
**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

**NORTH AMERICAN ELECTRIC)
RELIABILITY CORPORATION)** **Docket Nos. RM13-_____**

**PETITION OF THE
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION
FOR APPROVAL OF PROPOSED RELIABILITY STANDARDS IRO-001-3,
IRO-002-3, IRO-005-4, and IRO-014-2**

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**UNITED STATES OF AMERICA
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FEDERAL ENERGY REGULATORY COMMISSION**

**NORTH AMERICAN ELECTRIC) Docket Nos. RR_ __-000
RELIABILITY CORPORATION)**

**PETITION OF THE
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FOR APPROVAL OF PROPOSED RELIABILITY STANDARDS IRO-001-3, IRO-002-3,
IRO-005-4, and IRO-014-2**

Pursuant to Section 215(d)(1) of the Federal Power Act (“FPA”)¹ and Section 39.5² of the Federal Energy Regulatory Commission’s (“FERC” or “Commission”) regulations, the North American Electric Reliability Corporation (“NERC”)³ hereby submits for Commission approval four revised Reliability Standards:

- IRO-001-3 — Reliability Coordination — Responsibilities and Authorities
- IRO-002-3 — Reliability Coordination – Analysis Tools
- IRO-005-4 — Reliability Coordination – Current Day Operations
- IRO-014-2 — Coordination Among Reliability Coordinators

These proposed Reliability Standards are referred to herein as the “IRO Reliability Standards.”

NERC also seeks approval of the implementation plan for the proposed IRO Reliability Standards, and approval of the retirement of the following six Reliability Standards, effective at midnight immediately prior to the first day of the first calendar quarter that is twelve months following the effective date of a Final Rule in this docket:

- IRO-001-1.1 - Reliability Coordination - Responsibilities and Authorities

¹ 16 U.S.C. § 824o (2006).

² 18 C.F.R. § 39.5 (2012).

³ The Commission certified NERC as the electric reliability organization (“ERO”) in accordance with Section 215 of the FPA on July 20, 2006. *N. Amer. Elec. Reliability Corp.*, 116 FERC ¶ 61,062 (2006).

- IRO-002-2 - Reliability Coordination - Facilities
- IRO-005-3a - Reliability Coordination - Current Day Operations
- IRO-014-1 - Procedures, Processes, or Plans to Support Coordination Between Reliability Coordinators
- IRO-015-1 - Notifications and Information Exchange Between Reliability Coordinators
- IRO-016-1 - Coordination of Real-time Activities Between Reliability Coordinators.

On August 4, 2011 and August 16, 2012,⁴ the NERC Board of Trustees approved the proposed IRO Reliability Standards and the associated implementation plans that were part of Project 2006-06 – Reliability Coordination.⁵ Subsequently, on May 9, 2012, the NERC Board of Trustees approved the proposed TOP-001-2, TOP-002-3, and TOP-003-2 – Real-time Transmission Operations (“TOP Reliability Standards”). NERC is submitting the proposed TOP Reliability Standards to the Commission for approval in a separate petition that is being filed contemporaneously with this Petition.⁶ NERC requests that the standards presented in these petitions be approved simultaneously given that the proposed IRO Reliability Standards remove requirements from the currently-effective IRO standards for Transmission Operators that are added as requirements in proposed TOP Reliability Standards. Similarly, the proposed TOP

⁴ The NERC Board of Trustees approved the proposed IRO-002-3, IRO-005-4, and IRO-014-2 on August 4, 2011. The Board also approved a proposed IRO-001-2 Reliability Standard on August 4, 2011, that was subsequently revised by the standard drafting team before it was filed at FERC. The revision is designated as IRO-001-3, was approved by the Board on August 16, 2012, and is included in this petition for approval.

⁵ This petition addresses two directives associated with IRO-005-1 that were issued by the Commission in Order No. 693. A directive associated with IRO-002-1 was not addressed by the standard drafting team, as this directive falls under the scope of Real-Time Tools Best Practices Task Force.

⁶ NERC notes that these proposed standards were delayed in being filed at FERC given that a separate analysis was performed by NERC staff after Board approval comparing the proposed TOP Reliability Standards to the events of the September 2011 Southwest Blackout Event. The details of this analysis are described in more detail in the petition for approval of the proposed TOP Reliability Standards filed concurrently with this petition.

Reliability Standards remove requirements for Reliability Coordinators from the currently-effective TOP standards and that are added as requirements in the proposed IRO Reliability Standards. Accordingly, simultaneous approval of both petitions by the Commission will help ensure a smooth transition and implementation of the proposed Reliability Standards for both the industry and the ERO. Together, these sets of Reliability Standards address actions required to prevent instability, uncontrolled separation, or cascading outages.

As required by Section 39.5(a)⁷ of the Commission's regulations, this petition presents the technical basis and purpose for approval of the proposed IRO Reliability Standards, a summary of the development proceedings, and a demonstration that the proposed Reliability Standards meet the criteria identified by the Commission in Order No. 672.⁸

I. Executive Summary

The proposed IRO Reliability Standards achieve two important overall reliability benefits. First, the proposed Reliability Standards delineate a clean division of responsibilities between the Reliability Coordinator and Transmission Operators. This division of responsibilities will help to ensure that the Reliability Coordinator is responsible for identifying and controlling operations associated with Interconnection Reliability Operating Limits ("IROLs") and the Transmission Operator is responsible for identifying and controlling operations associated with System Operating Limits ("SOLs"). As demonstrated during the August 2003 blackout, having a clear division of responsibilities is essential in real-time

⁷ 18 C.F.R. § 39.5(a) (2012).

⁸The Commission specified in Order No. 672 certain general factors it would consider when assessing whether a particular Reliability Standard is just and reasonable. *See Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards*, Order No. 672, FERC Stats. & Regs. ¶ 31,204, at P 262, 321-37, *order on reh'g*, Order No. 672-A, FERC Stats. & Regs. ¶ 31,212 (2006).

operations⁹ and will help to ensure that Reliability Coordinators and Transmission Operators are working together to ensure bulk power system reliability. The proposed IRO Reliability Standards give the Reliability Coordinator the authority to direct its Transmission Operators to take actions to prevent or mitigate instances of exceeding specific IROLs. Similarly the Transmission Operator may ask the Reliability Coordinator for assistance in preventing or mitigating instances of exceeding specific SOLs. This delineation of responsibilities between Reliability Coordinators and Transmission Operators is appropriate because the responsibility for monitoring and handling IROLs is primarily given to the Reliability Coordinator but the Transmission Operator has the primary responsibility to designate any SOLs that require special attention.

The second significant reliability benefit of the proposed IRO Reliability Standards is in the improvement to system performance by raising the bar on monitoring of IROLs and SOLs in order to focus this monitoring on IROLs and SOLs that are important to reliability. Additionally, with the Commission's approval of the proposed TOP Reliability Standards filed concurrently with this petition, the proposed TOP-001-2, Requirement R8 will give Transmission Operators the ability to identify a sub-set of non-IROL SOLs that are identified as important for local areas. This will give Transmission Operators the authority to ensure that any non-IROL SOLs in which it is concerned to direct that they be monitored and local consequences managed.

The proposed IRO Reliability Standards also serve the following, additional reliability goals:

- Interconnected Bulk Electric Systems will be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Reliability Standards.

⁹ See, NERC August 14, 2003 Blackout Investigation, available at: <http://www.nerc.com/filez/blackout.html>.

- Personnel responsible for planning and operating interconnected bulk electric systems will be trained, qualified, and have the responsibility and authority to implement actions.
- The security of the interconnected bulk electric systems will be assessed, monitored and maintained on a wide-area basis.
- Plans for emergency operation and system restoration of interconnected bulk electric systems will be developed, coordinated, maintained and implemented.

Each of the proposed IRO Reliability Standards has a clear purpose. Proposed IRO-001-3 gives Reliability Coordinators the authority to have plans and agreements in place to immediately direct reliability entities within their Reliability Coordinator Areas to re-dispatch generation, reconfigure transmission, or reduce load to mitigate critical conditions to return the system to a reliable state. If a Reliability Coordinator delegates such tasks to others, the Reliability Coordinator retains its responsibilities for complying with NERC and regional Reliability Standards.

Proposed IRO-002-3 gives Reliability Coordinators the ability to provide their System Operators with authority to analyze tool outages and to have procedures to mitigate effects of tool outages. Proposed IRO-005-4 ensures that entities are notified when an expected or actual event with Adverse Reliability Impacts is identified. And proposed IRO-014-2 ensures that each Reliability Coordinator's operations are coordinated such that they will not have an Adverse Reliability Impact on other Reliability Coordinator Areas and to preserve the reliability benefits of interconnected operations.

When evaluating modified Reliability Standards, the Commission is expected to give “due weight” to the technical expertise of the ERO.¹⁰ The technical expertise of the ERO is derived from the standard drafting team. For this project, the standard drafting team consisted of

¹⁰ Federal Power Act §215(d)(2); 16 U.S.C. §824o(d)(2)(2012).

eight industry experts with a wealth of diverse industry experience across North America, including both the continental United States and Canada. A roster of the standard drafting team is included in **Exhibit G**.

II. NOTICES AND COMMUNICATIONS

Notices and communications with respect to this filing may be addressed to the following:¹¹

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III. BACKGROUND

A. Regulatory Framework

By enacting the Energy Policy Act of 2005,¹² Congress entrusted the Commission with the duties of approving and enforcing rules to ensure the reliability of the Nation's Bulk-Power

¹¹ Persons to be included on FERC's service list are indicated with an asterisk. NERC requests waiver of 18 C.F.R. § 385.203(b) to permit the inclusion of more than two people on the service list.

System, and with the duties of certifying an ERO that would be charged with developing and enforcing mandatory Reliability Standards, subject to Commission approval. Section 215(b)(1)¹³ of the FPA states that all users, owners, and operators of the Bulk-Power System in the United States will be subject to Commission-approved Reliability Standards. Section 215(d)(5)¹⁴ of the FPA authorizes the Commission to order the ERO to submit a new or modified Reliability Standard. Section 39.5(a)¹⁵ of the Commission's regulations requires the ERO to file with the Commission for its approval each Reliability Standard that the ERO proposes should become mandatory and enforceable in the United States, and each modification to a Reliability Standard that the ERO proposes should be made effective.

The Commission has the regulatory responsibility to approve standards that protect the reliability of the Bulk-Power System and to ensure that such standards are just, reasonable, not unduly discriminatory or preferential, and in the public interest. Pursuant to Section 215(d)(2) of the FPA¹⁶ and Section 39.5(c)¹⁷ of the Commission's regulations, the Commission will give due weight to the technical expertise of the ERO with respect to the content of a Reliability Standard.

B. Reliability Standards Development Procedure

NERC develops Reliability Standards in accordance with Section 300 (Reliability Standards Development) of its Rules of Procedure and the NERC *Reliability Standards Development Procedure*, which is incorporated into the Rules of Procedure as Appendix 3A. In its ERO Certification Order, FERC found that NERC's proposed rules provide for reasonable notice and opportunity for public comment, due process, openness, and a balance of interests in

¹² 16 U.S.C. § 824o (2006).

¹³ *Id.* § 824(b)(1).

¹⁴ *Id.* § 824o(d)(5).

¹⁵ 18 C.F.R. § 39.5(a) (2012).

¹⁶ 16 U.S.C. § 824o(d)(2).

¹⁷ 18 C.F.R. § 39.5(c)(1).

developing Reliability Standards and thus satisfies certain of the criteria for approving Reliability Standards.¹⁸

The development process is open to any person or entity with a legitimate interest in the reliability of the bulk power system. NERC considers the comments of all stakeholders and a vote of stakeholders and the NERC Board of Trustees is required to approve a Reliability Standard before its submission to the Commission.

The proposed Reliability Standards set out in **Exhibit B** have been developed and approved by industry stakeholders using NERC's *Reliability Standards Development Procedure*. They were approved by the NERC Board of Trustees on August 4, 2011 and August 16, 2012.

IV. JUSTIFICATION FOR APPROVAL

A. Basis for Approval and Purpose of Proposed IRO Reliability Standards

The proposed Reliability Standards provide a set of coordinated Reliability Standards that Reliability Coordinators must utilize in their operations of the bulk power system. With FERC's approval of the standards proposed herein and the proposed TOP Reliability Standards filed concurrently with this petition, the NERC Reliability Standards will help to ensure better coordination for Transmission Operators and Reliability Coordinators to plan and operate the interconnected Bulk Electric System in a synchronized manner to perform reliably under normal and abnormal conditions.

Each of the proposed IRO Reliability Standards are described briefly below and in more detail in **Exhibit C** which includes a complete mapping of changes to the currently-effective IRO standards to the proposed IRO Reliability Standards.

¹⁸ Order No. 672 at PP 268, 270.

1. Improvements Reflected in Proposed IRO Reliability Standards

The proposed IRO Reliability Standards serve the following important reliability goals:

- Interconnected Bulk Electric Systems will be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Reliability Standards.
- Personnel responsible for planning and operating interconnected bulk electric systems will be trained, qualified, and have the responsibility and authority to implement actions.
- The security of the interconnected bulk electric systems will be assessed, monitored and maintained on a wide-area basis.
- Plans for emergency operation and system restoration of interconnected bulk electric systems will be developed, coordinated, maintained and implemented.

2. Requirements in Proposed IRO Reliability Standards

This section summarizes the development of the proposed IRO Reliability Standards and explains the reliability goal of the requirements proposed for Commission approval. All of the requirements from the currently-effective IRO Reliability Standards proposed for approval or retirement in this petition are addressed in the section below and are organized by type of requirement (*e.g.*, Requirements Related to Reliability Coordinators' Authority, Plans, and Agreements; Requirements Related to System Operators' Authority to Analyze Tool Outages, *etc.*). NERC, in its analysis of the proposed Reliability Standards, determined that the proposed standards are just, reasonable, not unduly discriminatory or preferential, and in the public interest.

Requirements Related to Reliability Coordinators' Authority, Plans, and Agreements

IRO-001-3

The primary purpose of Reliability Standard IRO-001-3 is to ensure that Reliability Coordinators have the authority to direct other entities to prevent an Emergency or Adverse Reliability Impact to the Bulk Electric System. The proposed standard achieves this goal by requiring the Reliability Coordinator to have the responsibility and authority to act or direct others to act (which could include issuing Reliability Directives) to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impact.

Proposed Requirements

R1. Each Reliability Coordinator shall have the authority to act or direct others to act (which could include issuing Reliability Directives) to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impact. *[Violation Risk Factor: High][Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

R2. Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall comply with its Reliability Coordinator's direction unless compliance with the direction cannot be physically implemented or unless such actions would violate safety, equipment, regulatory, or statutory requirements. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

R3. Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to perform as directed in accordance with Requirement R2. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

These proposed requirements provide a technically sound way to ensure that the responsibility and authority to act or direct others to act (which could include issuing Reliability Directives) to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impact is assigned to the Reliability Coordinator. Entities required to perform actions issued by the Reliability Coordinator must comply with its Reliability Coordinator's direction unless compliance with the direction cannot

be physically implemented or unless such actions would violate safety, equipment, regulatory, or statutory requirements.

The changes to the proposed IRO-001-3 are a result of the retirement of the currently-effective IRO-001-1.1, Requirement R7, which states:

R7. The Reliability Coordinator shall have clear, comprehensive coordination agreements with adjacent Reliability Coordinators to ensure that System Operating Limit or Interconnection Reliability Operating Limit violation mitigation requiring actions in adjacent Reliability Coordinator Areas are coordinated.

The reliability objective of IRO-001-1.1, Requirement R7, is now covered in proposed IRO-014-2, which addresses Operating Procedures, Operating Processes and Operating Plans.¹⁹

Both IRO-001-1.1 and IRO-014-2 require coordination between Reliability Coordinators. IRO-001-1.1, Requirement R7, requires specific agreements “to ensure that System Operating Limit or Interconnection Reliability Operating Limit violation mitigation requiring actions in adjacent Reliability Coordinator Areas are coordinated.” Similarly, IRO-014-2, Requirement R1, Part 1.6 requires that the Operating Procedures, Operating Processes, or Operating Plans include authority to act to prevent and mitigate system conditions which could cause Adverse Reliability Impacts to other Reliability Coordinator Areas.²⁰ Therefore, these currently-effective requirements will ensure that both coordination agreements are in place to ensure that IROLs and SOLs are managed, and that system conditions which could cause Adverse Reliability Impacts are mitigated.

¹⁹ Proposed IRO-014-2, Requirement R1, specifically requires each “Reliability Coordinator to have Operating Procedures, Operating Processes, or Operating Plans for activities that require notification, exchange of information or coordination of actions that may impact other Reliability Coordinator Areas to support Interconnection reliability.”

²⁰ The term “Adverse Reliability Impact” is defined in the NERC Glossary of Terms as: “The impact of an event that results in Bulk Electric System instability or Cascading.” This revised definition was approved by the NERC Board of Trustees on August 4, 2011, as a defined term used in Reliability Standard IRO-014-2.

IRO-014-2, Requirement R1, and IRO-001-1.1, Requirement R7, both have the same reliability objective and would therefore create unnecessary overlap if both were in effect. Therefore, in order to eliminate the possibility of confusion for applicable entities, Requirement R7 of IRO-001-1.1 is proposed for retirement.

Requirements Related to System Operators' Authority to Analyze Tool Outages

IRO-002-3

The primary purpose of proposed Reliability Standard IRO-002-3 is to ensure that Reliability Coordinators provide their System Operators with authority to analyze tool outages and to have procedures to mitigate effects of tool outages.

Proposed Requirements

- **R1.** Each Reliability Coordinator shall provide its System Operators with the authority to approve, deny or cancel planned outages of its own analysis tools. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*
- **R2.** Each Reliability Coordinator shall have procedures in place to mitigate the effects of analysis tool outages. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

For the reasons explained below, the IRO-002-3 standard proposes to retire Requirements R1, R2, R3, R4, R5, R6, and R7 from the currently-effective IRO-002-2 to eliminate redundancies in the Reliability Standards.

Requirement R1 of currently-effective IRO-002-2 states that the Reliability Coordinator shall have adequate communications facilities (voice and data links) linked to appropriate entities within its Reliability Coordinator Area and that these facilities shall be staffed and available to act in addressing a real-time emergency condition. NERC is proposing that the first part of

Requirement R1 of IRO-002-2, which provides that “Each Reliability Coordinator shall have adequate communications facilities (voice and data links) to appropriate entities within its Reliability Coordinator Area...” be retired because it is addressed in the facility requirements specified in COM-001-1, Requirement R1, which was approved by the Commission in Order No. 693.²¹

COM-001-1, Requirement R1 provides:

R1. Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information:

R1.1. Internally.

R1.2. Between the Reliability Coordinator and its Transmission Operators and Balancing Authorities.

R1.3. With other Reliability Coordinators, Transmission Operators, and Balancing Authorities as necessary to maintain reliability.

R1.4. Where applicable, these facilities shall be redundant and diversely routed.²²

The second part of IRO-002-2, Requirement R1, states that: “These communications facilities shall be staffed and available to act in addressing a real-time emergency condition.” This part of the requirement is proposed to be retired because it is redundant with the currently-effective PER-004-2, Requirement R1, which was approved by the Commission in Order No. 742.²³ PER-004-2, Requirement R1, provides:

R1. Each Reliability Coordinator shall be staffed with adequately trained and NERC-certified Reliability Coordinator operators, 24 hours per day, seven days per week.

NERC therefore proposes that IRO-002-2, Requirements R1 be retired.

²¹ Order No. 693 at P 508.

²² NERC is also preparing to file a proposed COM-001-2 Reliability Standard that was approved by the NERC Board of Trustees on November 7, 2012. Similar to the currently-effective COM-001-1 Reliability Standard, the proposed COM-001-2 Reliability Standard addresses the need for adequate communication facilities. Specifically, the proposed standard requires the need for communication among Transmission Operators, Balancing Authorities, Reliability Coordinators and Distribution Providers. The proposed standard is available at: <http://www.nerc.com/files/COM-001-2.pdf>.

²³ *System Personnel Training Reliability Standards*, Order No. 742, 133 FERC ¶ 61,159 (2010).

Requirement R2 of the currently-effective IRO-002-2 calls for the Reliability Coordinator to provide, or arrange provisions for, data exchange to other Reliability Coordinators or Transmission Operators and Balancing Authorities via a secure network. NERC requests that this requirement be retired because it is now addressed in the proposed IRO-014-2, Requirement R1, which provides that the Reliability Coordinator shall have Operating Procedures, Operating Processes, or Operating Plans for activities that require notification, exchange of information or coordination of actions that may impact other Reliability Coordinator Areas to support Interconnection reliability. Additionally, proposed IRO-014-2, Requirement R3, provides that:

R3. Each Reliability Coordinator shall make notifications and exchange reliability–related information with other Reliability Coordinators in accordance with the Operating Procedures, Operating Processes, or Operating Plans identified in Requirement R1.

In addition, the provision in IRO-002-2, Requirement R2, stating that Reliability Coordinators provide information via a “secure network” is addressed in the NERC Rules of Procedure, Section 1002, which provides that:

1002. Reliability Support Services

NERC may assist in the development of tools and other support services for the benefit of Reliability Coordinators and other system operators to enhance reliability, operations and planning. NERC will work with the industry to identify new tools, collaboratively develop requirements, support development, provide an incubation period, and at the end of that period, transition the tool or service to another group or owner for long term operation of the tool or provision of the service. To accomplish this goal, NERC will:

1. Collaborate with industry to determine the necessity of new tools or services to enhance reliability;
2. For those tools that the collaborative process determines should proceed to a development phase, provide a start-up mechanism and development system;
3. Implement the tool either on its own or through an appropriate group or organization; and
4. Where NERC conducts the implementation phase of a new tool or service, develop a transition plan to turn maintenance and provision of the tool or service over to an organization identified in the development stage.

In addition to tools developed as a result of a collaborative process with industry, NERC may develop reliability tools on its own, but will consult with industry concerning the need for the tool prior to proceeding to development.

Tools and services being maintained by NERC as of January 1, 2012, will be reviewed and, as warranted, transitioned to an appropriate industry group or organization. NERC will develop and maintain a strategic reliability tools plan that will list the tools and services being maintained by NERC, and, where applicable, the plans for transition to an appropriate industry group or organization.

Because the currently-effective IRO-002-2, Requirement R2 is now addressed in the proposed IRO-014-2, Requirements R1, R2, R3, and Section 1002 of the NERC Rules of Procedure, NERC proposed that IRO-002-2, Requirement R2 be retired.

Requirement R3 of the currently-effective IRO-002-2 states that:

R3. Each Reliability Coordinator shall have multi-directional communications capabilities with its Transmission Operators and Balancing Authorities, and with neighboring Reliability Coordinators, for both voice and data exchange as required to meet reliability needs of the Interconnection.

Requirement R3 is redundant with the facility requirements specified in COM-001-1, Requirement R1, which requires Reliability Coordinators, Transmission Operators, and Balancing Authorities to provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information.²⁴ NERC therefore proposes that IRO-002-2, Requirements R3 be retired.

Additionally, the data exchange provisions of Requirement R3 of IRO-002-2 are addressed in the currently-effective Commission approved standard IRO-010-1a, Requirement R1, which provides:

R1. The Reliability Coordinator shall have a documented specification for data and information to build and maintain models to support Real-time monitoring, Operational Planning Analyses, and Real-time Assessments of its Reliability Coordinator Area to prevent instability, uncontrolled separation, and cascading outages.

²⁴ See *supra* note 21.

Requirements Related to IROLs and SOLs

The requirements related to IROLs and SOLs in the proposed IRO Reliability Standards are proposed for modification or retirement in order to focus monitoring of IROLs and SOLs in the Reliability Standards on those IROLs and SOLs important to reliability. This refocus of the requirements also eliminates redundancies in the standards. The discussion below addresses these proposed changes.

Requirement R4 of the currently-effective IRO-002-2 Reliability Standard addresses monitoring capability and systems, including Interconnection Reliability Operating Limits (“IROLs”) and System Operating Limit (“SOLs”) and provides:

R4. Each Reliability Coordinator shall have detailed real-time monitoring capability of its Reliability Coordinator Area and sufficient monitoring capability of its surrounding Reliability Coordinator Areas to ensure that potential or actual System Operating Limit or Interconnection Reliability Operating Limit violations are identified. Each Reliability Coordinator shall have monitoring systems that provide information that can be easily understood and interpreted by the Reliability Coordinator’s operating personnel, giving particular emphasis to alarm management and awareness systems, automated data transfers, and synchronized information systems, over a redundant and highly reliable infrastructure.

This requirement is proposed for retirement because, as explained below, an SOL would unlikely have an impact on the wide-area reliability of the bulk power system.

An SOL is defined in the NERC Glossary of Terms as:

“The value (such as MW, MVar, Amperes, Frequency or Volts) that satisfies the most limiting of the prescribed operating criteria for a specified system configuration to ensure operation within acceptable reliability criteria. System Operating Limits are based upon certain operating criteria. These include, but are not limited to:

- Facility Ratings (Applicable pre- and post-Contingency equipment or facility ratings)
- Transient Stability Ratings (Applicable pre- and post-Contingency Stability Limits)
- Voltage Stability Ratings (Applicable pre- and post-Contingency Voltage Stability)

- System Voltage Limits (Applicable pre- and post-Contingency Voltage Limits)”

An SOL limit is derived from operating criteria to ensure the reliable and safe operation of a particular facility. If an SOL limit is exceeded, it will generally not have an impact outside of the affected Transmission Operator’s area, and therefore will not have an impact on the wide-area reliability of the bulk power system.

Where an SOL has a wider impact it is considered and redefined as an IROL, which is defined in the NERC Glossary of Terms as: “A System Operating Limit that, if violated, could lead to instability, uncontrolled separation, or Cascading Outages that adversely impact the reliability of the Bulk Electric System.”²⁵ Therefore, because IROL limits that, if violated, would have an impact on bulk power system reliability, the proposed IRO Reliability Standards have been modified to focus on IROLs having a direct impact on reliability.

Additionally, Requirement R4 of currently-effective IRO-002-2 is redundant with the Requirements contained in IRO-010-1a and EOP-008-1, which were approved by the Commission on April 21, 2011.²⁶ With respect to IROLs, Requirement IRO-010-1a states:

R1. The Reliability Coordinator shall have a documented specification for data and information to build and maintain models to support Real-time monitoring, Operational Planning Analyses, and Real-time Assessments of its Reliability Coordinator Area to prevent instability, uncontrolled separation, and cascading outages. The specification shall include the following: (Violation Risk Factor: Low) (Time Horizon: Operations Planning)

R1.1. List of required data and information needed by the Reliability Coordinator to support Real-Time Monitoring, Operational Planning Analyses, and Real-Time Assessments.

R1.2. Mutually agreeable format.

R1.3. Timeframe and periodicity for providing data and information (based on its hardware and software requirements, and the time needed to do its Operational Planning Analyses).

²⁵ NERC Glossary of Terms at p. 36.

²⁶ *Order Approving Reliability Standard*, 135 FERC ¶ 61,040 (2011).

R1.4. Process for data provision when automated Real-Time system operating data is unavailable.

R2. The Reliability Coordinator shall distribute its data specification to entities that have Facilities monitored by the Reliability Coordinator and to entities that provide Facility status to the Reliability Coordinator. (Violation Risk Factor: Low) (Time Horizon: Operations Planning)

R3. Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. (Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations)

Requirement R1 of IRO-010-1a addresses IROLs by requiring the Reliability Coordinator to “have a documented specification for data and information to build and maintain models to support Real-time monitoring, Operational Planning Analyses, and Real-time Assessments of its Reliability Coordinator Area to prevent instability, uncontrolled separation, and cascading outages.”²⁷ For this reason, Requirement R4 of currently-effective IRO-004-2 that requires Reliability Coordinators to have detailed, real-time monitoring capability of its Reliability Coordinator Area and sufficient monitoring capability of its surrounding Reliability Coordinator Areas to ensure that potential or actual SOL or IROL violations are identified is no longer needed.

Similarly, the proposed TOP-001-2, Requirements R8, R9, R10, and R11, which are being filed with the Commission contemporaneously with this petition, address SOLs:

R8. Each Transmission Operator shall inform its Reliability Coordinator of each SOL which, while not an IROL, has been identified by the Transmission Operator as supporting reliability internal to its Transmission Operator Area based on its assessment of its Operational Planning Analysis. *[Violation Risk Factor: Medium] [Time Horizon: Operations Planning]*

R9. Each Transmission Operator shall not operate outside any System Operating Limit (SOL) identified in Requirement R8 for a continuous duration that would

²⁷ NERC Glossary of Terms at p. 24.

cause a violation of the Facility Rating or Stability criteria upon which it is based. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]*

R10. Each Transmission Operator shall inform its Reliability Coordinator of its actions to return the system to within limits when an IROL, or an SOL identified in Requirement R8, has been exceeded. *[Violation Risk Factor: Medium] [Time Horizon: Real-Time Operations]*

R11. Each Transmission Operator shall act or direct others to act, to mitigate both the magnitude and duration of exceeding an IROL within the IROL's Tv, or of an SOL identified in Requirement R8. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*

The proposed TOP-001-2, Requirement R8 includes a requirement for the Transmission Operator to identify a subset of SOLs that, based on the results of the Transmission Operator's Operational Planning Analysis, could adversely impact reliability in the Transmission Operator's area. The Transmission Operator is required to provide its Reliability Coordinator with those SOLs and is required to inform the Reliability Coordinator when it operates outside of those SOLs. With Commission approval of the proposed IRO Reliability Standards (and concurrently-filed TOP Reliability Standards), NERC believes that monitoring Bulk Electric System elements that could result in SOL or IROL violations will continue to be addressed in a manner that will ensure bulk power system reliability.

NERC notes that currently-effective Reliability Standard IRO-010-1a was approved in Order No. 748, in part, because monitoring of IROLs and SOLs was included in IRO-002-2.²⁸ However, in Order No. 748, the Commission also acknowledged the on-going industry efforts to improve Reliability Standards pertaining to SOLs, and accepted NERC's commitment to revise applicable Reliability Standards in Projects 2007-03 and 2006-06.²⁹

²⁸ Order No. 748 at PP 40-41.

²⁹ *Mandatory Reliability Standards for Interconnection Reliability Operating Limits*, 134 FERC ¶ 61,213, Order No. 748, at P 43 (2011). Project 2007-03 resulted in the proposed TOP Reliability Standards being filed for approval concurrently with this petition. Project 2006-06 is the project that developed the proposed Reliability Standards included herein for approval.

Further, the Commission encouraged NERC to use the standard development process to develop appropriate modifications to applicable Reliability Standards as necessary:

Because the study and monitoring of SOLs and IROLs is an issue at the very core of Bulk-Power System reliability, the Commission agrees with EEI that the NERC Reliability Coordinators Working Group should engage the issues raised in this proceeding with NERC stakeholders, including the NERC Planning and Operating committees, to determine whether a need exists to further refine the delineation of responsibilities between the reliability coordinator and transmission operator for analyzing a class of “grid-impactive” SOLs. Depending on the results of that review, we further encourage NERC, working through its standard development process, to develop appropriate modifications to these and any other related Reliability Standards as necessary.³⁰

The standard drafting team that developed the proposed IRO Reliability Standards collaborated with the standard drafting team that developed the proposed TOP Reliability Standards being filed concurrently with this petition for approval. As a result of this collaboration, the TOP Reliability Standards include requirements for Transmission Operators that work synchronously with the requirements for Reliability Coordinators in the proposed IRO Reliability Standards. Accordingly, Requirement R4 of currently-effective IRO-002-2 should be retired because it is redundant with the requirements in IRO-010-1a and the proposed TOP-001-2 Reliability Standards.

The backup functionality provisions in the second part of IRO-002-2, R4, which are proposed for retirement, are addressed in EOP-008-1, Requirement R4, which provides:

R4. Each Balancing Authority and Transmission Operator shall have backup functionality (provided either through a facility or contracted services staffed by applicable certified operators when control has been transferred to the backup functionality location) that includes monitoring, control, logging, and alarming sufficient for maintaining compliance with all Reliability Standards that depend on a Balancing Authority and Transmission Operator’s primary control center functionality respectively. To avoid requiring tertiary functionality, backup functionality is not required during: *[Violation Risk Factor = Medium] [Time Horizon = Operations Planning]*

³⁰ *Id* at P. 44.

- Planned outages of the primary or backup functionality of two weeks or less
- Unplanned outages of the primary or backup functionality.

Accordingly, because EOP-008-1, Requirement R4, requires the Transmission Operator to have “back up functionality”, IRO-002-2, Requirement R4, should be retired.

Currently-effective IRO-002-2, Requirement R5, which addresses monitoring Bulk Electric System elements that could result in SOL or IROL violations, is also proposed for retirement because Real-time monitoring is a supporting activity and is only one of several processes used to support operation within SOLs or IROLs. Currently-effective IRO-002-2, Requirement R5 provides:

R5. Each Reliability Coordinator shall monitor Bulk Electric System elements (generators, transmission lines, buses, transformers, breakers, etc.) that could result in SOL or IROL violations within its Reliability Coordinator Area. Each Reliability Coordinator shall monitor both real and reactive power system flows, and operating reserves, and the status of Bulk Electric System elements that are or could be critical to SOLs and IROLs and system restoration requirements within its Reliability Coordinator Area.

The identified reliability objective of IRO-002-2, Requirement R5, is to operate within identified parameters, not to monitor. However, monitoring Bulk Electric System elements that could result in SOL or IROL violations is implicit in the obligation to control, as specified in the proposed TOP-001-2 Reliability Standard, Requirements R8, R9, R10, and R11, filed concurrently with this petition for approval (*see*, discussion above). Therefore, NERC proposes to retire IRO-002-2, Requirement R5, because it is redundant with the requirement of the proposed TOP-001-2 Reliability Standards.

Requirements Related to Analysis Tools for Reliability Coordinators

Requirement R6 of IRO-002-2, which is proposed for retirement, involves analysis tools for the Reliability Coordinator and lists such tools as state estimation, pre- and post-contingency

analysis and wide-area overview displays. The reliability objective of IRO-002-2, Requirement R6, is also addressed in IRO-008-1, which states:

R1. Each Reliability Coordinator shall perform an Operational Planning Analysis to assess whether the planned operations for the next day within its Wide Area, will exceed any of its Interconnection Reliability Operating Limits (IROLs) during anticipated normal and Contingency event conditions. (Violation Risk Factor: Medium) (Time Horizon: Operations Planning)

R2. Each Reliability Coordinator shall perform a Real-Time Assessment at least once every 30 minutes to determine if its Wide Area is exceeding any IROLs or is expected to exceed any IROLs. (Violation Risk Factor: High) (Time Horizon: Real-time Operations)

R3. When a Reliability Coordinator determines that the results of an Operational Planning Analysis or Real-Time Assessment indicates the need for specific operational actions to prevent or mitigate an instance of exceeding an IROL, the Reliability Coordinator shall share its results with those entities that are expected to take those actions. (Violation Risk Factor: Medium) (Time Horizon: Real-time Operations or Same Day Operations)

A Reliability Coordinator typically employs tools such as state estimation, pre- and post-contingency analysis, and wide-area overview displays to perform the analyses required under IRO-008-1, Requirements R1. However, a list of specific tools that may be used is not included in this requirement. Including a specific list may limit new technologies and analysis tools from being employed to enhance reliability and the wide area view of the Reliability Coordinator. Given that IRO-008-1, Requirement R1, achieves the reliability purpose of IRO-002-2, Requirement R6, NERC is proposing that Requirement R6 of IRO-002-2 be retired in order to avoid redundancy.

Requirements Related to Monitoring the Reliability Coordinators' Area

Requirement R7 of IRO-002-2, which has three parts, is also proposed for retirement:

R7. Each Reliability Coordinator shall continuously monitor its Reliability Coordinator Area. Each Reliability Coordinator shall have provisions for backup

facilities that shall be exercised if the main monitoring system is unavailable. Each Reliability Coordinator shall ensure SOL and IROL monitoring and derivations continue if the main monitoring system is unavailable.

The first part of this requirement requires the Reliability Coordinator to “continuously monitor its Reliability Coordinator Area.” The standard drafting team determined that real-time monitoring is a supporting activity and is only one of several processes used to support operation within SOLs or IROLs. The identified reliability objective of the first sentence of Requirement R7 is to operate within identified parameters, not to monitor.

Experience in complying with the body of real-time requirements has shown that some requirements are onerous from the perspective of evidence retention. Retaining evidence to prove that an entity had its system operators actively monitoring all range of parameters 24/7 for 365 days a year for three years is onerous. These lower-level facilitating requirements are also already measured through other performance-based requirements and do not require retention of as much evidence to demonstrate compliance. Thus, since real-time performance-based requirements for the Reliability Coordinator rely on active monitoring, NERC proposes retiring the first sentence of Requirement R7.

The second part of Requirement R7 concerns backup facilities and capability. NERC also proposes to retire this portion of Requirement R7 as it is covered by the backup facility requirements of EOP-008-1, approved by the Commission, with an effective date of July 1, 2013.³¹ Specifically, EOP-008-1 provides:

R1. Each Reliability Coordinator, Balancing Authority, and Transmission Operator shall have a current Operating Plan describing the manner in which it continues to meet its functional obligations with regard to the reliable operations of the BES in the event that its primary control center functionality is lost. This Operating Plan for backup functionality shall include the following, at a minimum: *[Violation Risk Factor = Medium] [Time Horizon = Operations Planning]*

³¹ *North American Electric Reliability Corporation*, 135 FERC ¶ 61,040 (2011).

- 1.1.** The location and method of implementation for providing backup functionality for the time it takes to restore the primary control center functionality.
- 1.2.** A summary description of the elements required to support the backup functionality. These elements shall include, at a minimum:
 - 1.2.1.** Tools and applications to ensure that System Operators have situational awareness of the BES.
 - 1.2.2.** Data communications.
 - 1.2.3.** Voice communications.
 - 1.2.4.** Power source(s).
 - 1.2.5.** Physical and cyber security.
- 1.3.** An Operating Process for keeping the backup functionality consistent with the primary control center.
- 1.4.** Operating Procedures, including decision authority, for use in determining when to implement the Operating Plan for backup functionality.
- 1.5.** A transition period between the loss of primary control center functionality and the time to fully implement the backup functionality that is less than or equal to two hours.
- 1.6.** An Operating Process describing the actions to be taken during the transition period between the loss of primary control center functionality and the time to fully implement backup functionality elements identified in Requirement R1, Part 1.2. The Operating Process shall include at a minimum:
 - 1.6.1.** A list of all entities to notify when there is a change in operating locations.
 - 1.6.2.** Actions to manage the risk to the BES during the transition from primary to backup functionality as well as during outages of the primary or backup functionality.
 - 1.6.3.** Identification of the roles for personnel involved during the initiation and implementation of the Operating Plan for backup functionality.

EOP-008-1 requires Reliability Coordinators to have specific backup capabilities sufficient to, among other things, provide visualization capabilities that ensure that operating personnel have situational awareness of the Bulk Electric System. This is stated in EOP-008-1, Requirement R1, Part 1.2.1: “Tools and applications to ensure that System Operators have situational awareness of the BES.” To avoid unnecessary redundancy, NERC believes that the second sentence of IRO-002-2, Requirement R7 should be retired.

The third sentence of IRO-002-2, Requirement R7, proposed for retirement, addresses the ability “to ensure SOL and IROL monitoring and derivations continue if the main monitoring system is unavailable.” The provisions relating to IROLs are addressed in IRO-010-1a, Requirement R1, Part R1.4 which states that the Reliability Coordinator’s data specification shall have a “Process for data provision when automated Real-Time system operating data is unavailable.” As noted above, the provisions pertaining to SOLs are addressed in the proposed TOP-001-2, Requirements R8, R9, R10, and R11.

Requirement R8 of currently-effective IRO-002-2 was revised and incorporated into proposed Requirements R1 and R2 of IRO-002-3. Because this requirement contains two distinct reliability objectives, the standard drafting team created two separate requirements. The first part of Requirement R8 of IRO-002-2 originally stated “Each Reliability Coordinator shall control its Reliability Coordinator analysis tools, including approvals for planned maintenance.” This has been revised in IRO-002-3, Requirement R1 to state, “Each Reliability Coordinator shall provide its System Operators with the authority to approve, deny or cancel planned outages of its own analysis tools.”

NERC is also developing a set of Reliability Standards in Project 2009-02, which is expected to be completed in 2014, that will establish requirements for the functionality, performance, and maintenance of Real-time monitoring and analysis capabilities for Reliability Coordinators, Transmission Operators, Generator Operators, and Balancing Authorities for use by their System Operators in support of reliable system operations. According to the August 2003 Blackout Report,³² a principal cause of the August 14, 2003 blackout was a lack of situational awareness, which was in turn the result of inadequate reliability tools. In addition, the

³² The *Final Report on the August 14, 2003 Blackout in the United States and Canada: Causes and Recommendations Report*, dated April 5, 2004, is available at: <http://www.nerc.com/filez/blackout.html>.

failure of control computers and alarm systems, incomplete tool sets, and the failure to supply network analysis tools with correct System data on August 14, contributed directly to this lack of situational awareness. Also, the need for improved visualization capabilities over a wide geographic area has been a recurrent theme in blackout investigations.

There are two directives in FERC Order No. 693 relating to minimum tool capabilities. One directive pertains to IRO-002 and is described in Paragraphs 905 and 906. The second directive pertains to TOP-006 and is described in Paragraph 1660. Rather than addressing these directives in the proposed IRO Reliability Standards and concurrently-filed proposed TOP Reliability Standards, they were deliberately chosen to be addressed by the Project 2009-02 Standard Drafting Team. As noted above, these proposed Reliability Standards addressing Real-time tools are anticipated to be completed in 2014.

Requirements Related to Notification Requirements

IRO-005-4

The primary purpose of Reliability Standard IRO-005-4 is to ensure that entities are notified when an expected or actual event with Adverse Reliability Impacts is identified.

Proposed Requirements

- **R1.** When the results of an Operational Planning Analysis or Real-time Assessment indicate an anticipated or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*
- **R2.** Each Reliability Coordinator that identifies an anticipated or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when the problem has been mitigated. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

The proposed IRO-005-4 standard is a result of the standard drafting team reviewing the requirements of the currently-effective IRO-005-3a to eliminate redundancies between existing and proposed standards. As a result of these revisions, NERC is proposing to retire all or parts of Requirements R1, R2, R3, R4, R5, R6, R7, R8, R9, and R10 of IRO-005-3a.

Requirement R1 of IRO-005-3a states that: “Each Reliability Coordinator shall monitor its Reliability Coordinator Area parameters....” As noted above, monitoring capability is essential to real-time operations; however, real-time monitoring is a supporting activity and is only one of several processes used to support operation within defined parameters.

Requirement R2 of IRO-005-3a has three reliability objectives. The first objective requires the Reliability Coordinator to monitor its Balancing Authorities’ parameters to “ensure that the required amount of operating reserves is provided and available as required to meet the Control Performance Standard (CPS) and Disturbance Control Standard (DCS) requirements.” This reliability objective of Requirement R2 of IRO-005-3 should be retired because the Balancing Authority has its own requirements regarding compliance with CPS (Reliability Standard BAL-001-0.1a) and DCS (Reliability Standard BAL-002-0) Reliability Standards.³³ Further, BAL-002-1 provides requirements for the Balancing Authority to meet the Disturbance Control Standard.

The second objective states: “If necessary, the Reliability Coordinator shall direct the Balancing Authorities in the Reliability Coordinator Area to arrange for assistance from neighboring Balancing Authorities.” The Balancing Authority has its own requirements regarding assistance. For example, EOP-002-3, Requirement R6, specifies the conditions under which a Balancing Authority is required to request assistance:

³³ The Requirements of BAL-001-0.1a specify the Control Performance Standard 1 (CPS1) and Control Performance Standard 2 (CPS2) for which each Balancing Authority must comply.

R6. If the Balancing Authority cannot comply with the Control Performance and Disturbance Control Standards, then it shall immediately implement remedies to do so. These remedies include, but are not limited to:

R6.1. Loading all available generating capacity.

R6.2. Deploying all available operating reserve.

R6.3. Interrupting interruptible load and exports.

R6.4. Requesting emergency assistance from other Balancing Authorities.

R6.5. Declaring an Energy Emergency through its Reliability Coordinator; and

R6.6. Reducing load, through procedures such as public appeals, voltage reductions, curtailing interruptible loads and firm loads.

The third objective requires the Reliability Coordinator to “issue Energy Emergency Alerts as needed and at the request of its Balancing Authorities and Load-Serving Entities.” This reliability objective is contained in the requirements of existing EOP-002-3, Requirements R1 and R8, which provide that the Reliability Coordinator shall alleviate capacity and energy emergencies and issue alerts:

R1. Each Balancing Authority and Reliability Coordinator shall have the responsibility and clear decision-making authority to take whatever actions are needed to ensure the reliability of its respective area and shall exercise specific authority to alleviate capacity and energy emergencies.

R8. A Reliability Coordinator that has any Balancing Authority within its Reliability Coordinator area experiencing a potential or actual Energy Emergency shall initiate an Energy Emergency Alert as detailed in Attachment 1-EOP-002-0 “Energy Emergency Alert Levels.” The Reliability Coordinator shall act to mitigate the emergency condition, including a request for emergency assistance if required.

Given that the Balancing Authority has separate requirements that require compliance with the CPS and DCS standards, Requirement R2 is redundant and should be retired.

Requirement R3 of IRO-005-3a addresses notifying Transmission Operators and Balancing Authorities of Geo-Magnetic Disturbances (“GMD”) and assisting with the development of response plans if needed. This requirement is proposed to be retired because the reporting of GMDs by a Reliability Coordinator to impact Transmission Operators and

Balancing Authorities are addressed in the currently-effective IRO-005-4, Requirement R1, which provides:

R1. When the results of an Operational Planning Analysis or Real-time Assessment indicate an anticipated or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]* .

A GMD would be considered one of the “anticipated or actual condition[s] with Adverse Reliability Impacts” referenced in proposed IRO-005-4, Requirement R1. Thus, Requirement R3 of IRO-005-3a should be retired to eliminate the possibility of confusion for applicable entities with respect to compliance with the Reliability Standards.

Requirement R4 of IRO-005-3a states that: “The Reliability Coordinator shall disseminate information within its Reliability Coordinator Area, as required.” This requirement should be retired because it is too vague and ambiguous to measure or prove compliance with the requirement. Additionally, the reliability objective of disseminating information by the Reliability Coordinator is also addressed in the proposed IRO-005-4, Requirement R1:

R1. When the results of an Operational Planning Analysis or Real-time Assessment indicate an anticipated or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, *each Reliability Coordinator shall notify* all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]* (*Emphasis added*).

Requirement R5 of IRO-005-3a has two reliability objectives. The first objective requires the Reliability Coordinator to monitor system frequency and its Balancing Authorities’ performance with respect to CPS and DCS compliance. As previously noted, this part of the requirement should be retired because the Balancing Authority has its own requirements regarding compliance with CPS and DCS standards.

The second reliability objective of Requirement R5 states: “The Transmission Operators and Balancing Authorities shall utilize all resources, including firm load shedding, as directed by its Reliability Coordinator to relieve the emergent condition.” This is redundant with three Requirements in the currently-effective EOP-002-3, R1, R6, and R7:

R4. A Balancing Authority anticipating an operating capacity or energy emergency shall perform all actions necessary including bringing on all available generation, postponing equipment maintenance, scheduling interchange purchases in advance, and being prepared to reduce firm load.

R6. If the Balancing Authority cannot comply with the Control Performance and Disturbance Control Standards, then it shall immediately implement remedies to do so. These remedies include, but are not limited to:

R6.1. Loading all available generating capacity.

R6.2. Deploying all available operating reserve.

R6.3. Interrupting interruptible load and exports.

R6.4. Requesting emergency assistance from other Balancing Authorities.

R6.5. Declaring an Energy Emergency through its Reliability Coordinator; and

R6.6. Reducing load, through procedures such as public appeals, voltage reductions, curtailing interruptible loads and firm loads.

R7. Once the Balancing Authority has exhausted the steps listed in Requirement 6, or if these steps cannot be completed in sufficient time to resolve the emergency condition, the Balancing Authority shall:

R7.1. Manually shed firm load without delay to return its ACE to zero; and

R7.2. Request the Reliability Coordinator to declare an Energy Emergency Alert in accordance with Attachment 1-EOP-002-0 “Energy Emergency Alert Levels.

Requirements R4, R6 and R7 specify that appropriate entities “utilize all resources, including firm load shedding” and the steps to be taken to ensure that the Balancing Authority returns to compliance with the CPS and DCS standards.³⁴ Based on the redundancy in the EOP-002-3 Reliability Standard with the IRO-005-3a, Requirement R5 Reliability Standard, IRO-005-3a, R5 should be retired.

³⁴ BAL-001-0.1a addressed CPS performance and BAL-002-1 addresses DCS performance.

Requirement R6 of IRO-005-3a, which is proposed for retirement, has two parts. The first part states “The Reliability Coordinator shall coordinate with Transmission Operators, Balancing Authorities, and Generator Operators as needed to develop and implement action plans to mitigate potential or actual SOL, IROL, CPS or DCS violations.” The portion of this sentence dealing with CPS or DCS violations is addressed in the currently-effective EOP-002-3, Requirements R6, R7 and R8:

R6. If the Balancing Authority cannot comply with the *Control Performance and Disturbance Control Standards*, then it shall immediately implement remedies to do so. These remedies include, but are not limited to:

- R6.1.** Loading all available generating capacity.
- R6.2.** Deploying all available operating reserve.
- R6.3.** Interrupting interruptible load and exports.
- R6.4.** Requesting emergency assistance from other Balancing Authorities.
- R6.5.** Declaring an Energy Emergency through its Reliability Coordinator; and
- R6.6.** Reducing load, through procedures such as public appeals, voltage reductions, curtailing interruptible loads and firm loads.

R7. Once the Balancing Authority has exhausted the steps listed in Requirement 6, or if these steps cannot be completed in sufficient time to resolve the emergency condition, the Balancing Authority shall:

- R7.1.** Manually shed firm load without delay to return its ACE to zero; and
- R7.2.** Request the Reliability Coordinator to declare an Energy Emergency Alert in accordance with Attachment 1-EOP-002-0 “Energy Emergency Alert Levels.

R8. A Reliability Coordinator that has any Balancing Authority within its Reliability Coordinator area experiencing a potential or actual Energy Emergency shall initiate an Energy Emergency Alert as detailed in Attachment 1-EOP-002-0 “Energy Emergency Alert Levels.” The Reliability Coordinator shall act to mitigate the emergency condition, including a request for emergency assistance if required. (*Emphasis added*).

Based on the redundancies above, the first sentence of IRO-005-3a, Requirement R6 should be retired.

The second part of IRO-005-3a, Requirement R6 states: “The Reliability Coordinator shall coordinate pending generation and transmission maintenance outages with Transmission Operators, Balancing Authorities, and Generator Operators as needed in both the real time and next-day reliability analysis timeframes.” The coordination aspects of this part of Requirement R6 are addressed in the requirements of currently-effective IRO-008-1, Requirement R3, and IRO-010-1a, Requirement R3, which provide:

IRO-008-1, R3. When a Reliability Coordinator determines that the results of an Operational Planning Analysis or Real-Time Assessment indicates the need for specific operational actions to prevent or mitigate an instance of exceeding an IROL, the *Reliability Coordinator shall share* its results with those entities that are expected to take those actions. (Violation Risk Factor: Medium) (Time Horizon: Real-time Operations or Same Day Operations)

IRO-010-1a, R3. Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner *shall provide data and information, as specified, to the Reliability Coordinator(s)* with which it has a reliability relationship. (Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations) (*emphasis added*).

Thus, based on the redundancies identified above, NERC proposes that IRO-005-3a, Requirement R6 be retired.

Requirement R7 of IRO-005-3a concerns the Reliability Coordinator assisting its Balancing Authorities in arranging assistance from neighboring Reliability Coordinator Areas. This requirement should be retired because it is redundant with the reliability objectives and provisions of currently-effective EOP-002-3, Requirements R7 and R8:

R7. Once the Balancing Authority has exhausted the steps listed in Requirement 6, or if these steps cannot be completed in sufficient time to resolve the emergency condition, the Balancing Authority shall:

R7.1. Manually shed firm load without delay to return its ACE to zero; and

R7.2. Request the Reliability Coordinator to declare an Energy Emergency Alert in accordance with Attachment 1-EOP-002-0 “Energy Emergency Alert Levels.”

R8. A Reliability Coordinator that has any Balancing Authority within its Reliability Coordinator area experiencing a potential or actual Energy Emergency shall initiate an Energy Emergency Alert as detailed in Attachment 1-EOP-002-0 “Energy Emergency Alert Levels.” The Reliability Coordinator shall act to mitigate the emergency condition, including a request for emergency assistance if required.

Requirements R7 and R8 of EOP-002-3 above require the Reliability Coordinator to issue alerts as requested to assist a deficient Balancing Authority as well as to act to mitigate an emergency condition. Such action may include a request for emergency assistance if required.

IRO-005-3a, Requirement R8 requires the Reliability Coordinator to identify Large Area Control Errors that may be contributing to potential reliability issues. NERC proposes to retire the requirement because its reliability objective is superseded by the proposed IRO-001-3, Requirement R1:

R1. Each Reliability Coordinator shall have the authority to act or direct others to act (which could include issuing Reliability Directives) to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impact. *[Violation Risk Factor: High][Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

While Large Area Control Errors are a potential threat to the integrity and reliability of the Bulk Electric System, the Reliability Coordinator has the authority and obligation to address any potential reliability concerns under IRO-001-3, Requirement R1.

Currently-effective IRO-005-3a, Requirement R9, addresses Special Protection Systems (“SPS”):

R9. Whenever a Special Protection System that may have an inter-Balancing Authority, or inter-Transmission Operator impact (e.g., could potentially affect transmission flows resulting in a SOL or IROL violation) is armed, the Reliability Coordinators shall be aware of the impact of the operation of that Special Protection System on inter-area flows. The Transmission Operator shall

immediately inform the Reliability Coordinator of the status of the Special Protection System including any degradation or potential failure to operate as expected.

The reliability objective of this requirement is to make the Reliability Coordinator aware of the potential impact of the SPS should it fail or suffer a degradation. NERC proposes to retire Requirement R9 as it is redundant with the requirements of currently-effective IRO-010-1a.

R1. The Reliability Coordinator shall have a documented data specification for data and information to build and maintain models to support Real-Time monitoring, Operational Planning Analyses, and Real-time Assessments. The specification shall include the following: (Violation Risk Factor: Low) (Time Horizon: Operations Planning)

R1.1. List of required data and information.

R1.2. Mutually agreeable format.

R1.3. Timeframe and periodicity for providing data and information (based on its hardware and software requirements, and the time needed to do its Operational Planning Analyses).

R1.4. Process for data provision when automated Real-Time system operating data is unavailable.

R2. The Reliability Coordinator shall distribute its data specification to entities that have Facilities monitored by the Reliability Coordinator and to entities that provide Facility status to the Reliability Coordinator. (Violation Risk Factor: Low) (Time Horizon: Operations Planning)

R3. Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. The data and information is limited to data needed by the Reliability Coordinator to support Real-Time Monitoring, Operational Planning Analyses, and Real-Time Assessments. (Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations).

These requirements call for the Reliability Coordinator to develop a “specification for data and information to build and maintain models to support Real-Time monitoring, Operational Planning Analyses, and Real-time Assessments.” This would include SPS information. The Reliability Coordinator is required to distribute the specification and entities (Balancing

Authorities, Generator Owners, Generator Operators, Interchange Authorities, Load-Serving Entities, Reliability Coordinators, Transmission Operators, and Transmission Owners) that are required to provide the data to the Reliability Coordinator. Thus, Requirement R9 of IRO-005-3a should be retired based on this redundancy.

Currently-effective IRO-005-3a, Requirement R10 requires operating entities to operate to the most limiting parameter in instances where there is a difference in derived limits. NERC recommends retiring the requirement as it is a facet of the SOL/IROL methodology required in FAC-011-2 and FAC-014-1. In FAC-011-2, the requirements specify how the limit methodology is to be developed and what it must contain:³⁵

R1. The Reliability Coordinator shall have a documented methodology for use in developing SOLs (SOL Methodology) within its Reliability Coordinator Area. This SOL Methodology shall:

R1.1. Be applicable for developing SOLs used in the operations horizon.

R1.2. State that SOLs shall not exceed associated Facility Ratings.

R1.3. Include a description of how to identify the subset of SOLs that qualify as IROLs.

R2. The Reliability Coordinator's SOL Methodology shall include a requirement that SOLs provide BES performance consistent with the following:

R2.1. In the pre-contingency state, the BES shall demonstrate transient, dynamic and voltage stability; all Facilities shall be within their Facility Ratings and within their thermal, voltage and stability limits. In the determination of SOLs, the BES condition used shall reflect current or expected system conditions and shall reflect changes to system topology such as Facility outages.

R2.2. Following the single Contingencies¹ identified in Requirement 2.2.1 through Requirement 2.2.3, the system shall demonstrate transient, dynamic and voltage stability; all Facilities shall be operating within their Facility Ratings and within their thermal, voltage and stability limits; and Cascading or uncontrolled separation shall not occur.

R2.2.1. Single line to ground or 3-phase Fault (whichever is more severe), with Normal Clearing, on any Faulted generator, line, transformer, or shunt device.

³⁵ NERC Reliability Standard FAC-011-2, available at: <http://www.nerc.com/files/FAC-011-2.pdf>.

R2.2.2. Loss of any generator, line, transformer, or shunt device without a Fault.

R2.2.3. Single pole block, with Normal Clearing, in a monopolar or bipolar high voltage direct current system.

R2.3. In determining the system's response to a single Contingency, the following shall be acceptable:

R2.3.1. Planned or controlled interruption of electric supply to radial customers or some local network customers connected to or supplied by the Faulted Facility or by the affected area.

R2.3.2. Interruption of other network customers, (a) only if the system has already been adjusted, or is being adjusted, following at least one prior outage, or (b) if the real-time operating conditions are more adverse than anticipated in the corresponding studies

R2.3.3. System reconfiguration through manual or automatic control or protection actions.

R2.4. To prepare for the next Contingency, system adjustments may be made, including changes to generation, uses of the transmission system, and the transmission system topology.

R3. The Reliability Coordinator's methodology for determining SOLs, shall include, as a minimum, a description of the following, along with any reliability margins applied for each:

R3.1. Study model (must include at least the entire Reliability Coordinator Area as well as the critical modeling details from other Reliability Coordinator Areas that would impact the Facility or Facilities under study.)

R3.2. Selection of applicable Contingencies

R3.3. A process for determining which of the stability limits associated with the list of multiple contingencies (provided by the Planning Authority in accordance with FAC-014 Requirement 6) are applicable for use in the operating horizon given the actual or expected system conditions.

R3.3.1. This process shall address the need to modify these limits, to modify the list of limits, and to modify the list of associated multiple contingencies.

R3.4. Level of detail of system models used to determine SOLs.

R3.5. Allowed uses of Special Protection Systems or Remedial Action Plans.

R3.6. Anticipated transmission system configuration, generation dispatch and Load level

R3.7. Criteria for determining when violating a SOL qualifies as an Interconnection Reliability Operating Limit (IROL) and criteria for developing any associated IROL Tv.

R4. The Reliability Coordinator shall issue its SOL Methodology and any changes to that methodology, prior to the effectiveness of the Methodology or of a change to the Methodology, to all of the following:

R4.1. Each adjacent Reliability Coordinator and each Reliability Coordinator that indicated it has a reliability-related need for the methodology.

R4.2. Each Planning Authority and Transmission Planner that models any portion of the Reliability Coordinator's Reliability Coordinator Area.

R4.3. Each Transmission Operator that operates in the Reliability Coordinator Area.

The requirements of FAC-014-2 specify that the Reliability Coordinator and the Transmission Operator shall establish SOLs consistent with the Reliability Coordinator SOL methodology:

R1. The Reliability Coordinator shall ensure that SOLs, including Interconnection Reliability Operating Limits (IROLs), for its Reliability Coordinator Area are established and that the SOLs (including Interconnection Reliability Operating Limits) are consistent with its SOL Methodology.

R2. The Transmission Operator shall establish SOLs (as directed by its Reliability Coordinator) for its portion of the Reliability Coordinator Area that are consistent with its Reliability Coordinator's SOL Methodology.

NERC proposes to retire IRO-005-3a, Requirement R10, because of the overlap with the above requirements. In addition, resolution of real-time conflicts is addressed in IRO-014-2, Requirements R6, R7, and R8:

R6. During each instance where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact each impacted Reliability Coordinator shall operate as though the problem exists. [Violation Risk Factor: High] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

R7. During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, the Reliability Coordinator that identified the Adverse Reliability Impact shall develop an action plan to resolve

the Adverse Reliability Impact. [Violation Risk Factor: High][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

R8. During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, each Reliability Coordinator shall implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact unless such actions would violate safety, equipment, regulatory or statutory requirements. [Violation Risk Factor: High][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

Currently-effective IRO-005-3a, Requirement R11, requires Transmission Service Providers to “respect these SOLs or IROLs in accordance with filed tariffs and regional Total Transfer Calculation and Available Transfer Calculation process.” MOD-001-1a has requirements that address the reliability objective of this requirement. Specifically, requirements R1 and R2 state:

R1. Each Transmission Operator shall select one of the methodologies listed below for calculating Available Transfer Capability (ATC) or Available Flowgate Capability (AFC) for each ATC Path per time period identified in R2 for those Facilities within its Transmission operating area: [Violation Risk Factor: Lower] [Time Horizon: Operations Planning]

- The Area Interchange Methodology, as described in MOD-028
- The Rated System Path Methodology, as described in MOD-029
- The Flowgate Methodology, as described in MOD-030

R2. Each Transmission Service Provider shall calculate ATC or AFC values as listed below using the methodology or methodologies selected by its Transmission Operator(s): [Violation Risk Factor: Lower [Time Horizon: Operations Planning]

R2.1. Hourly values for at least the next 48 hours.

R2.2. Daily values for at least the next 31 calendar days.

R2.3. Monthly values for at least the next 12 months (months 2-13).”

Based on the ATC and AFC calculation requirements in MOD-001-1a, Requirement R11 of IRO-005-3a should be retired to eliminate redundancy and unnecessary overlap.

Currently-effective IRO-005-3a Requirement R12 was revised and separated into two requirements. The new requirements call for notifications when issues are identified and when they are mitigated:

R1. When the results of an Operational Planning Analysis or Real-time Assessment indicate an anticipated or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]

R2. Each Reliability Coordinator that identifies an anticipated or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when the problem has been mitigated. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]

Requirements Related to Coordination of Reliability Coordinator's Operations

IRO-014-2

The primary purpose of proposed Reliability Standard IRO-014-2 is to ensure that each Reliability Coordinator's operations are coordinated such that they will not have an Adverse Reliability Impact on other Reliability Coordinator Areas and to preserve the reliability benefits of interconnected operations. IRO-014-2, Requirement R1 provides:

R1. Each Reliability Coordinator shall have Operating Procedures, Operating Processes, or Operating Plans for activities that require notification, exchange of information or coordination of actions that may impact other Reliability Coordinator Areas to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following: *[Violation Risk Factor: Medium]* *[Time Horizon: Same Day Operations and Operations Planning]*

1.1. Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators.

1.2. Energy and capacity shortages.

1.3. Planned or unplanned outage information.

1.4. Control of voltage, including the coordination of reactive resources.

1.5. Coordination of information exchange to support reliability assessments.

1.6. Authority to act to prevent and mitigate system conditions which could cause Adverse Reliability Impacts to other Reliability Coordinator Areas.

1.7. Weekly conference calls

R2. Each Reliability Coordinator shall maintain its Operating Procedures, Operating Processes, or Operating Plans identified in Requirement R1 as follows: *[Violation Risk Factor: Lower] [Time Horizon: Same Day Operations and Operations Planning]*

2.1. Review and update annually with no more that 15 months between reviews.

2.2. Obtain written agreement from all of the Reliability Coordinators required to take the indicated action(s) for each update.

2.3. Distribute to all Reliability Coordinators that are required to take the indicated action(s) within 30 days of an update.

R3. Each Reliability Coordinator shall make notifications and exchange reliability-related information with other Reliability Coordinators in accordance with the Operating Procedures, Operating Processes, or Operating Plans identified in Requirement R1. *[Violation Risk Factor: Medium][Time Horizon: Real-time Operations and Operations Planning]*

R4. Each Reliability Coordinator shall participate in agreed upon conference calls, at least weekly (per Requirement 1, Part 1.7) with other Reliability Coordinators within the same Interconnection. *[Violation Risk Factor: Lower][Time Horizon: Real-time Operations]*

R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify all other Reliability Coordinators. *[Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*

R6. During each instance where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact each impacted Reliability Coordinator shall operate as though the problem exists. *[Violation Risk Factor: High] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*

R7. During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, the Reliability Coordinator that identified the Adverse Reliability Impact shall develop an action plan to resolve the Adverse Reliability Impact. *[Violation Risk Factor: High][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*

R8. During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, each Reliability Coordinator shall implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact unless such actions would violate safety, equipment, regulatory or statutory requirements. *[Violation Risk Factor: High][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*

The proposed standard IRO-014-2 is a result of the standard drafting team reviewing the requirements of IRO-014-1, IRO-015-1 and IRO-016-1. The standard drafting team revised the Reliability Standards and incorporated them into a single Reliability Standard with eight (8) requirements. Accordingly, NERC is proposing to retire four (4) requirements of IRO-014-1, as discussed below.

The standard drafting team included Requirement R1 of IRO-014-1 in the proposed IRO-014-2 and added Part 1.7, which requires Reliability Coordinators to have weekly conference calls. Additionally, while Requirement R1 of IRO-014-1 addresses “Operating Procedures, Operating Processes, or Operating Plans for activities that require notification, exchange of information or coordination of actions that may impact other Reliability Coordinator Areas to support Interconnection reliability,” proposed IRO-014-2, Requirement R1 defines specific information that is to be included in these Operating Procedures, Operating Processes, or Operating Plans. Thus, with the exception of the addition of Part 1.7, the proposed IRO-014-2, Requirement R1 achieves the same or greater reliability objective as the IRO-014-1 Reliability Standard.

Requirement R2 of currently-effective IRO-014-1 addresses agreement by others as well as distribution of the Operating Procedures, Operating Processes, or Operating Plans. The standard drafting team revised this requirement to include these same items with the addition of provisions for an annual update of the Operating Procedures, Operating Processes, or Operating Plans with no more than 15 months between updates.

Requirement R3 of IRO-014-1, which is proposed to be retired, states:

R3. A Reliability Coordinator's Operating Procedures, Processes, or Plans developed to support a Reliability Coordinator-to-Reliability Coordinator Operating Procedure, Process, or Plan shall include:

R3.1. A reference to the associated Reliability Coordinator-to-Reliability Coordinator Operating Procedure, Process, or Plan.

R3.2. The agreed-upon actions from the associated Reliability Coordinator-to-Reliability Coordinator Operating Procedure, Process, or Plan.

Requirement R3 of IRO-014-1 is administrative in nature, describing the administrative contents of the plans rather than the reliability situations that should be addressed in the plans.

Accordingly, IRO-014-1, Requirement R3 is proposed for retirement.

Requirement R4 of currently-effective IRO-014-1, states:

R4. Each of the Operating Procedures, Processes, and Plans addressed in Reliability Standard IRO-014 Requirement 1 and Requirement 3 shall:

R4.1. Include version control number or date.

R4.2. Include a distribution list.

R4.3. Be reviewed, at least once every three years, and updated if needed

This requirement is also administrative in nature, describing document management best practices and direction as to "how" to implement other requirements (*i.e.*, through a distribution list). Requirement R3 of IRO-014-1 and its subparts are good utility practices to be used as a guideline for use in developing the Operating Procedures, Processes or Plans. The provisions of IRO-014-1, Requirement R4.3 have been revised and incorporated into Requirement R2 of proposed IRO-014-2, which requires an annual review rather than every three year review.

The requirements contained in currently-effective IRO-015-1 have been incorporated into proposed IRO-014-2, with the exception of proposed Requirement R3. The standard drafting team combined IRO-014-1 and its sub-requirements into a single requirement –now proposed as Requirement R3 of IRO-014-2 – which states:

R3. Each Reliability Coordinator shall make notifications and exchange reliability-related information with other Reliability Coordinators in accordance with the Operating Procedures, Operating Processes, or Operating Plans identified in Requirement R1.

The standard drafting team revised currently-effective IRO-015-1, Requirement R2 by combining the main requirement and sub-requirement into a single requirement – now proposed as Requirement R4 of IRO-014-2 – which states:

R4. Each Reliability Coordinator shall participate in agreed upon conference calls, at least weekly (per Requirement 1, Part 1.7) with other Reliability Coordinators within the same Interconnection.

Requirement R3 in IRO-015-1 is proposed to be retired because it is redundant with proposed Requirement R3 of IRO-014-2. Specifically, Requirement R3 of IRO-015-1 requires that each “Reliability Coordinator shall provide reliability-related information as requested by other Reliability Coordinators.” However, Reliability Coordinators have a requirement to share information as they try to confirm the existence of operating issues as part of IRO-014-2, Requirement R3. Therefore, there is unnecessary overlap with Requirement R3 of IRO-015-1 and proposed Requirement R3 of IRO-014-2, and Requirement R3 of IRO-015-1 should therefore be retired.

The Requirements contained in currently-effective IRO-016-1 have been incorporated into proposed IRO-014-2, with the exception of Requirement R2. The standard drafting team revised IRO-016-1, Requirement R1 by separating the reliability objectives of the Requirement and its sub-requirements into distinct, measurable requirements. The main Requirement R1 and sub-requirement R1.1 have been simplified and are included in proposed IRO-014-2, Requirement R5, which states: “Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify all other Reliability Coordinators.”

The reliability objective of IRO-106-1, Parts R1.2, R1.2.1, and R1.2.2 are incorporated as proposed Requirements R6 and R7 of IRO-014-2. The original language in IRO-016-1 states:

R1.2. If the involved Reliability Coordinators cannot agree on the problem(s) each Reliability Coordinator shall re-evaluate the causes of the disagreement (bad data, status, study results, tools, etc.). [Violation Risk Factor: Medium]

R1.2.1 If time permits, this re-evaluation shall be done before taking corrective actions. [Violation Risk Factor: Medium]

R1.2.2 If time does not permit, then each Reliability Coordinator shall operate as though the problem(s) exist(s) until the conflicting system status is resolved. [Violation Risk Factor: Medium]

The proposed IRO-014-2, Requirements R6 and R7 provide:

R6. During each instance where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact each impacted Reliability Coordinator shall operate as though the problem exists. [Violation Risk Factor: High] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

R7. During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, the Reliability Coordinator that identified the Adverse Reliability Impact shall develop an action plan to resolve the Adverse Reliability Impact. [Violation Risk Factor: High][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]”

For sub requirement R1.3, the standard drafting team removed the language relating to the “most conservative solution” because it cannot be measured. The requirement was revised and is included in proposed IRO-014-2, Requirement R8:

R8. During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, each Reliability Coordinator shall implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact unless such actions would violate safety, equipment, regulatory or statutory requirements. [Violation Risk Factor: High][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]”

NERC is proposing, in Requirement R8, to use the mitigation plan of the Reliability Coordinator to implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact, in cases where an agreed to mitigation plan cannot be developed.

This ensures that there is an action plan developed and implemented. There may be cases where one Reliability Coordinator identifies a potential problem in another Reliability Coordinator Area and that Reliability Coordinator does not see the same problem.

IRO-016-1, Requirement R2, is proposed for retirement:

R2. The Reliability Coordinator shall document (via operator logs or other data sources) its actions taken for either the event or for the disagreement on the problem(s) or for both.

This requirement is a measure of Requirement R1 of IRO-016-1 and should not be included in the Requirements.

B. Enforceability of Proposed IRO Reliability Standards

The proposed IRO Reliability Standards contain Measures that support each Requirement by clearly identifying what is required and how the Requirements will be enforced. The measures are included in the proposed standards attached as **Exhibit B**. Additionally, each of the proposed IRO Reliability Standards is assigned a Violation Risk Factor (“VRF”) and a Violation Severity Level (“VSL”) which supports the determination of a base penalty amount for violations of the requirements as required by NERC Sanction Guidelines. The VSLs provide further guidance on the way that NERC will enforce the Requirements of the proposed IRO Reliability Standards. The VRFs and VSLs for the proposed IRO Reliability Standards comport with NERC and Commission guidelines related to their assignments. For a detailed review of the VRFs, the VSLs, and the analysis of how the VRFs and VSLs were determined using these guidelines, see **Exhibit D**. The VSLs have been developed based on the situations an auditor may encounter during a compliance audit.

C. Response to Order No. 693 Directives

There were three directives issued in Order No. 693 related to the proposed IRO Reliability Standards. A summary of each of these directives and analysis of how each directive was addressed or is being addressed is included below.

In Order No. 693 (at P 896), FERC issued one directive related to IRO-001-1 to “eliminate the regional reliability organization as an applicable entity.” The proposed IRO-001-3 Reliability Standard completes this directive by eliminating the regional reliability organization from the proposed Reliability Standard.

In Order No. 693 (at P 905), FERC issued one directive related to the IRO-002-1 Reliability Standard:

Further, consistent with the NOPR, the Commission directs the ERO to modify IRO-002-1 to require a minimum set of tools that must be made available to the reliability coordinator. We believe that this requirement will ensure that a reliability coordinator has the tools it needs to perform its functions. Further, as noted by Dominion, such a requirement promotes a more proactive approach to maintaining reliability.

The standard drafting team recognized that the development of a minimum set of tools should be addressed through the work of the Real-Time Tools Best Practices Task Force, which was charged with developing a list of tools required to perform real time operations functions and submit proposed Standard Authorization Requests (“SARs”) based on their work. As requirements for these tools are developed, appropriate standards projects will be initiated to incorporate the tools within the NERC Organization Registration and Certification Process, and the applicable Reliability Standards. NERC is therefore addressing this directive in that effort.

In Order No. 693 (at P 951), FERC also issued the following directives related to the IRO-005-1 Reliability Standard:

Accordingly, the Commission approves Reliability Standard IRO-005-1 as mandatory and enforceable. Further, because IRO-005-1 has no Measures or Levels of Non-Compliance, pursuant to section 215(d)(5) of the FPA and § 39.5(f) of our regulations, the Commission directs the ERO to develop a modification to IRO-005-1 through the Reliability Standards development process that includes Measures and Levels of Non-Compliance. The Commission further directs that the Measures and Levels of Non-Compliance specific to IROL violations must be commensurate with the magnitude, duration, frequency and causes of the violations and whether these occur during normal or contingency conditions. Finally, the Commission directs the ERO to conduct a survey on IROL practices and actual operating experiences by requiring reliability coordinators to report any violations of IROL, their causes, the date and time, the durations and magnitudes in which actual operations exceeds IROLs to the ERO on a monthly basis for one year beginning two months after the effective date of the Final Rule. We may propose further modifications to IRO-005-1 based on the survey results.

In response to this directive, the standard drafting team developed VRFs, Time Horizons, and VSLs for each requirement in the proposed IRO-005-4 Reliability Standard. A detailed analysis of the proposed VRFs and VSLs for the proposed IRO Reliability Standards is included as **Exhibit D**. Additionally, NERC conducted a year-long survey of IROL practices and actual operating experience, the results of which were filed with the Commission on October 31, 2008, in Docket number RM06-16-000.³⁶

FERC issued no directives related to the IRO-014-1 Reliability Standard in Order No. 693.

D. Requested Effective Dates

NERC requests that each of the proposed IRO Reliability Standards become effective in accordance with the effective date provisions contained therein. Additionally, NERC requests approval of the implementation plan for the proposed IRO Reliability Standards, and approval of

³⁶ *Compliance Filing of The North American Electric Reliability Corporation in Response to Paragraph 951 of Order No. 693*, Docket No. RM06-16-000, available at: <http://www.nerc.com/files/PublicFinalFiled-IROL-Data-Request-10312008.pdf>.

the retirement of the following six Reliability Standards, effective at midnight immediately prior to the first day of the first calendar quarter that is twelve months following the effective date of a Final Rule in this docket:

- IRO-001-1.1 - Reliability Coordination - Responsibilities and Authorities
- IRO-002-2 - Reliability Coordination - Facilities
- IRO-005-3a - Reliability Coordination - Current Day Operations
- IRO-014-1 - Procedures, Processes, or Plans to Support Coordination Between Reliability Coordinators
- IRO-015-1 - Notifications and Information Exchange Between Reliability Coordinators
- IRO-016-1 - Coordination of Real-time Activities Between Reliability Coordinators.

The proposed effective dates are just and reasonable and appropriately balance the urgency in the need to implement the proposed standards against the reasonableness of the time allowed for those who must comply to develop the necessary procedures and take the necessary actions to reflect the requirements and processes identified in the proposed standards. The proposed effective dates will allow affected entities adequate time to ensure compliance with the proposed standards in accordance with Order No. 672.³⁷

V. SUMMARY OF THE RELIABILITY STANDARD DEVELOPMENT

The highlights of the development process for the proposed IRO Reliability Standards are summarized below. **Exhibit F** contains a Summary of the Development Authorization, Posting, and Balloting History of the proposed IRO Reliability Standards. **Exhibit E** contains the Consideration of Comments Reports created during the development of the Proposed IRO

³⁷ Order No. 672 at P 333, *order on reh'g*, Order No. 672-A, FERC Stats. & Regs. ¶ 31,212 (2006) (“In considering whether a proposed Reliability Standard is just and reasonable, FERC will consider also the timetable for implementation of the new requirements, including how the proposal balances any urgency in the need to implement it against the reasonableness of the time allowed for those who must comply to develop the necessary procedures, software, facilities, staffing or other relevant capability.”).

Standards. **Exhibit F** contains the complete record of development for the proposed IRO Reliability Standards.

A. Overview of the Standards Drafting Team

When evaluating modified Reliability Standards, the Commission is expected to give “due weight” to the technical expertise of the ERO.³⁸ The technical expertise of the ERO is derived from the standard drafting team. For this project, the standard drafting team consisted of eight industry experts with a wealth of diverse industry experience across North America, including both the continental United States and Canada. A standard drafting team roster and member biographical information is included as **Exhibit G**.

B. Procedural History of the Proposed IRO Reliability Standards

The project to revise the proposed IRO Reliability Standards, Project 2006-06, was initiated in January of 2007 for the purpose of revising IRO-001-1, IRO-002-2, IRO-005-3a, IRO-014-1, IRO-015-1, IRO-016-1, COM-001-2, and COM-002-3. The SAR for this project described the purpose of the project “[t]o ensure that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique and enforceable; and to ensure that this set of requirements is sufficient to maintain reliability of the Bulk Electric System.”³⁹ Given that the draft COM-001-2 and COM-002-3 standards focused on communication protocols rather than responsibilities for Reliability Coordinator actions to prevent instability, uncontrolled separation, or cascading outages, the COM-001-2 and COM-

³⁸ Federal Power Act §215(d)(2); 16 U.S.C. §824o(d)(2)(2012).

³⁹ NERC Standards Authorization Request for Project 2006-06, Reliability Coordination at p. 2, available at: http://www.nerc.com/docs/standards/sar/RC%20_SAR_Draft%202_clean_050107.pdf.

002-3 standards were completed on a separate track from the proposed IRO Reliability Standards, and will be filed by NERC in a separate petition for approval.

The SAR was posted for two industry comment periods and then approved by the Standards Committee on May 1, 2007 for standard development to begin. The draft IRO-002-3, IRO-005-4, and IRO-014-1 standards were posted for five comment periods, with one initial ballot, one successive ballot, and a final recirculation ballot. The balloting of these standards concluded with a recirculation ballot achieving a quorum of 94.13 percent with weighted stakeholder segment approval of 76.99 percent for IRO-002-3—Reliability Coordination-Analysis tool, weighted stakeholder segment approval of 75.17 percent for IRO-005-4—Reliability Coordination-Current Day Operations, and weighted stakeholder segment approval of 76.27 percent for IRO-014-2—Coordination Among Reliability Coordinators.

The draft IRO-001-3 Reliability Standard was posted for seven comment periods, with one initial ballot, two successive ballots, and a final recirculation ballot. The balloting of the proposed IRO-001-3—Reliability Coordination, Responsibilities and Authorities Reliability Standard concluded with a recirculation ballot achieving a quorum of 85.04 percent and weighted stakeholder segment approval of 81.72 percent.

C. Board of Trustees Approval

The final drafts of the proposed IRO Reliability Standards, a NERC staff summary of the revisions, underlying history, minority issues and associated standard drafting team responses, and additional background information, were presented to NERC's Board of Trustees for approval on August 4, 2011 and August 16, 2012.⁴⁰ The Board of Trustees approved the

⁴⁰ The NERC Board of Trustees approved the proposed IRO-002-3, IRO-005-4, and IRO-014-2 on August 4, 2011. The Board also approved a proposed IRO-001-2 Reliability Standard on August 4, 2011, that was subsequently

revisions to the proposed IRO Reliability Standards and directed NERC staff to make the requisite filings with applicable regulatory authorities.

VI. CONCLUSION

For the reasons set forth above, NERC requests that the Commission approve the proposed IRO Reliability Standards as follows:

- IRO-001-3 — Reliability Coordination — Responsibilities and Authorities
- IRO-002-3 — Reliability Coordination – Analysis Tools
- IRO-005-4 — Reliability Coordination – Current Day Operations
- IRO-014-2 — Coordination Among Reliability Coordinators

NERC also seeks approval of the implementation plan for the proposed IRO Reliability Standards, and approval of the retirement of six Reliability Standards, effective at midnight immediately prior to the first day of the first calendar quarter that is twelve months following the effective date of a Final Rule in this docket as follows:

- IRO-001-1.1 - Reliability Coordination - Responsibilities and Authorities
- IRO-002-2 - Reliability Coordination - Facilities
- IRO-005-3a - Reliability Coordination - Current Day Operations
- IRO-014-1 - Procedures, Processes, or Plans to Support Coordination Between Reliability Coordinators
- IRO-015-1 - Notifications and Information Exchange Between Reliability Coordinators
- IRO-016-1 - Coordination of Real-time Activities Between Reliability Coordinators.

Respectfully submitted,

/s/ Holly A. Hawkins

revised by the standard drafting team before it was filed at FERC. The revision is designated as IRO-001-3, was approved by the Board on August 16, 2012, and is included in this petition for approval.

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April 16, 2013

CERTIFICATE OF SERVICE

I hereby certify that I have served a copy of the foregoing document upon all parties listed on the official service list compiled by the Secretary in this proceeding.

Dated at Washington, D.C. this 16th day of April, 2013.

/s/ Holly A. Hawkins
Holly A. Hawkins

*Assistant General Counsel for North
American Electric Reliability Corporation*

Exhibit A

Order No. 672 Criteria

EXHIBIT A

Demonstration that the proposed Reliability Standards are just, reasonable, not unduly discriminatory or preferential and in the public interest

Order No. 672 Criteria

In Order No. 672, FERC identified a number of criteria it will use to analyze Reliability Standards proposed for approval to ensure they are just, reasonable, not unduly discriminatory or preferential, and in the public interest.⁴⁶ The discussion below identifies these factors and explains how the proposed Reliability Standard have met or exceeded the criteria:

1. *Proposed Reliability Standards must be designed to achieve a specified reliability goal and must contain a technically sound method to achieve that goal.*

Order No. 672 at P 321. The proposed Reliability Standard must address a reliability concern that falls within the requirements of section 215 of the FPA. That is, it must provide for the reliable operation of Bulk-Power System facilities. It may not extend beyond reliable operation of such facilities or apply to other facilities. Such facilities include all those necessary for operating an interconnected electric energy transmission network, or any portion of that network, including control systems. The proposed Reliability Standard may apply to any design of planned additions or modifications of such facilities that is necessary to provide for reliable operation. It may also apply to Cybersecurity protection.

Order No. 672 at P 324. The proposed Reliability Standard must be designed to achieve a specified reliability goal and must contain a technically sound means to achieve this goal. Although any person may propose a topic for a Reliability Standard to the ERO, in the ERO's process, the specific proposed Reliability Standard should be developed initially by persons within the electric power industry and community with a high level of technical expertise and be based on sound technical and engineering criteria. It should be based on actual data and lessons learned from past operating incidents, where appropriate. The process for ERO approval of a proposed Reliability Standard should be fair and open to all interested persons.

The proposed IRO-001-3 Reliability Standard achieves the specific reliability goal of establishing the authority of a Reliability Coordinator to direct other entities to prevent an Emergency or Adverse Reliability Impact to the Bulk Electric System. The proposed standard

⁴⁶ Section 215(d)(2)(A) of the FPA; 18 C.F.R. §39.5.

achieves this goal by requiring the Reliability Coordinator to have the responsibility and authority to act or direct others to act (which could include issuing Reliability Directives) to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impact. The goal is further achieved by requiring those entities that would receive direction (which could include Reliability Directives) from the Reliability Coordinator to comply with its Reliability Coordinator's direction unless compliance with the direction cannot be physically implemented or unless such actions would violate safety, equipment, regulatory, or statutory requirements. These reliability entities include the Balancing Authority, Distribution Provider, Generator Operator, and Transmission Operator, which are required to inform its Reliability Coordinator upon recognition of its inability to comply with its Reliability Coordinator's direction. Because the Reliability Coordinator is the functional entity charged with maintaining the Real-time operating reliability of the Bulk Electric System within a Reliability Coordinator Area, it must have the authority necessary to direct others to prevent an Emergency or Adverse Reliability Impact. The Reliability Coordinator, who has complete visibility with its Reliability Coordinator area, enhances Real-time operation of the Bulk Electric System by ensuring that direction is being administered by a single functional entity that has the wide-area awareness necessary to mitigate an Emergency or Adverse Reliability Impact.

Proposed IRO-002-3 achieves the specific reliability goal of ensuring that analysis tools are available to the Reliability Coordinator and having a mitigation plan in the event that the analysis tools are unavailable. The requirements provide the system operator with the authority to approve, deny or cancel planned outages to the analysis tools, and specify that the responsible entity have procedures in place to mitigate the effects of analysis tool outages.

Proposed IRO-005-4 achieves the specific reliability goal of ensuring that entities are notified when an expected or actual event with Adverse Reliability Impacts is identified and when the event has ended or been mitigated. The requirements apply to the Reliability Coordinator and specify when such notifications are required.

The purpose of Proposed IRO-014-2 is to ensure that each Reliability Coordinator's operations are coordinated such that they will not have an Adverse Reliability Impact on other Reliability Coordinator Areas and to preserve the reliability benefits of interconnected operations. The Requirements of the Reliability Standard achieve this reliability goal by requiring the Reliability Coordinator to have Operating Processes, Operating Procedures or Operating Plans in place to coordinate operations with other Reliability Coordinators.

2. *Proposed Reliability Standards must be applicable only to users, owners and operators of the bulk power system, and must be clear and unambiguous as to what is required and who is required to comply.*

Order No. 672 at P 322. *The proposed Reliability Standard may impose a requirement on any user, owner, or operator of such facilities, but not on others.*

Order No. 672 at P 325. *The proposed Reliability Standard should be clear and unambiguous regarding what is required and who is required to comply. Users, owners, and operators of the Bulk-Power System must know what they are required to do to maintain reliability.*

The proposed IRO-001-3 Reliability Standard is applicable only to users, owners and operators of the North American bulk power system, and not others. The proposed IRO-001-3 standard applies to Balancing Authorities, Distribution Providers, Generator Operators, Transmission Operators, and Reliability Coordinators, and is clear and unambiguous as to what is required and who is required to comply, in accordance with Order No. 672.

The proposed IRO-002-3, IRO-005-4, and IRO-014-2 Reliability Standards are applicable only to Reliability Coordinators. No other registered entities are required to comply with these requirements.

Additionally, the requirements are structured to set out who shall do what and under what conditions by identifying a Functional Entity that is obligated to comply with each requirement. The requirements also include a statement that identifies the specific expectations for those Functional Entities. Measures are also provided for each requirement and include examples of evidence that are acceptable to demonstrate compliance with the requirement.

3. *A proposed Reliability Standard must include clear and understandable consequences and a range of penalties (monetary and/or non-monetary) for a violation.*

Order No. 672 at P 326. *The possible consequences, including range of possible penalties, for violating a proposed Reliability Standard should be clear and understandable by those who must comply.*

The proposed Reliability Standards include clear and understandable consequences. A Time Horizon, VRF and VSL is provided for each main requirement. Upon approval by FERC, the range of penalties for violations will be based on the applicable Time Horizon, VRF and VSL and will be administered based on the sanctions table and supporting penalty determination process described in the FERC-approved NERC Sanction Guidelines, Appendix 4B in NERC's Rules of Procedure. Therefore, responsible entities understand the potential impacts of non-compliance to the proposed requirements.

4. *A proposed Reliability Standard must identify clear and objective criterion or measure for compliance, so that it can be enforced in a consistent and non-preferential manner.*

Order No. 672 at P 327. There should be a clear criterion or measure of whether an entity is in compliance with a proposed Reliability Standard. It should contain or be accompanied by an objective measure of compliance so that it can be enforced and so that enforcement can be applied in a consistent and non-preferential manner.

The proposed Reliability Standards contain measures that support each standard requirement and that clearly identifies what is required and how the requirements will be enforced. These measures help ensure that the requirements will be enforced in a clear, consistent, and non-preferential manner and without prejudice to any party.

5. *Proposed Reliability Standards should achieve a reliability goal effectively and efficiently*

— but do not necessarily have to reflect “best practices” without regard to implementation cost.

Order No. 672 at P 328. The proposed Reliability Standard does not necessarily have to reflect the optimal method, or “best practice,” for achieving its reliability goal without regard to implementation cost or historical regional infrastructure design. It should however achieve its reliability goal effectively and efficiently.

The proposed IRO-001-3 Reliability Standard includes requirements to provide authority to the Reliability Coordinator and guidance on the delegation of tasks. These requirements will be mandatory and effective in the United States and do not impose an undue cost for implementation. The proposed standard is effective in that it removed unnecessary requirements on the Load-Serving Entity, Purchase-Selling Entity, Transmission Service Provider, and Regional Reliability Organization and retains the focus on the key functional entities responsible for Real-time operations. Those entities are the Balancing Authority, Distribution Provider, Generator Operator, and Reliability Coordinator. Clearly identifying the role of the Reliability Coordinator is effective and efficient because it clearly gives the Reliability Coordinator authority to take action when it identifies actions required to mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impact.

The proposed IRO-002-3 Reliability Standard provides the system operator with the authority to approve, deny or cancel planned outages of its own analysis tools. The standard further requires that the Reliability Coordinator have procedures in place to mitigate the effects of analysis tool outages. These requirements are procedural in nature and are not burdensome or costly for an entity to comply with.

The proposed Reliability Standard IRO-005-4 achieves the specific reliability goal of ensuring that entities are notified when an expected or actual event with Adverse Reliability Impacts is identified and when the event has ended or been mitigated. The requirements apply to

the Reliability Coordinator and specify when such notifications are required. Because entities are required to comply with similar standards, the cost to implement is negligible.

The proposed Reliability Standard IRO-014-2 achieves the specific reliability goal of ensuring that operations are coordinated among Reliability Coordinators by having Operating Processes, Operating Plans and Operating Procedures that address notifications and information exchange as well as actions to be taken by each party. The requirements apply to the Reliability Coordinator and specify when such notifications, information exchange and action are required. Because entities are required to comply with similar standards, the cost to implement is negligible.

6. *Proposed Reliability Standards cannot be “lowest common denominator,” i.e., cannot reflect a compromise that does not adequately protect bulk power system reliability. Proposed Reliability Standards can consider costs to implement for smaller entities, but not at consequences of less than excellence in operating system reliability.*

Order No. 672 at P 329. The proposed Reliability Standard must not simply reflect a compromise in the ERO’s Reliability Standard development process based on the least effective North American practice — the so-called “lowest common denominator” — if such practice does not adequately protect Bulk-Power System reliability. Although FERC will give due weight to the technical expertise of the ERO, we will not hesitate to remand a proposed Reliability Standard if we are convinced it is not adequate to protect reliability.

Order No. 672 at P 330. A proposed Reliability Standard may take into account the size of the entity that must comply with the Reliability Standard and the cost to those entities of implementing the proposed Reliability Standard. However, the ERO should not propose a “lowest common denominator” Reliability Standard that would achieve less than excellence in operating system reliability solely to protect against reasonable expenses for supporting this vital national infrastructure. For example, a small owner or operator of the Bulk-Power System must bear the cost of complying with each Reliability Standard that applies to it.

The proposed Reliability Standards do not reflect a “lowest common denominator” approach. To the contrary, the proposed standards represent a direct improvement over the currently-effective versions of the Reliability Standards. Additionally, the proposed Reliability Standards were not developed or adopted with the intent of protecting against the imposition of reasonable expenses. The standard drafting team considered and evaluated the effect these

standards would have on the applicable entities and determined that no entities would be unduly burdened by the cost to implement its requirements. No special accommodation was made for smaller entities, and the proposed standards will apply equally to all applicable entities in a consistent manner.

7. *Proposed Reliability Standards must be designed to apply throughout North America to the maximum extent achievable with a single Reliability Standard while not favoring one area or approach.*

Order No. 672 at P 331. A proposed Reliability Standard should be designed to apply throughout the interconnected North American Bulk-Power System, to the maximum extent this is achievable with a single Reliability Standard. The proposed Reliability Standard should not be based on a single geographic or regional model but should take into account geographic variations in grid characteristics, terrain, weather, and other such factors; it should also take into account regional variations in the organizational and corporate structures of transmission owners and operators, variations in generation fuel type and ownership patterns, and regional variations in market design if these affect the proposed Reliability Standard.

The proposed Reliability Standard applies throughout North America and does not favor one area or approach. There is no regional variation in the organization and corporate structures of Transmission Owners and Operators, variations in generation fuel type and ownership patterns, and regional variations in market design that affect the proposed Requirements in this Reliability Standard.

8. *Proposed Reliability Standards should cause no undue negative effect on competition or restriction of the grid.*

Order No. 672 at P 332. As directed by section 215 of the FPA, FERC itself will give special attention to the effect of a proposed Reliability Standard on competition. The ERO should attempt to develop a proposed Reliability Standard that has no undue negative effect on competition. Among other possible considerations, a proposed Reliability Standard should not unreasonably restrict available transmission capability on the Bulk-Power System beyond any restriction necessary for reliability and should not limit use of the Bulk-Power System in an unduly preferential manner. It should not create an undue advantage for one competitor over another.

The proposed Reliability Standard does not restrict the available transmission capability or limit use of the BES in a preferential manner. Proposed IRO-001-3 achieves the specific

reliability goal of establishing Reliability Coordinators and defining their authority to act to preserve the integrity of the BES. The requirements in the other proposed standards should cause no restriction of the grid because having clear responsibilities and authorities assure that the Bulk Electric System operates in a safe and reliable manner in all conditions.

9. *The implementation time for the proposed Reliability Standards must be reasonable.*

Order No. 672 at P 333. In considering whether a proposed Reliability Standard is just and reasonable, FERC will consider also the timetable for implementation of the new requirements, including how the proposal balances any urgency in the need to implement it against the reasonableness of the time allowed for those who must comply to develop the necessary procedures, software, facilities, staffing or other relevant capability.

The proposed effective date for IRO-001-3, included in the corresponding implementation plan proposed for approval, is the first day of the second calendar quarter beyond the date that this standard is approved by FERC. This will allow applicable entities adequate time to develop the documentation and other evidence necessary to exhibit compliance with the requirements.

The proposed effective date for IRO-002-3 is the first day of the first calendar quarter following the effective date of a Final Rule in this docket. Because this is a revision to an existing mandatory and enforceable standard, applicable entities are already complying with the existing standard.

The proposed effective date for IRO-005-4 is the first day of the first calendar quarter following the effective date of a Final Rule in this docket. Because this is a revision to an existing mandatory and enforceable standard, applicable entities are already in compliance with a similar requirement.

The proposed effective date for IRO-014-2 is the first day of the first calendar quarter that is 12 months following the effective date of a Final Rule in this docket. Because this is a revision to existing mandatory and enforceable standards, applicable entities should only have to

make minor revisions to their Operating Plans, Operating Processes or Operating Procedures to show compliance.

10. *The Reliability Standard development process must be open and fair.*

Order No. 672 at P 334. Further, in considering whether a proposed Reliability Standard meets the legal standard of review, we will entertain comments about whether the ERO implemented its Commission-approved Reliability Standard development process for the development of the particular proposed Reliability Standard in a proper manner, especially whether the process was open and fair. However, we caution that we will not be sympathetic to arguments by interested parties that choose, for whatever reason, not to participate in the ERO's Reliability Standard development process if it is conducted in good faith in accordance with the procedures approved by FERC.

The proposed Reliability Standards were developed in accordance with NERC's FERC-approved, ANSI- accredited process for developing and approving Reliability Standards. This process included, among other things, multiple comment periods, pre-ballot review periods, and balloting periods. In addition, all standard drafting team meetings were noticed and open to the public. The initial and recirculation ballots both achieved a quorum and the required ballot pool approvals. NERC considers the comments of all stakeholders and a vote of stakeholders and the NERC Board of Trustees is required to approve a proposed Reliability Standard for submission to the Commission. Therefore, NERC developed the proposed standards in a manner that is open and fair.

11. *Proposed Reliability Standards must balance with other vital public interests.*

Order No. 672 at P 335. Finally, we understand that at times development of a proposed Reliability Standard may require that a particular reliability goal must be balanced against other vital public interests, such as environmental, social and other goals. We expect the ERO to explain any such balancing in its application for approval of a proposed Reliability Standard.

NERC has identified no competing public interests regarding the request for approval of these proposed Reliability Standards. No comments were received that indicated the proposed standards conflict with other vital public interests.

12. Proposed Reliability Standards must consider any other relevant factors.

Order No. 672 at P 323. *In considering whether a proposed Reliability Standard is just and reasonable, we will consider the following general factors, as well as other factors that are appropriate for the particular Reliability Standard proposed.*

No other factors relevant to whether the proposed Reliability Standards are just and reasonable were identified.

Exhibit B

Reliability Standards submitted for Approval

A. Introduction

1. **Title: Reliability Coordination – Responsibilities and Authorities**
2. **Number:** IRO-001-3
3. **Purpose:** To establish the authority of Reliability Coordinators to direct other entities to prevent an Emergency or Adverse Reliability Impacts to the Bulk Electric System.
4. **Applicability**
 - 4.1. Reliability Coordinator
 - 4.2. Transmission Operator
 - 4.3. Balancing Authority
 - 4.4. Generator Operator
 - 4.5. Distribution Provider
5. **Effective Date:** The first day of the second calendar quarter beyond the date that this standard is approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standard becomes effective on the first day of the first calendar quarter beyond the date this standard is approved by the NERC Board of Trustees, or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities.

B. Requirements

- R1. Each Reliability Coordinator shall have the authority to act or direct others to act (which could include issuing Reliability Directives) to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impact. *[Violation Risk Factor: High][Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*
- R2. Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall comply with its Reliability Coordinator's direction unless compliance with the direction cannot be physically implemented or unless such actions would violate safety, equipment, regulatory, or statutory requirements. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*
- R3. Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to perform as directed in accordance with Requirement R2. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

C. Measures

- M1. Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it had the authority to take

action or direct action, which could have included issuing Reliability Directives, to prevent identified events or mitigate the magnitude or duration of actual events that resulted in an Emergency or Adverse Reliability Impact within its Reliability Coordinator Area. (R1.)

- M2.** Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall have and provide evidence which may include, but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it complied with its Reliability Coordinator's direction, unless the direction could not be physically implemented, or such actions would have violated safety, equipment, regulatory or statutory requirements. In such cases, the Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider shall have and provide copies of the safety, equipment, regulatory, or statutory requirements as evidence for not complying with the Reliability Coordinator's direction. (R2.)
- M3.** Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall have and provide evidence which may include, but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it informed the Reliability Coordinator of its inability to perform as directed in accordance with Requirement R2. (R3.)

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

The Regional Entity shall serve as the Compliance Enforcement Authority (CEA) unless the applicable entity is owned, operated, or controlled by the Regional Entity. In such cases, the ERO or a Regional Entity approved by FERC or other applicable governmental authority shall serve as the CEA.

1.2. Compliance Monitoring and Enforcement Processes:

Compliance Audit

Self-Certification

Spot Checking

Compliance Investigation

Self-Reporting

Complaint

1.3. Data Retention

The following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since

the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.

The Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- The Reliability Coordinator for Requirement R1, Measure M1 shall retain voice recordings for the most recent 90 calendar days or documentation for the most recent 12 calendar months.
- The Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider for Requirements R2 and R3, Measures M2 and M3 shall retain voice recordings for the most recent 90 calendar days or documentation for the most recent 12 calendar months.

If a Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider is found non-compliant, it shall keep information related to the non-compliance until mitigation is complete and approved or for the time specified above, whichever is longer.

The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

1.4. Additional Compliance Information

None.

2. Violation Severity Levels

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	N/A	N/A	N/A	The Reliability Coordinator failed to take action or direct actions, to prevent an identified event that resulted in an Emergency or Adverse Reliability Impact. OR The Reliability Coordinator failed to take action or direct actions to mitigate the magnitude or duration of an event that resulted in an Emergency or Adverse Reliability Impact.
R2	N/A	N/A	N/A	The Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider did not comply with the Reliability Coordinator's direction, and compliance with the direction could have been physically implemented and such actions would not have violated safety, equipment, regulatory, or statutory requirements.
R3	N/A	N/A	N/A	The Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider failed to inform its Reliability Coordinator upon recognition of its inability to perform as directed.

E. Regional Variances

None identified.

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
1	April 4, 2007	Approved by FERC — Effective Date	New
1	May 19, 2011	Replaced Levels of Noncompliance with FERC-approved VSLs	VSL Order
2	To be determined	Retired Requirement R7 to eliminate redundancy with IRO-014-2, Requirement R1.	Project 2006-06
3	TBD	Revised in accordance with SAR for Project 2006-06, Reliability Coordination (RC SDT). Revised the standard and retired six requirements (R1, R2, R4, R5, R6, and R9). Requirement R3 becomes the new R1 and R8 becomes the new R2 and R3.	Project 2006-06
3	August 16, 2012	Adopted by Board of Trustees	

A. Introduction

1. Title: Reliability Coordination — Responsibilities and Authorities

2. Number: IRO-001-~~1.13~~

~~3. Purpose: Reliability Coordinators must have the authority, plans, and agreements in place to immediately direct reliability entities within their Reliability Coordinator Areas to re-dispatch generation, reconfigure transmission, or reduce load to mitigate critical conditions to return the system to a reliable state. If a Reliability Coordinator delegates tasks to others, the Reliability Coordinator retains its responsibilities for complying with NERC and regional standards. Standards of conduct are necessary to ensure the Reliability Coordinator does not act in a manner that favors one market participant over another.~~

3. Purpose: To establish the authority of Reliability Coordinators to direct other entities to prevent an Emergency or Adverse Reliability Impacts to the Bulk Electric System.

4. Applicability

~~4.1. Reliability Coordinators.Coordinator~~

~~4.2. Regional Reliability Organizations.~~

~~4.3.4.2. Transmission Operator.~~

~~4.4.4.3. Balancing Authorities.Authority~~

~~4.5.4.4. Generator Operators.Operator~~

~~4.6. Transmission Service Providers.~~

~~4.7. Load-Serving Entities.~~

~~4.8. Purchasing Selling Entities.~~

~~5. Effective Date: May 13, 2009~~

~~4.5. Distribution Provider~~

5. Effective Date: The first day of the second calendar quarter beyond the date that this standard is approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standard becomes effective on the first day of the first calendar quarter beyond the date this standard is approved by the NERC Board of Trustees, or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities.

B. Requirements

~~R1. Each Regional Reliability Organization, subregion, or interregional coordinating group shall establish one or more Reliability Coordinators to continuously assess transmission reliability and coordinate emergency operations among the operating entities within the region and across the regional boundaries.~~

~~R2. The Reliability Coordinator shall comply with a regional reliability plan approved by the NERC Operating Committee.~~

- ~~R3.~~ The Reliability Coordinator shall have ~~clear decision-making the~~ authority to act ~~and~~ ~~to~~ direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities within its Reliability Coordinator Area to preserve the integrity and reliability of the Bulk Electric System. These actions shall be taken without delay, but no longer than 30 minutes.
- ~~R4.~~ Reliability Coordinators that delegate tasks to other entities shall have formal operating agreements with each entity to others to act (which tasks are delegated. The Reliability Coordinator shall verify that all delegated tasks are understood, communicated, and addressed within its Reliability Coordinator Area. All responsibilities for complying with NERC and regional standards applicable to Reliability Coordinators shall remain with the Reliability Coordinator.
- ~~R5.~~ The Reliability Coordinator shall list within its reliability plan all entities to which the Reliability Coordinator has delegated required tasks.
- ~~R6.~~ The Reliability Coordinator shall verify that all delegated tasks are carried out by NERC-certified Reliability Coordinator operating personnel.
- ~~R7.~~R1. The Reliability Coordinator shall have clear, comprehensive coordination agreements with adjacent Reliability Coordinators to ensure that System Operating Limit could include issuing Reliability Directives) to prevent identified events or mitigate the magnitude or Interconnection Reliability Operating Limit violation mitigation requiring actions duration of actual events that result in adjacent Reliability Coordinator Areas are coordinated an Emergency or Adverse Reliability Impact. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*
- ~~R2.~~ Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities shall comply with Reliability Coordinator directives unless such actions would violate safety, equipment, or regulatory or statutory requirements. Under these circumstances, ~~the~~Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service and Distribution Provider, Load-Serving Entity shall comply with its Reliability Coordinator's direction unless compliance with the direction cannot be physically implemented or unless such actions would violate safety, equipment, regulatory, or Purchasing-Selling Entity shall immediately statutory requirements. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*
- ~~R8.~~R3. Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform ~~the its~~ Reliability Coordinator upon recognition of ~~the its~~ inability to perform the directive so that the Reliability Coordinator may implement alternate remedial actions as directed in accordance with Requirement R2. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

~~R9.~~—The Reliability Coordinator shall act in the interests of reliability for the overall Reliability Coordinator Area and the Interconnection before the interests of any other entity.

C. Measures

- ~~M1.~~ Each ~~Regional Reliability Organization Coordinator~~ shall have, and provide ~~upon request~~, evidence ~~that could~~which may include, but is not limited to signed agreements or other dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent evidence documentation, that will be used to ~~confirm~~determine that it ~~established one or more~~had the authority to take action or direct action, which could have included issuing Reliability Coordinators to continuously assess transmission reliability and coordinate emergency operations among the operating entities within the region and across the regional boundaries as described in Requirement 1. Directives, to prevent identified events or mitigate the magnitude or duration of actual events that resulted in an Emergency or Adverse Reliability Impact within its Reliability Coordinator Area. (R1.)
- ~~M2.~~—Each ~~Reliability Coordinator~~Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall have and provide ~~upon request~~ evidence ~~that could~~which may include, but is not limited to, job descriptions, signed agreements, an authority letter signed by an officer of the company, dated operator logs, dated records, dated and time-stamped voice recordings or other dated transcripts of voice recordings, electronic communications, or equivalent evidence documentation, that will be used to ~~confirm that~~determine that it complied with its Reliability Coordinator's direction, unless the direction could not be physically implemented, or such actions would have violated safety, equipment, regulatory or statutory requirements. In such cases, the Reliability Coordinator has the authority to act as described in Requirement 3.
- ~~M3.~~M2. The ~~Reliability Coordinator~~Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider shall have and provide ~~upon request~~ current formal operating agreements with entities that have been delegated any Reliability Coordinator tasks (Requirement 4 Part 1); copies of the safety, equipment, regulatory, or statutory requirements as evidence for not complying with the Reliability Coordinator's direction. (R2.)
- ~~M4.~~—The Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, job descriptions, signed agreements, records of training sessions, monitoring procedures or other equivalent evidence that will be used to confirm that all delegated tasks are understood, communicated, and addressed within its Reliability Coordinator Area (Requirement 4 Part 2 and Requirement 5).
- ~~M5.~~—The Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, records that show each operating person assigned to perform a Reliability Coordinator delegated task has a NERC Reliability Coordinator certification credential, or equivalent evidence confirming that delegated tasks were carried out by NERC-certified Reliability Coordinator operating personnel, as specified in Requirement 6.

~~M6.~~—The Reliability Coordinator shall have and provide upon request as evidence, signed agreements with adjacent Reliability Coordinators that will be used to confirm that it will coordinate corrective actions in the event SOL and IROL mitigation actions within neighboring areas must be taken. (Requirement 7)

~~M7.~~**M3.** Each Transmission Operator, Balancing Authority, Generator Operator, ~~Transmission Service and Distribution~~ Provider, ~~Load-Serving Entity, or Purchasing-Selling Entity~~ shall have and provide ~~upon request~~ evidence ~~that could~~ which may include, but is not limited to, dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, ~~or other electronic communications, or~~ equivalent evidencedocumentation, that will be used to ~~confirm~~determine that it ~~did comply with the Reliability Coordinator's directives, or if for safety, equipment, regulatory or statutory requirements it could not comply, it informed the Reliability Coordinator immediately. (of its inability to perform as directed in accordance with~~ Requirement 8)~~R2. (R3.)~~

D. Compliance

1. Compliance Monitoring Process

~~1.1. Compliance Monitoring Responsibility~~

~~NERC shall be responsible for compliance monitoring of the Regional Reliability Organization.~~

~~Regional Reliability Organizations shall be responsible for compliance monitoring of the Reliability Coordinators, Transmission Operators, Generator Operators, Distribution Providers, and Load-Serving Entities.~~

~~1.2. Compliance Monitoring Period and Reset Time Frame~~

~~One or more of the following methods will be used to assess compliance:~~

- ~~—Self-certification (Conducted annually with submission according to schedule.)~~
- ~~—Spot Check Audits (Conducted anytime with up to 30 days notice given to prepare.)~~
- ~~—Periodic Audit (Conducted once every three years according to schedule.)~~
- ~~—Triggered Investigations (Notification of an investigation must be made within 60 days of an event or complaint of noncompliance. The entity will have up to 30 days to prepare for the investigation. An entity may request an extension of the preparation period and the extension will be considered by the Compliance Monitor on a case-by-case basis.)~~

~~The Performance Reset Period shall be 12 months from the last finding of non-compliance.~~

1.1. Compliance Enforcement Authority

The Regional Entity shall serve as the Compliance Enforcement Authority (CEA) unless the applicable entity is owned, operated, or controlled by the Regional

Entity. In such cases, the ERO or a Regional Entity approved by FERC or other applicable governmental authority shall serve as the CEA.

1.2. Compliance Monitoring and Enforcement Processes:

Compliance Audit

Self-Certification

Spot Checking

Compliance Investigation

Self-Reporting

Complaint

1.3. Data Retention

~~Each Regional Reliability Organization shall have its current, in-force document for Measure 1.~~

EachThe following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.

The Reliability Coordinator ~~shall have its current, in-force documents or the latest copy of a record as evidence of compliance to Measures 2 through 6.~~

~~Each~~, Transmission Operator, Balancing Authority, Generator Operator, ~~Transmission Service and Distribution Provider, and Load Serving Entity~~ shall keep 90 days of historical data (evidence) or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for Measure 7— a longer period of time as part of an investigation:

- The Reliability Coordinator for Requirement R1, Measure M1 shall retain voice recordings for the most recent 90 calendar days or documentation for the most recent 12 calendar months.
- The Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider for Requirements R2 and R3, Measures M2 and M3 shall retain voice recordings for the most recent 90 calendar days or documentation for the most recent 12 calendar months.

~~If an entity is a Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider is found non-compliant the entity, it~~ shall keep information related to the ~~noncompliance~~ non-compliance until ~~found compliant~~ mitigation is complete and approved or for ~~two years plus the current year~~ time specified above, whichever is longer.

~~Evidence used as part of a triggered investigation shall be retained by the entity being investigated for one year from the date that the investigation is closed, as determined by the Compliance Monitor,~~

The Compliance ~~Monitor~~Enforcement Authority shall keep the last ~~periodic~~-audit ~~report~~records and all requested and submitted subsequent ~~compliance~~audit records.

1.4. Additional Compliance Information

None.

2. Violation Severity Levels ~~of Non-Compliance: for a~~

<u>R#</u>	<u>Lower VSL</u>	<u>Moderate VSL</u>	<u>High VSL</u>	<u>Severe VSL</u>
<u>R1</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>The Reliability Coordinator failed to take action or direct actions, to prevent an identified event that resulted in an Emergency or Adverse Reliability Impact.</u> <u>OR</u> <u>The Reliability Coordinator failed to take action or direct actions to mitigate the magnitude or duration of an event that resulted in an Emergency or Adverse Reliability Impact.</u>
<u>R2</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>The Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider did not comply with the Reliability Coordinator's direction, and compliance with the direction could have been physically implemented and such actions would not have violated safety, equipment, regulatory, or statutory requirements.</u>
<u>R3</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>The Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider failed to inform its Reliability Coordinator upon recognition of its inability to perform as directed.</u>

2.E. Regional Reliability Organization: Variances

~~2.1. Level 1: Not applicable~~

~~2.2. Level 2: Not applicable~~

~~2.3. Level 3: Not applicable~~

~~2.4. Level 4: Does not have evidence it established one or more Reliability Coordinators to continuously assess transmission reliability and coordinate emergency operations among the operating entities within the region and across the regional boundaries as described in Requirement 1.~~

3. Levels of Non-Compliance for a Reliability Coordinator:

~~3.1. Level 1: Not applicable.~~

~~3.2. Level 2: Not applicable.~~

~~3.3. Level 3: Not applicable.~~

~~3.4. Level 4: There shall be a separate Level 4 non-compliance for every one of the following requirements that is in violation:~~

~~3.4.1 Does not have the authority to act as described in R3.~~

~~3.4.2 Does not have formal operating agreements with entities that have been delegated any Reliability Coordinator tasks, as specified in R4, Part 1.~~

~~3.4.3 Did not confirm that all delegated tasks are understood, communicated, and addressed within its Reliability Coordinator Area and that they are being performed in a manner that complies with NERC and regional standards for the delegated tasks as per R4, Part 2.~~

~~3.4.4 Did not verify that delegated tasks are being carried out by NERC Reliability Coordinator certified staff as specified in R6.~~

~~3.4.5 Does not have agreements with adjacent Reliability Coordinators that confirm that they will coordinate corrective actions in the event SOL and IROL mitigation actions must be taken (R7).~~

4. Levels of Non-Compliance for a Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, or Purchasing-Selling Entity:

~~4.1. Level 1: Not applicable.~~

~~4.2. Level 2: Not applicable.~~

~~4.3. Level 3: Not applicable.~~

~~4.4. Level 4: There shall be a separate Level 4 non-compliance for every one of the following requirements that is in violation:~~

~~4.4.1 Did not comply with a Reliability Coordinator directive for reasons other than safety, equipment, or regulatory or statutory requirements. (R8)~~

~~4.4.2 Did not inform the Reliability Coordinator immediately after it was determined that it could not follow a Reliability Coordinator directive. (R8)~~

~~E. Regional Differences~~

None identified.

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
<u>1</u>	<u>April 4, 2007</u>	<u>Approved by FERC — Effective Date</u>	<u>New</u>
1	~~November~~ <u>May 19, 2006</u> ~~2011~~	~~Changes “Distribution Provider” to “Transmission Service Provider”~~ <u>Replaced Levels of Noncompliance with FERC-approved VSLs</u>	~~Errata~~ <u>VSL Order</u>
<u>1.12</u>	~~October 29, 2008~~ <u>To be determined</u>	~~— Removed “Proposed” from effective date; — BOT adopted errata changes; updated version number to “1.1”~~ <u>Retired Requirement R7 to eliminate redundancy with IRO-014-2, Requirement R1.</u>	~~Errata~~ <u>Project 2006-06</u>
<u>1.13</u>	~~May 13, 2009~~ <u>TBD</u>	~~FERC Approved~~ <u>Revised in accordance with SAR for Project 2006-06, Reliability Coordination (RC SDT). Revised the standard and retired six requirements (R1, R2, R4, R5, R6, and R9). Requirement R3 becomes the new R1 and R8 becomes the new R2 and R3.</u>	~~Revised~~ <u>Project 2006-06</u>
<u>3</u>	<u>August 16, 2012</u>	<u>Adopted by Board of Trustees</u>	

A. Introduction

1. **Title:** **Reliability Coordination – Analysis Tools**
2. **Number:** IRO-002-3
3. **Purpose:** To ensure that Reliability Coordinators provide their System Operators with authority with respect to analysis tool outages and to have procedures to mitigate effects of analysis tool outages.
4. **Applicability**
 - 4.1. Reliability Coordinator
5. **Effective Date:** In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees approval.

B. Requirements

- R1. Each Reliability Coordinator shall provide its System Operators with the authority to approve, deny or cancel planned outages of its own analysis tools. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*
- R2. Each Reliability Coordinator shall have procedures in place to mitigate the effects of analysis tool outages. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

C. Measures

- M1. Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a documented procedure or equivalent evidence that will be used to confirm that the Reliability Coordinator has provided its System Operators with the authority to approve, deny or cancel planned outages of its own analysis tools. (R1)
- M2. Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a documented procedure or equivalent evidence that will be used to confirm that the Reliability Coordinator has procedures in place to mitigate the effects of analysis tool outages. (R2)

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

The Regional Entity is the Compliance Enforcement Authority except where the Reliability Coordinator works for the Regional Entity. Where the Reliability Coordinator works for the Regional Entity, the Regional Entity will establish an agreement with the ERO or another entity approved by the ERO and FERC (i.e. another Regional Entity), to be responsible for compliance enforcement.

1.2. Compliance Monitoring and Enforcement Processes:

Compliance Audit

Self-Certification

Spot Checking

Compliance Violation Investigation

Self-Reporting

Complaint

1.3. Data Retention

The Reliability Coordinator shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- The Reliability Coordinator shall retain its current, in force document and any documents in force for the current year and previous calendar year for Requirements R1 and R2 and Measures M1 and M2.
- o If a Reliability Coordinator is found non-compliant, it shall keep information related to the non-compliance until found compliant.
- o The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

1.4. Additional Compliance Information

None.

2. Violation Severity Levels

Violation Severity Levels				
R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	N/A	N/A	N/A	The Reliability Coordinator failed to provide its System Operator with the authority to approve, deny or cancel planned outages of its own analysis tools.
R2	N/A	N/A	N/A	The Reliability Coordinator failed to have a procedure to mitigate the effects of analysis tool outages.

E. Regional Variances

None identified.

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	
1	April 4, 2007	Replaced Levels of Non-compliance with the Feb 28, BOT approved Violation Severity Levels (VSLs) Corrected typographical errors in BOT approved version of VSLs	Revised to add missing measures and compliance elements
2	October 17, 2008	Deleted R2, M3 and associated compliance elements as conforming changes associated with approval of IRO-010-1	Revised as part of IROL Project
2	October 17, 2008	Adopted by NERC Board of Trustees	IROL Project
2	March 23, 2011	Order issued by FERC approving IRO-002-2 (approval effective 5/23/11)	
3	August 4, 2011	Retired R1-R8 under Project 2006-06.	Project 2006-06
3	August 4, 2011	Adopted by the Board of Trustees	

A. Introduction

1. **Title:** Reliability Coordination —~~Facilities~~Analysis Tools
2. **Number:** IRO-~~002-23~~
3. **Purpose:** To ensure that Reliability Coordinators need information, tools and other capabilities to perform provide their responsibilities System Operators with authority with respect to analysis tool outages and to have procedures to mitigate effects of analysis tool outages.
4. **Applicability**
 - 4.1. Reliability ~~Coordinators~~Coordinator
5. **~~Proposed~~ Effective Date:**

In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, ~~the~~this standard shall become effective on the latter of either April 1, 2009 or the first day of the first calendar quarter, three months after Board of Trustee adoption.
5. In those jurisdictions where regulatory approval is required, the standard shall become effective on the latter of either April 1, 2009 or the first day of the first calendar quarter, three months after applicable regulatory approval. Trustees approval.

B. Requirements

- Each Reliability Coordinator shall ~~have adequate communications facilities (voice and data links) to appropriate entities within~~ provide its Reliability Coordinator Area. These communications facilities shall be staffed and available to act in addressing a real-time emergency condition.
- Each Reliability Coordinator — or its Transmission System Operators and Balancing Authorities — shall provide, or arrange provisions for, data exchange to other Reliability Coordinators or Transmission Operators and Balancing Authorities via a secure network.
- Each Reliability Coordinator shall have multi-directional communications capabilities with its Transmission Operators and Balancing Authorities, and with neighboring Reliability Coordinators, for both voice and data exchange as required to meet reliability needs with the authority to approve, deny or cancel planned outages of the Interconnection.
- Each Reliability Coordinator shall have detailed real-time monitoring capability of its Reliability Coordinator Area and sufficient monitoring capability of its surrounding Reliability Coordinator Areas to ensure that potential or actual System Operating Limit or Interconnection Reliability Operating Limit violations are identified. Each Reliability Coordinator shall have monitoring systems that provide information that can be easily understood and interpreted by the Reliability Coordinator's operating personnel, giving particular emphasis to alarm management and awareness systems, automated data transfers, and synchronized information systems, over a redundant and highly reliable infrastructure.
- Each Reliability Coordinator shall monitor Bulk Electric System elements (generators, transmission lines, buses, transformers, breakers, etc.) that could result in SOL or IROL violations within its Reliability Coordinator Area. Each Reliability Coordinator shall monitor both real and reactive power system flows, and operating reserves, and the status of Bulk

~~Electric System elements that are or could be critical to SOLs and IROLs and system restoration requirements within its Reliability Coordinator Area.~~

~~**R6.R1.** Each Reliability Coordinator shall have adequateits own analysis tools such as state estimation, pre and post contingency analysis capabilities (thermal, stability, and voltage), and wide area overview displays. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*~~

~~Each Reliability Coordinator shall continuously monitor its Reliability Coordinator Area. Each Reliability Coordinator shall have provisions for backup facilities that shall be exercised if the main monitoring system is unavailable. Each Reliability Coordinator shall ensure SOL and IROL monitoring and derivations continue if the main monitoring system is unavailable.~~

~~**R8.R2.** Each Reliability Coordinator shall control its Reliability Coordinator analysis tools, including approvals for planned maintenance. Each Reliability Coordinator shall have procedures in place to mitigate the effects of analysis tool outages. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*~~

C. Measures

~~**M1.** Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a document that lists its voice communications facilities with Transmission Operators, Balancing Authorities and Generator Operators within its Reliability Coordinator Area and with neighboring Reliability Coordinators, that will be used to confirm that it has communication facilities in accordance with Requirements 1 and 3.~~

~~**M2.** Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a data link facility description document, computer print out, training document, or other equivalent evidence that will be used to confirm that it has data links with entities within its Reliability Coordinator Area and with neighboring Reliability Coordinators, as specified in Requirements 1 and 3.~~

~~**M3.** Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, Energy Management System description documents, computer printouts, SCADA data collection system communications performance or equivalent evidence to demonstrate that it has real time monitoring capability of its Reliability Coordinator Area and monitoring capability of its surrounding Reliability Coordinator Areas to identify potential or actual System Operating Limit or Interconnection Reliability Operating Limit violations.~~

~~**M4.** Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, documentation from suppliers, operating and planning staff training documents, examples of studies, or other equivalent evidence to show that it has analysis tools in accordance with Requirement 6.~~

~~**M5.** Each Reliability Coordinator shall provide evidence such as equipment specifications, operating procedures, staff records of their involvement in training, or other equivalent evidence to show that it has a backup monitoring facility that can be used to identify and monitor SOLs and IROLs. (Requirement 7)~~

~~**M6.M1.** Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a documented procedure or equivalent evidence that will be used to confirm that the Reliability Coordinator has provided its System Operators with the authority to vet~~to~~approve, deny or cancel planned outages ~~to~~of its own analysis tools, ~~including final approvals for planned maintenance as specified in Requirement 8 Part 1.~~ (R1)~~

~~M7.M2.~~ Each Reliability Coordinator shall have and provide upon request ~~its~~ current evidence that could include, but is not limited to, a documented procedure or equivalent evidence that will be used to confirm that the Reliability Coordinator has procedures used in place to mitigate the effects of analysis tool outages ~~as specified in Requirement 8 Part 2, (R2)~~

D. Compliance

1. Compliance Monitoring Process

~~1.1. Compliance Monitoring Responsibility~~

~~Regional Reliability Organizations shall be responsible for compliance. Monitoring.~~

~~1.2. Compliance Monitoring and Reset Time Frame~~

~~One or more of the following methods will be used to assess compliance:~~

- ~~— Self-certification (Conducted annually with submission according to schedule.)~~
- ~~— Spot Check Audits (Conducted anytime with up to 30 days notice given to prepare.)~~
- ~~— Periodic Audit (Conducted once every three years according to schedule.)~~
- ~~— Triggered Investigations (Notification of an investigation must be made within 60 days of an event or complaint of noncompliance. The entity will have up to 30 days to prepare for the investigation. An entity may request an extension of the preparation period and the extension will be considered by the Compliance Monitor on a case-by-case basis.)~~

~~The Performance Reset Period shall be 12 months from the last finding of non-compliance.~~

1.1. Compliance Enforcement Authority

The Regional Entity is the Compliance Enforcement Authority except where the Reliability Coordinator works for the Regional Entity. Where the Reliability Coordinator works for the Regional Entity, the Regional Entity will establish an agreement with the ERO or another entity approved by the ERO and FERC (i.e. another Regional Entity), to be responsible for compliance enforcement.

1.2. Compliance Monitoring and Enforcement Processes:

Compliance Audit

Self-Certification

Spot Checking

Compliance Violation Investigation

Self-Reporting

Complaint

1.3. Data Retention

~~Each~~The Reliability Coordinator shall ~~have~~keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- The Reliability Coordinator shall retain its ~~current, in-~~ force document and any documents ~~used to show compliance within force for the current year and previous calendar year for Requirements R1 and R2 and Measures 1 through 7~~M1 and M2.

If ~~an entity~~a Reliability Coordinator is found non-compliant ~~the entity, it~~ shall keep information related to the ~~noncompliance non-compliance~~ until found compliant ~~or for two years plus the current year, whichever is longer.~~

- o ~~Evidence used as part of a triggered investigation shall be retained by the entity being investigated for one year from the date that the investigation is closed, as determined by the Compliance Monitor.~~
- o The Compliance ~~Monitor~~Enforcement Authority shall keep the last ~~periodic~~ audit ~~report~~records and all requested and submitted subsequent ~~compliance~~audit records.

1.4. Additional Compliance Information

None.

2. Violation Severity Levels:

<u>Violation Severity Levels</u>				
<u>Requirement R#</u>	<u>Lower VSL</u>	<u>Moderate VSL</u>	<u>High VSL</u>	<u>Severe VSL</u>
R1	The Reliability Coordinator has demonstrated communication facilities for both voice and data exist to all appropriate entities and that they are staffed and available but they are less than adequate.	The Reliability Coordinator has failed to demonstrate that is has: 1) Voice communication links with one appropriate entity or 2) Data links with one appropriate entity.	The Reliability Coordinator has failed to demonstrate that is has: 1) Voice communication links with two appropriate entities or 2) Data links with two appropriate entities.	The Reliability Coordinator has failed to demonstrate that is has: 1) Voice communication links with more than two appropriate entities or 2) Data links with more than two appropriate entities or 3) Communication facilities are not staffed or 4) Communication facilities are not ready.

R2	N/A	The Reliability Coordinator or designated Transmission Operator and Balancing Authority has failed to demonstrate it provided or arranged provision for the exchange of data with one of the other Reliability Coordinators or Transmission Operators and Balancing Authorities.			The Reliability Coordinator or designated Transmission Operator and Balancing Authority has failed to demonstrate it provided or arranged provision for the exchange of data with two of the other Reliability Coordinators or Transmission Operators and Balancing Authorities.	The Reliability Coordinator or designated Transmission Operator and Balancing Authority has failed to demonstrate it provided or arranged provision for the exchange of data with three of the other Reliability Coordinators or Transmission Operators and Balancing Authorities.
R3R1	N/A	The Reliability Coordinator has failed to demonstrate multi-directional communication capabilities to one of the Transmission Operators and Balancing Authorities in its Reliability Coordinator Area and with	The Reliability Coordinator has failed to demonstrate multi-directional communication capabilities to two or more of the Transmission Operators and Balancing Authorities in its Reliability Coordinator	The Reliability Coordinator has failed to demonstrate multi-directional communication capabilities to all of the Transmission Operators and Balancing Authorities in provide its Reliability Coordinator		

		neighboring Reliability Coordinators: <u>N/A</u>	Area and with neighboring Reliability Coordinators: <u>N/A</u>	Area and System Operator with all neighboring Reliability Coordinators: <u>the authority to approve, deny or cancel planned outages of its own analysis tools.</u>
<u>R4R2</u>	The Reliability Coordinator's monitoring systems provide information in a way that is not easily understood and interpreted by the Reliability Coordinator's operating personnel or particular emphasis was not given to alarm management	The Reliability Coordinator has failed to demonstrate that is has detailed real- time monitoring capabilities in its Reliability Coordinator Area and sufficient monitoring capabilities of its surrounding Reliability Coordinator Areas to ensure that one potential or actual SOL or IROL violation	The Reliability Coordinator has failed to demonstrate that is has detailed real- time monitoring capabilities in its Reliability Coordinator Area and sufficient monitoring capabilities of its surrounding Reliability Coordinator Areas to ensure that two or more potential and actual SOL and IROL	The Reliability Coordinator has failed to demonstrate that is has detailed real- time monitoring capabilities in its Reliability Coordinator Area and sufficient monitoring capabilities of its surrounding Reliability Coordinator Areas to ensure that all potential and actual SOL and IROL

	and awareness systems; automated data transfers and synchronized information systems. ~~N/A~~	is not identified. ~~N/A~~	violations are not identified. ~~N/A~~	violations are identified. ~~The Reliability Coordinator failed to have a procedure to mitigate the effects of analysis tool outages.~~	
R5	The Reliability Coordinator failed to monitor: 1) the status, real power flow or reactive power flow of Bulk Electric System elements that could result in one SOL violations or 2) or operating reserves for a small portion of the Reliability Authority Area.	The Reliability Coordinator failed to monitor: 1) the status, real power flow or reactive power flow of Bulk Electric System elements critical to assessing one IROL or to system restoration; 2) the status, real power flow or reactive power flow of Bulk Electric System elements that could result in multiple SOL violations, or 3) operating reserves.	The Reliability Coordinator failed to monitor: 1) the status, real power flow or reactive power flow of Bulk Electric System elements critical to assessing two or more IROLs; or one IROL and to system restoration; 2) the status, real power flow or reactive power flow of Bulk Electric System elements that could result in multiple SOL violations and operating reserves, or 3) the status, real power flow or	The Reliability Coordinator failed to monitor: 1) the status, real power flow or reactive power flow of Bulk Electric System elements critical to assessing all IROLs and to system restoration, or 2) the status, real power flow or reactive power flow of Bulk Electric System elements critical to assessing all SOL violations and operating reserves.	

			reactive power flow of Bulk Electric System elements critical to assessing one IROL or system restoration and operating reserves.	
R6	The Reliability Coordinator failed to demonstrate that it has: 1) analysis tools capable of assessing all pre-contingency flows; 2) analysis tools capable of assessing all post-contingency flows; or 3) all necessary wide-area overview displays exist.	The Reliability Coordinator failed to demonstrate that it has: 1) analysis tools capable of assessing the majority of pre-contingency flows; 2) analysis tools capable of assessing the majority of post-contingency flows; or 3) the majority of necessary wide-area overview displays exist.	The Reliability Coordinator failed to demonstrate that it has: 1) analysis tools capable of assessing a minority of pre-contingency flows; 2) analysis tools capable of assessing a minority of post-contingency flows; or 3) a minority of	The Reliability Coordinator failed to demonstrate that it has: 1) analysis tools capable of assessing any pre-contingency flows; 2) analysis tools capable of assessing any post-contingency flows; or 3) any necessary wide-area overview

			necessary wide-area overview displays exist.	displays exist.
R7	The Reliability Coordinator failed to demonstrate that: 1) it or a delegated entity monitored SOLs when the main monitoring system was unavailable or 2) it has provisions to monitor SOLs when the main monitoring system is not available.	The Reliability Coordinator failed to demonstrate that: 1) it or a delegated entity monitored one IROL when the main monitoring system was unavailable or 2) it has provisions to monitor one IROL when the main monitoring system is not available.	The Reliability Coordinator failed to demonstrate that: 1) it or a delegated entity monitored two or more IROLs when the main monitoring system was unavailable, 2) it or a delegated entity monitored SOLs and one IROL when the main monitoring system was unavailable 3) it has provisions to monitor two or more IROLs when the main	—The Reliability Coordinator failed to demonstrate that it continuously monitored its Reliability Authority Area.

			monitoring system is not available, or 4) it has provisions to monitor SOLs and one IROL when the main monitoring system was unavailable.	
R8	Reliability Coordinator has approval rights for planned maintenance outages of analysis tools but does not have approval rights for work on analysis tools that creates a greater risk of an unplanned outage of the tools.	Reliability Coordinator has approval rights for planned maintenance but does not have plans to mitigate the effects of outages of the analysis tools.	Reliability Coordinator has approval rights for planned maintenance but does not have plans to mitigate the effects of outages of the analysis tools and does not have approval rights for work on analysis tools that creates a greater risk of an unplanned outage of the tools.	Reliability Coordinator approval is not required for planned maintenance.

E. **Regional Variances**

None identified.

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	~~Revised~~
~~2~~ <u>1</u>	<u>April 4, 2007</u>	~~Deleted R2, M3 and associated compliance elements~~ Replaced Levels of Non-compliance with the Feb 28, BOT approved Violation Severity Levels (VSLs) Corrected typographical errors in BOT approved version of VSLs	~~Revised~~ <u>Revised to add missing measures and compliance elements</u>
~~2~~ <u>2</u>	<u>October 17, 2008</u>	~~Deleted R2, M3 and associated compliance elements as conforming changes associated with approval of IRO-010-1~~	~~Revised as part of IROL Project~~
2	October 17, 2008	Adopted by NERC Board of Trustees	<u>IROL Project</u>
2	March ~~17~~ <u>23</u> , 2011	Order issued by FERC approving IRO-002-2 (approval effective 5/23/11)	
<u>3</u>	<u>August 4, 2011</u>	<u>Retired R1-R8 under Project 2006-06.</u>	<u>Project 2006-06</u>
<u>3</u>	<u>August 4, 2011</u>	<u>Adopted by the Board of Trustees</u>	

Introduction

1. **Title:** **Reliability Coordination — Current Day Operations**
2. **Number:** IRO-005-4
3. **Purpose:** To ensure that entities are notified when an expected or actual event with Adverse Reliability Impacts is identified.
4. **Applicability:**
 - 4.1. Reliability Coordinators.
5. **Effective Date:** In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees approval.

A. Requirements

- R1.** When the results of an Operational Planning Analysis or Real-time Assessment indicate an anticipated or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*
- R2.** Each Reliability Coordinator that identifies an anticipated or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when the problem has been mitigated. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

B. Measures

- M1.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it notified all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when it identified an anticipated or actual condition with Adverse Reliability Impacts, within its Reliability Coordinator Area. (R1)
- M2.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it notified all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when an anticipated or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area had been mitigated. (R2)

C. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

The Regional Entity is the Compliance Enforcement Authority except where the Reliability Coordinator works for the Regional Entity. Where the Reliability Coordinator works for the Regional Entity, the Regional Entity will establish an agreement with the ERO or another entity approved by the ERO and FERC (i.e. another Regional Entity), to be responsible for compliance enforcement.

1.2. Compliance Monitoring and Enforcement Processes:

Compliance Audit

Self-Certification

Spot Checking

Compliance Violation Investigation

Self-Reporting

Complaint

1.3. Data Retention

The Reliability Coordinator shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- The Reliability Coordinator shall retain its evidence for the most recent 90 days for voice recordings or 12 months for other documentation for Requirements R1 and R2 and Measures M1 and M2.
- If a Reliability Coordinator is found non-compliant, it shall keep information related to the non-compliance until found compliant.
- The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records or for the time period specified above, whichever is longer.

1.4. Additional Compliance Information

None.

2. Violation Severity Levels

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	The Reliability Coordinator who identified an anticipated or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to one, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.	The Reliability Coordinator who identified an anticipated or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to two, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.	The Reliability Coordinator who identified an anticipated or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to three, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.	The Reliability Coordinator who identified an anticipated or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to more than three impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. OR The Reliability Coordinator who identified an anticipated or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area (in cases where there are less than three impacted entities).
R2	The Reliability Coordinator failed to notify one, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.	The Reliability Coordinator failed to notify two, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.	The Reliability Coordinator failed to notify three, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.	The Reliability Coordinator failed to notify more than three impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated. OR The Reliability Coordinator failed to notify more all impacted

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
				Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated (in cases where there are less than three impacted entities).

D. Regional Differences

None identified.

E. Associated Documents**Version History**

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	August 28, 2006	Added three items that were inadvertently left out to “Applicability” section: 4.5 Generator Operators. 4.6 Load-Serving Entities. 4.7 Purchasing-Selling Entities.	Errata
1	February 7, 2006	BOT Approval	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New
2	November 1, 2006	BOT Approval	Revised under Missing Measures & Compliance Elements Project
2a	November 5, 2009	Interpretation approved by the Board of Trustees	Interpretation
3	October 17, 2008	Retired R2, R3, R5, R16, R17 and revised R9, R13, R14 to eliminate redundancy or conflicts with IRO standards IRO-009-1, and IRO-010-1	IROL Project – conforming changes
3	October 17, 2008	Adopted by the Board of Trustees	
3	March 23, 2011	Order issued by FERC approving IRO-005-3 (approval effective 5/23/11)	
3a	April 21, 2011	Added FERC approved Interpretation	
4	August 4, 2011	Retired R1-R11; revised R12	Project 2006-06
4	August 4, 2011	Adopted by the Board of Trustees	

Introduction

1. **Title:** Reliability Coordination — Current Day Operations
2. **Number:** IRO-005-~~3.1a4~~
3. ~~**Purpose:** The Reliability Coordinator must be continuously aware of conditions within its Reliability Coordinator Area and include this information in its reliability assessments. The Reliability Coordinator must monitor Bulk Electric System parameters that may have significant impacts upon the Reliability Coordinator Area and neighboring Reliability Coordinator Areas.~~
4. ~~**Applicability**~~
 3. **Purpose:** To ensure that entities are notified when an expected or actual event with Adverse Reliability Impacts is identified.
 4. **Applicability:**
 - 4.1. Reliability Coordinators.
 - 4.2. ~~Balancing Authorities.~~
 - 4.3. ~~Transmission Operators.~~
 - 4.4. ~~Transmission Service Providers.~~
 - 4.5. ~~Generator Operators.~~
 - 4.6. ~~Load-Serving Entities.~~
 - 4.7. ~~Purchasing-Selling Entities.~~
5. ~~Effective Date:~~

In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, the standard shall become effective on the latter of either April 1, 2009 or the first day of the first calendar quarter, three months after BOT adoption.
5. ~~In those jurisdictions where regulatory approval is required, the~~ this standard shall become effective on the ~~latter~~ first day of the first calendar quarter after Board of either April 1, 2009 or the first day of the first calendar quarter, three months after applicable regulatory approval. Trustees approval.

A. Requirements

- R1.** When the results of an Operational Planning Analysis or Real-time Assessment indicate an anticipated or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]

- ~~**R1.**— Each Reliability Coordinator shall monitor its Reliability Coordinator Area parameters, including but not limited to the following:~~
- ~~**R1.1.**— Current status of Bulk Electric System elements (transmission or generation including critical auxiliaries such as Automatic Voltage Regulators and Special Protection Systems) and system loading.~~
 - ~~**R1.2.**— Current pre-contingency element conditions (voltage, thermal, or stability), including any applicable mitigation plans to alleviate SOL or IROL violations, including the plan’s viability and scope.~~
 - ~~**R1.3.**— Current post-contingency element conditions (voltage, thermal, or stability), including any applicable mitigation plans to alleviate SOL or IROL violations, including the plan’s viability and scope.~~
 - ~~**R1.4.**— System real and reactive reserves (actual versus required).~~
 - ~~**R1.5.**— Capacity and energy adequacy conditions.~~
 - ~~**R1.6.**— Current ACE for all its Balancing Authorities.~~
 - ~~**R1.7.**— Current local or Transmission Loading Relief procedures in effect.~~
 - ~~**R1.8.**— Planned generation dispatches.~~
 - ~~**R1.9.**— Planned transmission or generation outages.~~
 - ~~**R1.10.**— Contingency events.~~
- ~~**R2.**— Each Reliability Coordinator shall monitor its Balancing Authorities’ parameters to ensure that the required amount of operating reserves is provided and available as required to meet the Control Performance Standard and Disturbance Control Standard requirements. If necessary, the Reliability Coordinator shall direct the Balancing Authorities in the Reliability Coordinator Area to arrange for assistance from neighboring Balancing Authorities. The identifies an anticipated or actual condition with Adverse Reliability Coordinator shall issue Energy Emergency Alerts as needed and at the request of its Balancing Authorities and Load-Serving Entities.~~
- ~~**R3.**— Each Reliability Coordinator shall ensure its Transmission Operators and Balancing Authorities are aware of Geo-Magnetic Disturbance (GMD) forecast information and assist as needed in the development of any required response plans.~~
- ~~**R4.**— The Reliability Coordinator shall disseminate information within its Reliability Coordinator Area, as required.~~
- ~~**R5.**— Each Reliability Coordinator shall monitor system frequency and its Balancing Authorities’ performance and direct any necessary rebalancing to return to CPS and DCS compliance. The Transmission Operators and Balancing Authorities shall utilize all resources, including firm load shedding, as directed by its Reliability Coordinator to relieve the emergent condition.~~
- ~~**R6.**— The Reliability Coordinator shall coordinate with Transmission Operators, Balancing Authorities, and Generator Operators as needed to develop and implement action plans to mitigate potential or actual SOL, CPS, or DCS violations. The Reliability~~

~~Coordinator shall coordinate pending generation and transmission maintenance outages with Transmission Operators, Balancing Authorities, and Generator Operators as needed in both the real time and next day reliability analysis timeframes.~~

- ~~**R7.** As necessary, the Reliability Coordinator shall assist the Balancing Authorities in its Reliability Coordinator Area in arranging for assistance from neighboring Reliability Coordinator Areas or Balancing Authorities.~~
- ~~**R8.** The Reliability Coordinator shall identify sources of large Area Control Errors that may be contributing to Frequency Error, Time Error, or Inadvertent Interchange and shall discuss corrective actions with the appropriate Balancing Authority. The Reliability Coordinator shall direct its Balancing Authority to comply with CPS and DCS.~~
- ~~**R9.** Whenever a Special Protection System that may have an inter-Balancing Authority, or inter-Transmission Operator impact (e.g., could potentially affect transmission flows resulting in a SOL or IROL violation) is armed, the Reliability Coordinators shall be aware of the impact of the operation of that Special Protection System on inter-area flows. The Transmission Operator shall immediately inform the Reliability Coordinator of the status of the Special Protection System including any degradation or potential failure to operate as expected.~~
- ~~**R10.** In instances where there is a difference in derived limits, the Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities shall always operate the Bulk Electric System to the most limiting parameter.~~
- ~~**R11.** The Transmission Service Provider shall respect SOLs and IROLs in accordance with filed tariffs and regional Total Transfer Calculation and Available Transfer Calculation processes.~~
- ~~**R12.R2.** Each Reliability Coordinator who foresees a transmission problem (such as an SOL or IROL violation, loss of reactive reserves, etc.) Impacts within its Reliability Coordinator Area shall issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area without delay. The receiving Reliability Coordinator shall disseminate this information to its notify all impacted Transmission Operators and Balancing Authorities. The in its Reliability Coordinator shall notify all impacted Transmission Operators, Balancing Authorities, Area when the transmission problem has been mitigated. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]~~

B. Measures

- ~~**M1.** The Each Reliability Coordinator shall have and provide upon request evidence that could which may include, but is not limited to, Energy Management System description documents, computer printouts, a prepared report specifically detailing compliance to each of the bullets in Requirement 1, EMS availability, SCADA data collection system communications performance dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic~~

~~communications, or equivalent **evidencedocumentation**, that will be used to **confirm**determine that it **monitors** thenotified all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area **parameters specified in Requirements 1.1 through 1.9**.when it identified an anticipated or actual condition with Adverse Reliability Impacts, within its Reliability Coordinator Area. (R1)~~

- ~~M2. If one of its Balancing Authorities has insufficient operating reserves, the**Each** Reliability Coordinator shall have and provide ~~upon request~~evidence ~~that could~~**which may** include, but is not limited to ~~computer printouts, operating logs, voice recordings or transcripts of voice recordings, or equivalent evidence that will be used to determine if the Reliability Coordinator directed and, if needed, assisted the Balancing Authorities in the Reliability Coordinator Area to arrange for assistance from neighboring Balancing Authorities.~~ (Requirement 2 and Requirement 7)~~
- ~~M3. The Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to,**dated** operator logs, **dated** voice recordings or **dated** transcripts of voice recordings, electronic communications, or equivalent **evidencedocumentation**, that will be used to determine if it informed Transmission Operators and Balancing Authorities of Geo-Magnetic Disturbance (GMD) forecast information and provided assistance as needed in the development of any required response plans. (Requirement 3)~~
- ~~M4. The Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, operator logs, voice recordings or transcripts of voice recordings, Hot Line recordings, electronic communications or equivalent evidence that will be used to determine if **that** it disseminated information within its Reliability Coordinator Area in accordance with Requirement 4.~~
- ~~M5. The Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, computer printouts, operator logs, voice recordings or transcripts of voice recordings, electronic communications or equivalent evidence that will be used to confirm that it monitored system frequency and Balancing Authority performance and directed any necessary rebalancing, as specified in Requirement 5 Part 1.~~
- ~~M6. The Transmission Operators and Balancing Authorities shall have and provide upon request evidence that could include, but is not limited to, operator logs, voice recordings or transcripts of voice recordings, electronic communications or equivalent evidence that will be used to confirm that it utilized all resources, including firm load shedding, as directed by its Reliability Coordinator, to relieve an emergent condition. (Requirement 5 Part 2)~~
- ~~M7. The Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, voice recordings or transcripts of voice recordings, electronic communications, operator logs or equivalent evidence that will be used to determine if it coordinated with Transmission Operators, Balancing Authorities, and Generator Operators as needed to develop and implement action plans to mitigate potential or actual SOL, CPS, or DCS violations including the coordination of pending~~

~~generation and transmission maintenance outages with Transmission Operators, Balancing Authorities and Generator Operators. (Requirement 6 Part 1)~~

- ~~M8. If a large Area Control Error has occurred, the Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, operator logs, voice recordings or transcripts of voice recordings, Hot Line recordings, electronic communications or equivalent evidence that will be used to determine if it identified sources of the Area Control Errors, and initiated corrective actions with the appropriate Balancing Authority if the problem was within the Reliability Coordinator's Area (Requirement 8 Part 1)~~
- ~~M9. If a Special Protection System is armed and that system could have had an inter-area impact, the Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, agreements with their Transmission Operators, procedural documents, operator logs, computer analysis, training modules, training records or equivalent evidence that will be used to confirm that it was aware of the impact of that Special Protection System on inter-area flows. (Requirement 9)~~
- ~~M10. If there is an instance where there is a disagreement on a derived limit, the Transmission Operator, Balancing Authority, Generator Operator, Load-serving Entity, Purchasing-selling Entity and Transmission Service Provider involved in the disagreement shall have and provide upon request evidence that could include, but is not limited to, operator logs, voice recordings, electronic communications or equivalent evidence that will be used to determine if it operated to the most limiting parameter. (Requirement 10)~~
- ~~M11. The Transmission Service Providers shall have and provide upon request evidence that could include, but is not limited to, procedural documents, operator logs, voice recordings or transcripts of voice recordings, electronic communications or equivalent evidence that will be used to confirm that it respected the SOLs or IROLs in accordance with filed tariffs and regional Total Transfer Calculation and Available Transfer Calculation processes. (Requirement 11)~~
- ~~M12. The Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, operator logs, voice recordings or transcripts of voice recordings, electronic communications or equivalent evidence that will be used to confirm that it issued alerts when it foresaw a transmission problem (such as an SOL or IROL violation, loss of reactive reserves, etc.) within its Reliability Coordinator Area, **to notified** all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area as specified in Requirement 12 Part 1.~~
- ~~M13. The Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, operator logs, voice recordings or transcripts of voice recordings, electronic communications or equivalent evidence that will be used to confirm that upon receiving information such as an SOL or IROL violation, loss of reactive reserves, etc. it disseminated the information to its impacted Transmission Operators and Balancing Authorities as specified in Requirement 12 Part 2.~~
- M14.M2. The Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, operator logs, voice recordings or**

~~transcripts of voice recordings, electronic communications or equivalent evidence that will be used to confirm that it notified all impacted Transmission Operators, Balancing Authorities and Reliability Coordinators when a transmission problem has~~ when an anticipated or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area had been mitigated. (~~Requirement 12 Part 3R2~~)

C. Compliance

~~1.~~ **1. Compliance Monitoring Process**

~~1.1.~~ **1.1. Compliance Monitoring Responsibility**

~~Regional Reliability Organizations shall be responsible for compliance monitoring.~~

~~1.2.~~ **1.2. Compliance Monitoring and Reset Time Frame**

One or more of the following methods will be used to assess **1.1. Compliance Enforcement Authority**

The Regional Entity is the Compliance Enforcement Authority except where the Reliability Coordinator works for the Regional Entity. Where the Reliability Coordinator works for the Regional Entity, the Regional Entity will establish an agreement with the ERO or another entity approved by the ERO and FERC (i.e. another Regional Entity), to be responsible for compliance enforcement.

1.2. Compliance Monitoring and Enforcement Processes:

Compliance Audit

Self-Certification

Spot Checking

Compliance Violation Investigation

Self-Reporting

Complaint

1.3. Data Retention

The Reliability Coordinator shall keep data or evidence to show compliance:

- ~~— Self-certification (Conducted annually with submission according to schedule.)~~
- ~~— Spot Check Audits (Conducted anytime with up as identified below unless directed by its Compliance Enforcement Authority to 30 days notice given to prepare.)~~
- ~~— Periodic Audit (Conducted once every three years according to schedule.)~~
- ~~— Triggered Investigations (Notification retain specific evidence for a longer period of time as part of an investigation must be made within 60 days of an event~~

~~or complaint of noncompliance. The entity will have up to 30 days to prepare for the investigation. An entity may request an extension of the preparation period and the extension will be considered by the Compliance Monitor on a case-by-case basis.):~~

~~The Performance Reset Period Reliability Coordinator shall ~~be~~ retain its evidence for the most recent 90 days for voice recordings or 12 months ~~from the last finding of non-compliance.~~~~

~~1.3. Data Retention~~

~~For Measures 1 for other documentation for Requirements R1 and 9, each Reliability Coordinator shall have its current in-force documents as evidence.~~

~~For Measures 2–8 R2 and Measures 12 through 13, the Reliability Coordinator shall keep 90 days of historical data (evidence).~~

- ~~• For Measure 6, the Transmission Operator M1 and Balancing Authority shall keep 90 days of historical data (evidence). M2.~~

~~For Measure 10, the Transmission Operator, Balancing Authority, and Transmission Service Provider shall keep 90 days of historical data (evidence).~~

~~For Measure 11, the Transmission Service Provider shall keep 90 days of historical data (evidence).~~

- ~~• If an entity a Reliability Coordinator is found non-compliant ~~the entity, it~~ shall keep information related to the ~~noncompliance~~ non-compliance until found compliant ~~or for two years plus the current year, whichever is longer.~~~~

~~Evidence used as part of a triggered investigation shall be retained by the entity being investigated for one year from the date that the investigation is closed, as determined by the Compliance Monitor,~~

- ~~• The Compliance ~~Monitor~~ Enforcement Authority shall keep the last ~~periodic audit report~~ records and all requested and submitted subsequent ~~compliance records~~ audit records or for the time period specified above, whichever is longer.~~

~~1.4.~~ 1.4. Additional Compliance Information

~~None.~~

2. Violation Severity Levels:

<u>Requirement</u>	<u>Lower VSL</u>	<u>Moderate VSL</u>	<u>High VSL</u>	<u>Severe VSL</u>
~~R1~~	~~The Reliability Coordinator failed to monitor one (1) of the elements listed in IRO-005-1 R1.1 through R1.10.~~	~~The Reliability Coordinator failed to monitor two (2) of the elements listed in IRO-005-1 R1.1 through R1.10.~~	~~The Reliability Coordinator failed to monitor three (3) of the elements listed in IRO-005-1 R1.1 through R1.10.~~	~~The Reliability Coordinator failed to monitor more than three (3) of the elements listed in IRO-005-1 R1.1 through R1.10.~~
~~R1.1~~	~~The Reliability Coordinator failed to monitor the current status of Bulk Electric System elements (transmission or generation including critical auxiliaries such as Automatic Voltage Regulators and Special Protection Systems) and system loading.~~	~~N/A~~	~~N/A~~	~~N/A~~
~~R1.2~~	~~The Reliability Coordinator failed to monitor current pre-contingency element conditions (voltage, thermal, or stability), including any applicable mitigation plans to alleviate SOL or IROL violations, including the plan's viability and~~	~~N/A~~	~~N/A~~	~~N/A~~

Requirement <u>R#</u>	Lower <u>VSL</u>	Moderate <u>VSL</u>	High <u>VSL</u>	Severe <u>VSL</u>
R1.3	The Reliability Coordinator failed to monitor current post-contingency element conditions (voltage, thermal, or stability); including any applicable mitigation plans to alleviate SOL or IROL violations, including the plan's viability and scope.	N/A	N/A	N/A
R1.4	The Reliability Coordinator failed to monitor system real and reactive reserves (actual versus required).	N/A	N/A	N/A
R1.5	The Reliability Coordinator failed to monitor capacity and energy adequacy conditions.	N/A	N/A	N/A

Requirement <u>R#</u>	Lower <u>VSL</u>	Moderate <u>VSL</u>	High <u>VSL</u>	Severe <u>VSL</u>
~~R1.6~~	~~The Reliability Coordinator failed to monitor current ACE for all its Balancing Authorities.~~	~~N/A~~	~~N/A~~	~~N/A~~
~~R1.7~~	~~The Reliability Coordinator failed to monitor current local or Transmission Loading Relief procedures in effect.~~	~~N/A~~	~~N/A~~	~~N/A~~
~~R1.8~~	~~The Reliability Coordinator failed to monitor planned generation dispatches.~~	~~N/A~~	~~N/A~~	~~N/A~~
~~R1.9~~	~~The Reliability Coordinator failed to monitor planned transmission or generation outages.~~	~~N/A~~	~~N/A~~	~~N/A~~
~~R1.10~~	~~The Reliability Coordinator failed to monitor contingency events.~~	~~N/A~~	~~N/A~~	~~N/A~~

Requirement <u>R#</u>	Lower <u>VSL</u>	Moderate <u>VSL</u>	High <u>VSL</u>	Severe <u>VSL</u>
R2	N/A	The Reliability Coordinator failed to direct the Balancing Authorities in the Reliability Coordinator Area to arrange for assistance from neighboring Balancing Authorities.	The Reliability Coordinator failed to issue Energy Emergency Alerts as needed and at the request of its Balancing Authorities and Load-Serving Entities.	The Reliability Coordinator failed to monitor its Balancing Authorities' parameters to ensure that the required amount of operating reserves was provided and available as required to meet the Control Performance Standard and Disturbance Control Standard requirements.
R3	N/A	N/A	The Reliability Coordinator ensured its Transmission Operators and Balancing Authorities were aware of Geo-Magnetic Disturbance (GMD) forecast information, but failed to assist, when needed, in the development of any required response plans.	The Reliability Coordinator failed to ensure its Transmission Operators and Balancing Authorities were aware of Geo-Magnetic Disturbance (GMD) forecast information.
R4	N/A	N/A	N/A	The Reliability Coordinator failed to disseminate information within its Reliability Coordinator Area, when required.

Requirement <u>R#</u>		Lower <u>VSL</u>	Moderate <u>VSL</u>	High <u>VSL</u>	Severe <u>VSL</u>
	R5	N/A	N/A	The Reliability Coordinator monitored system frequency and its Balancing Authorities' performance but failed to direct any necessary rebalancing to return to CPS and DCS compliance.	The Reliability Coordinator failed to monitor system frequency and its Balancing Authorities' performance and direct any necessary rebalancing to return to CPS and DCS compliance or the responsible entity failed to utilize all resources, including firm load shedding, as directed by its Reliability Coordinator to relieve the emergent condition.
R6	<u>R1</u>	~~N/A~~ The Reliability Coordinator who identified an anticipated or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to one, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.	~~The Reliability Coordinator coordinated with Transmission Operators, Balancing Authorities, and Generator Operators, as needed, to develop action plans to mitigate potential or actual SOL, CPS, or DCS violations but failed to implement said plans, or the Reliability Coordinator coordinated pending generation and transmission maintenance outages with Transmission Operators, Balancing~~	~~The Reliability Coordinator who identified an anticipated or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to coordinate with issue an alert to three, but not all, impacted Transmission Operators, and Balancing Authorities, and Generator Operators as needed to develop and implement action plans to mitigate potential or actual SOL, CPS, or DCS violations, or the Reliability Coordinator~~	~~The Reliability Coordinator who identified an anticipated or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to coordinate with issue an alert to more than three impacted Transmission Operators, and Balancing Authorities, and Generator Operators as needed to develop and implement action plans to mitigate potential or actual SOL, CPS, in its Reliability Coordinator Area.~~ <u>OR</u>

Requirement <u>R#</u>		Lower <u>VSL</u>	Moderate <u>VSL</u>	High <u>VSL</u>	Severe <u>VSL</u>
			~~Authorities, and Generator Operators as needed in the real-time reliability analysis timeframe but failed to coordinate pending generation and transmission maintenance outages in the next-day reliability analysis timeframe.~~ <u>The Reliability Coordinator who identified an anticipated or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to two, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.</u>	~~failed to coordinate pending generation and transmission maintenance outages with Transmission Operators, Balancing Authorities, and Generator Operators as needed in both the real-time and next-day reliability analysis timeframes.~~ <u>its Reliability Coordinator Area.</u>	~~The Reliability Coordinator who identified an anticipated or DCS violations and the actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to coordinate pending generation and transmission maintenance outages with issue an alert to all impacted Transmission Operators, and Balancing Authorities, and Generator Operators as needed in both the real-time and next-day reliability analysis timeframes.~~ <u>in its Reliability Coordinator Area (in cases where there are less than three impacted entities).</u>
R7		N/A	N/A	N/A	~~The Reliability Coordinator failed to assist the Balancing Authorities in its Reliability Coordinator Area in arranging for assistance from neighboring Reliability Coordinator Areas or Balancing Authorities, when necessary.~~

Requirement <u>R#</u>		Lower <u>VSL</u>	Moderate <u>VSL</u>	High <u>VSL</u>	Severe <u>VSL</u>
	R8	N/A	The Reliability Coordinator identified sources of large Area Control Errors that were contributing to Frequency Error, Time Error, or Inadvertent Interchange and discussed corrective actions with the appropriate Balancing Authority but failed to direct the Balancing Authority to comply with CPS and DCS.	The Reliability Coordinator identified sources of large Area Control Errors that were contributing to Frequency Error, Time Error, or Inadvertent Interchange but failed to discuss corrective actions with the appropriate Balancing Authority.	The Reliability Coordinator failed to identify sources of large Area Control Errors that were contributing to Frequency Error, Time Error, or Inadvertent Interchange.

Requirement <u>R#</u>		Lower <u>VSL</u>	Moderate <u>VSL</u>	High <u>VSL</u>	Severe <u>VSL</u>
	R9	N/A	N/A	N/A	The Reliability Coordinator failed to be aware of the impact on inter-area flows of an inter-Balancing Authority or inter-Transmission Operator, following the operation of a Special Protection System that is armed (e.g., could potentially affect transmission flows resulting in a SOL or IROL violation), or the Transmission Operator failed to immediately inform the Reliability Coordinator of the status of the Special Protection System including any degradation or potential failure to operate as expected.
	R10	N/A	N/A	N/A	The responsible entity failed to operate the Bulk Electric System to the most limiting parameter in instances where there was a difference in derived limits.

Requirement <u>R#</u>		Lower <u>VSL</u>	Moderate <u>VSL</u>	High <u>VSL</u>	Severe <u>VSL</u>
	<u>R11</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>The Transmission Service Provider failed to respect SOLs or IROLs in accordance with filed tariffs and regional Total Transfer Calculation and Available Transfer Calculation processes.</u>
<u>R12</u>	<u>R2</u>	<u>N/A</u> The Reliability Coordinator failed to notify one, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.	The Reliability Coordinator failed to notify <u>two, but not all</u> , impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.	<u>N/A</u> The Reliability Coordinator failed to notify <u>three, but not all</u> , impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.	<u>The Reliability Coordinator who foresaw a transmission problem (such as an SOL or IROL violation, loss of reactive reserves, etc.) within its Reliability Coordinator Area failed to issue an alert to all notify more than three impacted Transmission Operators and, Balancing Authorities in its Reliability Coordinator Area, or, when the receiving transmission problem had been mitigated.</u> <u>OR</u> <u>The Reliability Coordinator failed to disseminate this information to its notify more all impacted Transmission Operators and, Balancing Authorities, when the transmission problem had been</u>

Requirement <u>R#</u>	Lower <u>VSL</u>	Moderate <u>VSL</u>	High <u>VSL</u>	Severe <u>VSL</u>
				<u>mitigated (in cases where there are less than three impacted entities).</u>

D. Regional Differences

None identified.

E. Associated Documents**Version History**

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
<u>1</u>	<u>August 28, 2006</u>	<u>Added three items that were inadvertently left out to “Applicability” section:</u> <u>4.5 Generator Operators.</u> <u>4.6 Load-Serving Entities.</u> <u>4.7 Purchasing-Selling Entities.</u>	<u>Errata</u>
<u>1</u>	<u>February 7, 2006</u>	<u>BOT Approval</u>	<u>Revised</u>
<u>1</u>	<u>April 4, 2007</u>	<u>Regulatory Approval — Effective Date</u>	<u>New</u>
<u>2</u>	<u>November 1, 2006</u>	<u>BOT Approval</u>	<u>Revised under Missing Measures & Compliance Elements Project</u>
<u>2a</u>	<u>November 5, 2009</u>	<u>Interpretation approved by the Board of Trustees</u>	<u>Interpretation</u>
<u>13</u>	<u>October 17, 2008</u>	~~Retired R2, R3, R5; modified, R16, R17 and revised R9, R13 and, R14; retired R16 and R17~~ ~~Retired M2 and M3; modified M9 and M12; retired M13~~ ~~Made conforming changes_ to data retention~~ ~~Replaced Levels of Non-compliance~~ ~~eliminate redundancy or conflicts with the Feb 28, BOT approved Violation Severity Levels (VSLs)~~ ~~Retired VSLs associated with R2, R3, R5, R16 and R17;~~ ~~Modified VSLs associated with R9~~	~~Revised~~ <u>IROL Project – conforming changes</u>

		~~and R13, and R14~~ <u>IRO standards IRO-009-1, and IRO-010-1</u>	
2	November 1, 2006	Approved by the Board of Trustees	
2	January 1, 2007	Effective Date	
2a	November 5, 2009	Approved by the Board of Trustees	
3	October 17, 2008	~~Approved~~ <u>Adopted</u> by the Board of Trustees	
3	March ~~17~~ <u>23</u> , 2011	Order issued by FERC approving IRO-005-3 (approval effective 5/23/11)	
3a	April 21, 2011	Added FERC approved Interpretation	
3.1a4	~~March 8, 2012~~ <u>August 4, 2011</u>	~~Errata adopted by Standards Committee; (removed outdated references in Measures M10 and M11 to ‘Part 2’ of Requirements R10 and R11)~~ <u>Retired R1-R11; revised R12</u>	~~Errata~~ <u>Project 2006-06</u>
3.1a4	~~September 13, 2012~~ <u>August 4, 2011</u>	~~FERC approved~~ <u>Adopted by the Board of Trustees</u>	~~Errata~~

Appendix 1

Requirement Number and Text of Requirement

~~TOP-005-1 Requirement R3~~

~~Upon request, each Balancing Authority and Transmission Operator shall provide to other Balancing Authorities and Transmission Operators with immediate responsibility for operational reliability, the operating data that are necessary to allow these Balancing Authorities and Transmission Operators to perform operational reliability assessments and to coordinate reliable operations. Balancing Authorities and Transmission Operators shall provide the types of data as listed in Attachment 1 TOP-005-0 “Electric System Reliability Data,” unless otherwise agreed to by the Balancing Authorities and Transmission Operators with immediate responsibility for operational reliability.~~

~~The above referenced Attachment 1 — TOP-005-0 specifies the following data as item 2.6: New or degraded special protection systems. [Underline added for emphasis.]~~

~~IRO-005-1 Requirement R12¹~~

~~**R12.** Whenever a Special Protection System that may have an inter-Balancing Authority, or inter-Transmission Operator impact (e.g., could potentially affect transmission flows resulting in a SOL or IROL violation) is armed, the Reliability Coordinators shall be aware of the impact of the operation of that Special Protection System on inter-area flows. The Transmission Operator shall immediately inform the Reliability Coordinator of the status of the Special Protection System including any degradation or potential failure to operate as expected. [Underline added for emphasis.]~~

~~PRC-012-0 Requirements R1 and R1.3~~

~~**R1.** Each Regional Reliability Organization with a Transmission Owner, Generator Owner, or Distribution Providers that uses or is planning to use an SPS shall have a documented Regional Reliability Organization SPS review procedure to ensure that SPSs comply with Regional criteria and NERC Reliability Standards. The Regional SPS review procedure shall include:~~

~~**R1.3.** Requirements to demonstrate that the SPS shall be designed so that a single SPS component failure, when the SPS was intended to operate, does not prevent the interconnected transmission system from meeting the performance requirements defined in Reliability Standards TPL-001-0, TPL-002-0, and TPL-003-0.~~

Background Information for Interpretation

The TOP-005-1 standard focuses on two key obligations. The first key obligation (Requirement R1) is a “responsibility mandate.” Requirement R1 establishes who is responsible for the obligation to provide operating data “required” by a Reliability Coordinator within the framework of the Reliability Coordinator requirements defined in the IRO standards. The second key obligation (Requirement R3) is a “performance mandate.” Requirement R3 defines the obligation to provide data “requested” by other reliability entities that is needed “to perform

¹ ~~In the current version of the Standard (IRO-005-3a), this requirement is R9.~~

assessments and to coordinate operations.”

The Attachment to TOP-005-1 is provided as a guideline of what “can be shared.” The Attachment is not an obligation of “what must be shared.” Enforceable NERC Requirements must be explicitly contained within a given Standard’s approved requirements. In this case, the standard only requires data “upon request.” If a Reliability Coordinator or other reliability entity were to request data such as listed in the Attachment, then the entity being asked would be mandated by Requirements R1 and R3 to provide that data (including item 2.6, whether it is or is not in some undefined “degraded” state).

IRO-002-1 requires the Reliability Coordinator to have processes in place to support its reliability obligations (Requirement R2). Requirement R4 mandates that the Reliability Coordinator have communications processes in place to meet its reliability obligations, and Requirement R5 et al mandate the Reliability Coordinator to have the tools to carry out these reliability obligations.

IRO-003-2 (Requirements R1 and R2) requires the Reliability Coordinator to monitor the state of its system.

IRO-004-1 requires that the Reliability Coordinator carry out studies to identify Interconnection Reliability Operating Limits (Requirement R1) and to be aware of system conditions via monitoring tools and information exchange.

IRO-005-1 mandates that each Reliability Coordinator monitor predefined base conditions (Requirement R1), collect additional data when operating limits are or may be exceeded (Requirement R3), and identify actual or potential threats (Requirement R5). The basis for that request is left to each Reliability Coordinator. The Purpose statement of IRO-005-1 focuses on the Reliability Coordinator’s obligation to be aware of conditions that may have a “significant” impact upon its area and to communicate that information to others (Requirements R7 and R9). Please note: it is from this communication that Transmission Operators and Balancing Authorities would either obtain or would know to ask for SPS information from another Transmission Operator.

The IRO-005-1 (Requirement R12) standard implies that degraded is a condition that will result in a failure to operate as designed. If the loss of a communication channel will result in the failure of an SPS to operate as designed then the Transmission Operator would be mandated to report that information. On the other hand, if the loss of a communication channel will not result in the failure of the SPS to operate as designed, then such a condition can be, but is not mandated to be, reported.

Conclusion

The TOP-005-1 standard does not provide, nor does it require, a definition for the term “degraded.”

The IRO-005-1 (R12) standard implies that degraded is a condition that will result in a failure of an SPS to operate as designed. If the loss of a communication channel will result in the failure of an SPS to operate as designed, then the Transmission Operator would be mandated to report that information. On the other hand, if the loss of a communication channel will not result in the failure of the SPS to operate as designed, then such a condition can be, but is not mandated to be,

~~reported.~~

~~To request a formal definition of the term degraded, the Reliability Standards Development Procedure requires the submittal of a Standards Authorization Request.~~

A. Introduction

1. **Title:** Coordination Among Reliability Coordinators
2. **Number:** IRO-014-2
3. **Purpose:** To ensure that each Reliability Coordinator's operations are coordinated such that they will not have an Adverse Reliability Impact on other Reliability Coordinator Areas and to preserve the reliability benefits of interconnected operations.
4. **Applicability:**
 - 4.1. Reliability Coordinator
5. **Effective Date:** In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter that is 12 months after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter that is 12 months after Board of Trustees approval.

B. Requirements

- R1. Each Reliability Coordinator shall have Operating Procedures, Operating Processes, or Operating Plans for activities that require notification, exchange of information or coordination of actions that may impact other Reliability Coordinator Areas to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following: *[Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning]*
 - 1.1. Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators.
 - 1.2. Energy and capacity shortages.
 - 1.3. Planned or unplanned outage information.
 - 1.4. Control of voltage, including the coordination of reactive resources.
 - 1.5. Coordination of information exchange to support reliability assessments.
 - 1.6. Authority to act to prevent and mitigate system conditions which could cause Adverse Reliability Impacts to other Reliability Coordinator Areas.
 - 1.7. Weekly conference calls
- R2. Each Reliability Coordinator shall maintain its Operating Procedures, Operating Processes, or Operating Plans identified in Requirement R1 as follows: *[Violation Risk Factor: Lower] [Time Horizon: Same Day Operations and Operations Planning]*
 - 2.1. Review and update annually with no more that 15 months between reviews.
 - 2.2. Obtain written agreement from all of the Reliability Coordinators required to take the indicated action(s) for each update.

- 2.3.** Distribute to all Reliability Coordinators that are required to take the indicated action(s) within 30 days of an update.
- R3.** Each Reliability Coordinator shall make notifications and exchange reliability-related information with other Reliability Coordinators in accordance with the Operating Procedures, Operating Processes, or Operating Plans identified in Requirement R1. *[Violation Risk Factor: Medium][Time Horizon: Real-time Operations and Operations Planning]*
- R4.** Each Reliability Coordinator shall participate in agreed upon conference calls, at least weekly (per Requirement 1, Part 1.7) with other Reliability Coordinators within the same Interconnection. *[Violation Risk Factor: Lower][Time Horizon: Real-time Operations]*
- R5.** Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify all other Reliability Coordinators. *[Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*
- R6.** During each instance where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact each impacted Reliability Coordinator shall operate as though the problem exists. *[Violation Risk Factor: High][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*
- R7.** During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, the Reliability Coordinator that identified the Adverse Reliability Impact shall develop an action plan to resolve the Adverse Reliability Impact. *[Violation Risk Factor: High][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*
- R8.** During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, each Reliability Coordinator shall implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact unless such actions would violate safety, equipment, regulatory or statutory requirements. *[Violation Risk Factor: High][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*

C. Measures

- M1.** Each Reliability Coordinator shall have available the latest approved documented version of its Operating Procedures, Processes, and Operating Plans that require notifications, information exchange or the coordination of actions among impacted Reliability Coordinators for conditions or activities that impact other Reliability Coordinator Areas. This documentation shall include dated, current in force documentation with the specified elements. (R1)
- M2.** Each Reliability Coordinator shall have dated evidence that the Operating Procedures, Processes, and Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were:
- 2.1** Reviewed and updated annually with no more than 15 months between reviews.

- 2.2 Agreed to, in writing, by all the Reliability Coordinators required to take the indicated action(s).
- 2.3 Distributed within 30 days of an update to all Reliability Coordinators that are required to take the indicated action(s).

This evidence may include, but is not limited to dated documentation with confirmation of receipt, dated notice of acceptance or agreement to take specified actions, or dated electronic communications with confirmation of receipt and acceptance or agreement to take specified actions. (R2)

- M3.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent dated documentation, that will be used to determine that it made notifications and exchanged reliability-related information with impacted Reliability Coordinators in accordance with the Operating Procedures, Processes, or Plans identified in Requirement R1. (R3)
- M4.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent dated documentation, that will be used to determine that it participated in agreed upon (at least weekly) conference calls with other Reliability Coordinators within the same Interconnection. (R4)
- M5.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent dated documentation, that will be used to determine that it, upon identification of an Adverse Reliability Impact, notified other Reliability Coordinators. (R5)
- M6.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it operated under the assumption that the Adverse Reliability Impact existed during each instance where Reliability Coordinators disagreed on the existence of an Adverse Reliability Impact. (R6)
- M7.** Each Reliability Coordinator that identified an Adverse Reliability Impact shall have evidence and provide evidence that it developed an action plan during those instances where Reliability Coordinators disagreed on the existence of an Adverse Reliability Impact. This evidence may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent dated documentation. (R7)
- M8.** Each impacted Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent dated documentation, that will be used to determine that it implemented the action plan developed by the Reliability Coordinator who has the identified the Adverse Reliability Impact when a Reliability Coordinator has identified an Adverse Reliability Impact and the impacted Reliability

Coordinators disagree on an action unless such actions would have violated safety, equipment, or regulatory or statutory requirements. (R8)

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

The Regional Entity is the Compliance Enforcement Authority except where the Reliability Coordinator works for the Regional Entity. Where the Reliability Coordinator works for the Regional Entity, the Regional Entity will establish an agreement with the ERO or another entity approved by the ERO and FERC (i.e. another Regional Entity), to be responsible for compliance enforcement.

1.2. Compliance Monitoring Period and Reset Time Frame

Not Applicable

1.3. Compliance Monitoring and Enforcement Processes:

Compliance Audit

Self-Certification

Spot Checking

Compliance Violation Investigation

Self-Reporting

Complaint

1.4. Data Retention

The Reliability Coordinator shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- o Each Reliability Coordinator shall retain its current, in force document and any documents in force since the last compliance audit for Requirements R1, R2, and Measures M1, M2.
- o Each Reliability Coordinator shall retain its most recent 12 months of evidence for Requirement R3, R4, R5 and Measure M3, M4, M5.
- o Each Reliability Coordinator shall retain 3 calendar years plus current calendar year of evidence for Requirements R6 through R8 and Measures M6 through M8.
- o If a Reliability Coordinator is found non-compliant, it shall keep information related to the non-compliance until found compliant, or for the time period specified above, whichever is longer.
- o The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

2. Violation Severity Levels

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	The Reliability Coordinator has Operating Procedures, Operating Processes, or Operating Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address one of the topical areas identified in Parts 1.1 through 1.7.	The Reliability Coordinator has Operating Procedures, Operating Processes, or Operating Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address two of the topical areas identified in Parts 1.1 through 1.7.	The Reliability Coordinator has Operating Procedures, Operating Processes, or Operating Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address three of the topical areas identified in Parts 1.1 through 1.7.	The Reliability Coordinator failed to have Operating Procedures, Operating Processes, or Operating Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability to address three or more of the topical areas identified in Parts 1.1 through 1.7.
R2	N/A	The Reliability Coordinator Operating Procedures, Operating Processes, or Operating Plans identified in R1 but failed to distribute these to all Reliability Coordinators that are required to take action.	The Reliability Coordinator has Operating Procedures, Operating Processes, or Operating Plans identified in R1 but failed to obtain agreement from all Reliability Coordinators that are required to take action. OR Failed to review and update the Operating Procedures, Operating Processes, and Operating Plans identified in R1 annually.	The Reliability Coordinator has Operating Procedures, Operating Processes, or Operating Plans identified in R1 but failed to review and update annually and obtain written agreement from all Reliability Coordinators that are required to take action and failed to distribute these to all Reliability Coordinators that are required to take action.
R3	N/A	N/A	The Reliability Coordinator failed to make notifications OR exchange reliability-related information with impacted Reliability Coordinators.	The Reliability Coordinator failed to make notifications AND exchange reliability-related information with impacted Reliability Coordinators.

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R4	N/A	N/A	N/A	The Reliability Coordinator failed to participate in an agreed upon (at least weekly) conference call with impacted Reliability Coordinators within the same Interconnection.
R5	N/A	The Reliability Coordinator failed to notify one, but not all, of the impacted Reliability Coordinators upon identification of an Adverse Reliability Impact.	N/A	The Reliability Coordinator failed to notify more than one impacted Reliability Coordinators upon identification of an Adverse Reliability Impact. OR The Reliability Coordinator failed to notify the impacted Reliability Coordinator (when there is only one impacted Reliability Coordinator) upon identification of an Adverse Reliability Impact.
R6	N/A	N/A	N/A	The Reliability Coordinator failed to operate under the assumption that the Adverse Reliability Impact existed during an instance where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact.
R7	N/A	N/A	N/A	The Reliability Coordinator that identified the Adverse Reliability Impact failed to develop an action plan to resolve the Adverse Reliability Impact during an instance where Reliability Coordinators disagreed on the existence of an Adverse Reliability

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
				Impact.
R8	N/A	N/A	N/A	The Reliability Coordinator failed to implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact during an instance where Reliability Coordinators disagreed on the existence of an Adverse Reliability Impact.

E. Regional Differences

None identified.

F. Associated Documents**Version History**

Version	Date	Action	Change Tracking
1	August 10, 2005	1. Changed incorrect use of certain hyphens (-) to “en dash (–).” 2. Hyphenated “30-day” when used as adjective. 3. Changed standard header to be consistent with standard “Title.” 4. Initial capped heading “Definitions of Terms Used in Standard.” 5. Added “periods” to items where appropriate. 6. Changed “Timeframe” to “Time Frame” in item D, 1.2. 7. Lower cased all words that are not “defined” terms — drafting team, self-certification. 8. Changed apostrophes to “smart” symbols. 9. Added comma in all word strings “Procedures, Processes, or Plans,” etc. 10. Added hyphens to “Reliability Coordinator-to-Reliability Coordinator” where used as adjective. 11. Removed comma in item 2.1.2. 12. Removed extra spaces between words where appropriate.	January 20, 2006
1	February 7, 2006	Approved by BOT	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New
2	August 4, 2011	Revised per Project 2006-6; Revised existing requirements for clarity, retired R3 and R4 and incorporated requirements from IRO-015-1 and IRO-016-1 into this standard.	Revised
2	August 4, 2011	Adopted by Board of Trustees	

A. Introduction

1. **Title:** ~~Procedures, Processes, or Plans to Support~~ Coordination
~~Between~~Among Reliability Coordinators _____
2. **Number:** IRO-014-~~12~~
3. **Purpose:** To ensure that each Reliability Coordinator's operations are coordinated such that they will not have an Adverse Reliability Impact on other Reliability Coordinator Areas and to preserve the reliability benefits of interconnected operations.
4. **Applicability:**
 - 4.1. Reliability Coordinator
- ~~5. **Effective Date:** _____ November 1, 2006 _____~~
5. **Effective Date:** In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter that is 12 months after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter that is 12 months after Board of Trustees approval.

B. Requirements

- ~~R1. The~~Each Reliability Coordinator shall have Operating Procedures, Operating Processes, or Operating Plans ~~in place~~ for activities that require notification, exchange of information or coordination of actions ~~with one or more that may impact~~ other Reliability ~~Coordinators~~Coordinator Areas to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall ~~address Scenarios that affect other Reliability Coordinator Areas as well as those developed in coordination with other Reliability Coordinators.~~
- ~~R1.1.R1. _____~~ These Operating Procedures, Processes, or Plans shall collectively address, ~~as a minimum,~~ the following: [Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning]
- ~~R1.1.1.1.1. _____~~ Communications and notifications, including the mutually agreed to conditions⁴ under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators.
- ~~R1.1.2.1.2. _____~~ Energy and capacity shortages.
- ~~R1.1.3.1.3. _____~~ Planned or unplanned outage information.
- ~~R1.1.4.1.4. _____~~ ~~Voltage control~~Control of voltage, including the coordination of reactive resources ~~for voltage control.~~
- ~~R1.1.5.1.5. _____~~ Coordination of information exchange to support reliability assessments.

⁴ Examples of conditions when one Reliability Coordinator may need to notify another Reliability Coordinator may include (but aren't limited to) sabotage events, Interconnection Reliability Operating Limit violations, voltage reductions, insufficient resources, arming of special protection systems, etc.

R1.1.6.1.6. Authority to act to prevent and mitigate ~~instances of causing system conditions which could cause~~ Adverse Reliability Impacts to other Reliability Coordinator Areas.

1.7. Weekly conference calls

R2. Each Reliability ~~Coordinator's~~Coordinator shall maintain its Operating ~~Procedure, Process~~Procedures, Operating Processes, or ~~Plan~~Operating Plans identified in Requirement R1 as follows: *[Violation Risk Factor: Lower] [Time Horizon: Same Day Operations and Operations Planning]*

2.1. Review and update annually with no more that requires15 months between reviews.

2.2. Obtain written agreement from all of the Reliability Coordinators required to take the indicated action(s) for each update.

2.3. Distribute to all Reliability Coordinators that are required to take the indicated action(s) within 30 days of an update.

R3. Each Reliability Coordinator shall make notifications and exchange reliability-related information with other Reliability Coordinators in accordance with the Operating Procedures, Operating Processes, or Operating Plans identified in Requirement R1. *[Violation Risk Factor: Medium][Time Horizon: Real-time Operations and Operations Planning]*

R4. Each Reliability Coordinator shall participate in agreed upon conference calls, at least weekly (per Requirement 1, Part 1.7) with other Reliability Coordinators within the same Interconnection. *[Violation Risk Factor: Lower][Time Horizon: Real-time Operations]*

R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify all other Reliability Coordinators. *[Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*

R6. During each instance where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact each impacted Reliability Coordinator shall operate as though the problem exists. *[Violation Risk Factor: High] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*

R7. During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, the Reliability Coordinator that identified the Adverse Reliability Impact shall develop an action plan to resolve the Adverse Reliability Impact. *[Violation Risk Factor: High][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*

R8. During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, each Reliability Coordinator shall implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact unless such actions would violate safety, equipment, regulatory or statutory requirements. *[Violation Risk Factor: High][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*

C. Measures

M1. Each Reliability Coordinator shall have available the latest approved documented version of its Operating Procedures, Processes, and Operating Plans that require notifications, information exchange or the coordination of actions among impacted Reliability Coordinators for conditions or activities that impact other Reliability Coordinator Areas. This documentation shall include dated, current in force documentation with the specified elements. (R1)

R2.M2. Each Reliability Coordinator shall have dated evidence that the Operating Procedures, Processes, and Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) ~~shall be~~ are:

2.1 Reviewed and updated annually with no more than 15 months between reviews.

R2.1.2.2 Agreed to, in writing, by all the Reliability Coordinators required to take the indicated action(s).

R2.2.2.3 Distributed within 30 days of an update to all Reliability Coordinators that are required to take the indicated action(s).

~~R3.~~ A Reliability Coordinator's Operating Procedures, Processes, or Plans developed to support a Reliability Coordinator to Reliability Coordinator Operating Procedure, Process, or Plan shall include:

~~3.1.~~ A reference to the associated Reliability Coordinator to Reliability Coordinator Operating Procedure, Process, or Plan.

~~3.2.~~ The agreed-upon actions from the associated Reliability Coordinator to Reliability Coordinator Operating Procedure, Process, or Plan.

~~R4.~~ Each of the Operating Procedures, Processes, and Plans addressed in Reliability Standard IRO-014 Requirement 1 and Requirement 3 shall:

~~4.1.~~ Include version control number or date.

~~4.2.~~ Include a distribution list.

~~4.3.~~ Be reviewed, at least once every three years, and updated if needed.

C. Measures

M1. The Reliability Coordinator's System Operators shall have available for Real-time use, the latest approved version of Operating Procedures, Processes, or Plans that require notifications, information exchange or the coordination of actions between Reliability Coordinators.

1.1 These Operating Procedures, Processes, or Plans shall address:

1.1.1 Communications and notifications, including the conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and

~~the data and information to be exchanged with other Reliability Coordinators.~~

~~1.1.2 — Energy and capacity shortages.~~

~~1.1.3 — Planned or unplanned outage information.~~

~~1.1.4 — Voltage control, including the coordination of reactive resources for voltage control.~~

~~1.1.5 — Coordination of information exchange to support reliability assessments.~~

~~1.1.6 — Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas.~~

~~M2. The Reliability Coordinator shall have evidence that these Operating Procedures, Processes, or Plans were:~~

~~2.1 — Agreed to by all the Reliability Coordinators required to take the indicated action(s).~~

~~2.2 — Distributed to all Reliability Coordinators that are required to take the indicated action(s).~~

~~M3. The Reliability Coordinator's Operating Procedures, Processes, or Plans developed (for its System Operators' internal use) to support a Reliability Coordinator to Reliability Coordinator Operating Procedure, Process, or Plan received from another Reliability Coordinator shall:~~

~~3.1 — Be available to the Reliability Coordinator's System Operators for Real-time use,~~

~~3.2 — Include a reference to the associated source document, and~~

~~3.3 — Support the agreed-upon actions from the source document.~~

~~M4. The Reliability Coordinator's Operating Procedures, Processes, or Plans that addresses Reliability Coordinator to Reliability Coordinator coordination shall each include a version control number or date and a distribution list. The Reliability Coordinator shall have evidence that these Operating Procedures, Processes, or Plans were reviewed within the last three years.~~

~~This evidence may include, but is not limited to dated documentation with confirmation of receipt, dated notice of acceptance or agreement to take specified actions, or dated electronic communications with confirmation of receipt and acceptance or agreement to take specified actions. (R2)~~

~~M3. Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent dated documentation, that will be used to determine that it made notifications and exchanged reliability-related information with impacted Reliability Coordinators in accordance with the Operating Procedures, Processes, or Plans identified in Requirement R1. (R3)~~

- M4.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent dated documentation, that will be used to determine that it participated in agreed upon (at least weekly) conference calls with other Reliability Coordinators within the same Interconnection. (R4)
- M5.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent dated documentation, that will be used to determine that it, upon identification of an Adverse Reliability Impact, notified other Reliability Coordinators. (R5)
- M6.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it operated under the assumption that the Adverse Reliability Impact existed during each instance where Reliability Coordinators disagreed on the existence of an Adverse Reliability Impact. (R6)
- M7.** Each Reliability Coordinator that identified an Adverse Reliability Impact shall have evidence and provide evidence that it developed an action plan during those instances where Reliability Coordinators disagreed on the existence of an Adverse Reliability Impact. This evidence may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent dated documentation. (R7)
- M8.** Each impacted Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent dated documentation, that will be used to determine that it implemented the action plan developed by the Reliability Coordinator who has the identified the Adverse Reliability Impact when a Reliability Coordinator has identified an Adverse Reliability Impact and the impacted Reliability Coordinators disagree on an action unless such actions would have violated safety, equipment, or regulatory or statutory requirements. (R8)

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance ~~Monitoring Responsibility~~ Enforcement Authority

~~Regional Reliability Organization~~

The Regional Entity is the Compliance Enforcement Authority except where the Reliability Coordinator works for the Regional Entity. Where the Reliability Coordinator works for the Regional Entity, the Regional Entity will establish an agreement with the ERO or another entity approved by the ERO and FERC (i.e. another Regional Entity), to be responsible for compliance enforcement.

1.2. Compliance Monitoring Period and Reset Time Frame

~~The Performance Reset Period shall be one calendar year.~~

Not Applicable

1.3. Compliance Monitoring and Enforcement Processes:

Compliance Audit

Self-Certification

Spot Checking

Compliance Violation Investigation

Self-Reporting

Complaint

1.3.1.4. Data Retention

~~The Reliability Coordinator shall keep documentation for the prior calendar year and the current calendar year. The Compliance Monitor shall keep data or evidence to show compliance data for a minimum of three years or until the Reliability Coordinator has achieved full compliance, whichever is longer.~~

1.1. Additional Compliance Information

~~The Reliability Coordinator shall demonstrate compliance through self-certification submitted to as identified below unless directed by its Compliance Monitor annually. The Compliance Monitor shall also use a scheduled on-site review at least once every three years and investigations upon complaint. The Compliance Monitor shall conduct an Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation upon a complaint within 30 days of the alleged infraction's discovery date. The Compliance Monitor shall complete the investigation within 45 days after the start of the investigation. As part of an audit or investigation, the Compliance Monitor shall interview other Reliability Coordinators to identify Operating Procedures, Processes or Plans that were distributed to the Reliability Coordinator being audited to verify that these documents are available for Real-time use by the receiving Reliability Coordinator's System Operators.;~~

~~o TheEach Reliability Coordinator shall have the followingretain its current, in force document and any documents available for inspection during an on-sitein force since the last compliance audit or within five business daysfor Requirements R1, R2, and Measures M1, M2.~~

~~o Each Reliability Coordinator shall retain its most recent 12 months of a request as partevidence for Requirement R3, R4, R5 and Measure M3, M4, M5.~~

~~o Each Reliability Coordinator shall retain 3 calendar years plus current calendar year of an investigation upon a complaint:evidence for Requirements R6 through R8 and Measures M6 through M8.~~

~~1.1.1 The latest version of its Operating Procedures, Processes, or Plans that require notification, exchange of If a Reliability Coordinator is found non-compliant,~~

~~it shall keep information, or coordination of actions with one or more other Reliability Coordinators to support Interconnection reliability.~~

~~1.1.1 Evidence of distribution of Operating Procedures, Processes, or Plans.~~

~~2. Levels of Non-Compliance~~

~~2.1. Level 1: There shall be a level one non-compliance if either of the following conditions is present:~~

~~2.1.1 The latest versions of Operating Procedures, Processes, or Plans (identified through self-certification) that require notification, exchange of information, or coordination of actions with one or more other Reliability Coordinators to support Interconnection reliability do not include a version control number or date, and a distribution list.~~

~~2.1.2 The latest versions of Reliability Coordinator internal documents developed to support action(s) required as a result of other Reliability Coordinators do not include both a reference to the source Operating Procedure, Process, or Plan and the agreed-upon actions from the source Operating Procedure, Process, or Plan.~~

~~2.2. Level 2: There shall be a level two related to the non-compliance if any of the following conditions is present:~~

~~2.2.1 Documents required by this standard were not distributed to all entities on the distribution list.~~

~~2.2.2 Documents required by this standard were not available until found compliant, or for System Operators' Real-time use period specified above, whichever is longer.~~

~~2.2.3 Documents required by this standard do not address all required topics.~~

~~2.3. Level 3: Documents required by this standard do not address any of the six required topics in Reliability Standard IRO-014-R1.~~

~~2.4. Level 4: Not Applicable.~~

o The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

2. Violation Severity Levels

<u>R#</u>	<u>Lower VSL</u>	<u>Moderate VSL</u>	<u>High VSL</u>	<u>Severe VSL</u>
<u>R1</u>	<u>The Reliability Coordinator has Operating Procedures, Operating Processes, or Operating Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address one of the topical areas identified in Parts 1.1 through 1.7.</u>	<u>The Reliability Coordinator has Operating Procedures, Operating Processes, or Operating Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address two of the topical areas identified in Parts 1.1 through 1.7.</u>	<u>The Reliability Coordinator has Operating Procedures, Operating Processes, or Operating Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address three of the topical areas identified in Parts 1.1 through 1.7.</u>	<u>The Reliability Coordinator failed to have Operating Procedures, Operating Processes, or Operating Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability to address three or more of the topical areas identified in Parts 1.1 through 1.7.</u>
<u>R2</u>	<u>N/A</u>	<u>The Reliability Coordinator Operating Procedures, Operating Processes, or Operating Plans identified in R1 but failed to distribute these to all Reliability Coordinators that are required to take action.</u>	<u>The Reliability Coordinator has Operating Procedures, Operating Processes, or Operating Plans identified in R1 but failed to obtain agreement from all Reliability Coordinators that are required to take action.</u> <u>OR</u> <u>Failed to review and update the Operating Procedures, Operating Processes, and Operating Plans identified in R1 annually.</u>	<u>The Reliability Coordinator has Operating Procedures, Operating Processes, or Operating Plans identified in R1 but failed to review and update annually and obtain written agreement from all Reliability Coordinators that are required to take action and failed to distribute these to all Reliability Coordinators that are required to take action.</u>
<u>R3</u>	<u>N/A</u>	<u>N/A</u>	<u>The Reliability Coordinator failed to make notifications OR exchange reliability-related information with impacted Reliability Coordinators.</u>	<u>The Reliability Coordinator failed to make notifications AND exchange reliability-related information with impacted Reliability Coordinators.</u>

<u>R#</u>	<u>Lower VSL</u>	<u>Moderate VSL</u>	<u>High VSL</u>	<u>Severe VSL</u>
<u>R4</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>The Reliability Coordinator failed to participate in an agreed upon (at least weekly) conference call with impacted Reliability Coordinators within the same Interconnection.</u>
<u>R5</u>	<u>N/A</u>	<u>The Reliability Coordinator failed to notify one, but not all, of the impacted Reliability Coordinators upon identification of an Adverse Reliability Impact.</u>	<u>N/A</u>	<u>The Reliability Coordinator failed to notify more than one impacted Reliability Coordinators upon identification of an Adverse Reliability Impact.</u> <u>OR</u> <u>The Reliability Coordinator failed to notify the impacted Reliability Coordinator (when there is only one impacted Reliability Coordinator) upon identification of an Adverse Reliability Impact.</u>
<u>R6</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>The Reliability Coordinator failed to operate under the assumption that the Adverse Reliability Impact existed during an instance where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact.</u>
<u>R7</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>The Reliability Coordinator that identified the Adverse Reliability Impact failed to develop an action plan to resolve the Adverse Reliability Impact during an instance where Reliability Coordinators disagreed on the existence of an Adverse Reliability</u>

<u>R#</u>	<u>Lower VSL</u>	<u>Moderate VSL</u>	<u>High VSL</u>	<u>Severe VSL</u>
				<u>Impact.</u>
<u>R8</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>The Reliability Coordinator failed to implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact during an instance where Reliability Coordinators disagreed on the existence of an Adverse Reliability Impact.</u>

**Standard IRO-014-~~12~~ — ~~Procedures, Processes, or Plans to Support~~ Coordination
Between Among Reliability Coordinators**

E. Regional Differences

None ~~Identified~~identified.

F. Associated Documents

Version History

Version	Date	Action	Change Tracking
~~Version~~ 1	~~08/August 10/05,~~ <u>2005</u>	1. Changed incorrect use of certain hyphens (-) to “en dash (-).” 2. Hyphenated “30-day” when used as adjective. 3. Changed standard header to be consistent with standard “Title.” 4. Initial capped heading “Definitions of Terms Used in Standard.” 5. Added “periods” to items where appropriate. 6. Changed “Timeframe” to “Time Frame” in item D, 1.2. 7. Lower cased all words that are not “defined” terms — drafting team, self-certification. 8. Changed apostrophes to “smart” symbols. 9. Added comma in all word strings “Procedures, Processes, or Plans,” etc. 10. Added hyphens to “Reliability Coordinator-to-Reliability Coordinator” where used as adjective. 11. Removed comma in item 2.1.2. 12. Removed extra spaces between words where appropriate.	~~01/January 20/06,~~ <u>2006</u>
<u>1</u>	<u>February 7, 2006</u>	<u>Approved by BOT</u>	<u>Revised</u>
<u>1</u>	<u>April 4, 2007</u>	<u>Regulatory Approval — Effective Date</u>	<u>New</u>
<u>2</u>	<u>August 4, 2011</u>	<u>Revised per Project 2006-6; Revised existing requirements for clarity, retired R3 and R4 and incorporated requirements from IRO-015-1 and IRO-016-1 into this standard.</u>	<u>Revised</u>
<u>2</u>	<u>August 4, 2011</u>	<u>Adopted by Board of Trustees</u>	

Exhibit C

Implementation Plans and Mapping Documents submitted for Approval

Implementation Plan and Mapping Document

IRO-001-3 Reliability Coordination – Responsibilities and Authorities

Requested Approval

The RC SDT requests the approval of IRO-001-3 – Reliability Coordination – Responsibilities and Authorities.

Requested Retirement

The RC SDT request the retirement of standard IRO-001-2 – Responsibilities and Authorities, Requirements R1 and R2, and the associated sub-requirements.

Prerequisite Approvals

None.

Defined Terms in the NERC Glossary

The RC SDT proposes the following new definition:

Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact.

Conforming Changes to Requirements in Already Approved Standards

None.

Revision Summary

The RC SDT is proposing the following revisions. Requirement, R1 will be retired because it is addressed in the NERC Rules of Procedure, Section 501 and 503. Requirements, R2 and R5 are proposed for retirement. Requirement, R3 will become the new Requirement R1, the authority to act and direct others to act, which may include Reliability Directives. Requirement, R4 is proposed for retirement because it is redundant with the NERC Rules of Procedure, Section 501 and 508. Requirement, R6 is proposed for retirement because PER-003-0 provides the necessary reliability replacement with no gap in reliability. Requirement, R7 is proposed for retirement because IRO-014-2, R1 provides the necessary reliability replacement with no gap in reliability. Requirement, R8 is proposed for replacement by the new IRO-001-3, Requirement R2 and R3. Requirements, R9 is proposed for retirement because it is redundant with other requirements and it is covered under the Reliability Coordinator's Standard of Conduct.

Applicable Entities

- Reliability Coordinator
- Balancing Authority
- Transmission Operator Generator Operator
- Distribution Provider

Effective Dates

The first day of the second calendar quarter beyond the date that this standard is approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standard becomes effective on the first day of the first calendar quarter beyond the date this standard is approved by the NERC Board of Trustees, or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities.

New or Revised Standard

- IRO-001-3 In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the second calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees adoption.

Standard for Retirement

- IRO-001-2 Midnight of the day immediately prior to the Effective Date of IRO-001-3 in the particular Jurisdiction in which the new standard is becoming effective.

Implementation Plan for Definition

Reliability Directive: Entities shall use this definition when implementing the standard IRO-001-3, which uses this defined term.

Revisions or Retirements to Already Approved Standards

The following tables identify the sections of approved standards that shall be retired or revised when this standard becomes effective. If the drafting team is recommending the retirement or revision of a requirement, that text is [blue](#).

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R1. Each Regional Reliability Organization, subregion, or interregional coordinating group shall establish one or more Reliability Coordinators to continuously assess transmission reliability and coordinate emergency operations among the operating entities within the region and across the regional boundaries. <i>[Violation Risk Factor: High]</i>	The RC SDT proposes retiring the requirement as it is addressed in the NERC Rules of Procedure, March 15, 2012: Section 503, 2 (2.1) “Regional Entities shall verify that all Reliability Coordinators, Balancing Authorities, and Transmission Operators meet the Registration requirements of Section 501(1.4).” Section 501 (1.4) “1.4 For all geographical or electrical areas of the Bulk Power System, the Registration process shall ensure that (1) no areas are lacking any entities to perform the duties and tasks identified in and required by the Reliability Standards to the fullest extent practical, and (2) there is no unnecessary duplication of such coverage or of required oversight of such coverage. In particular the process shall: 1.4.1 Ensure that all areas are under the oversight of one and

Already Approved Standard	Proposed Replacement Requirement(s)
	only one Reliability Coordinator. 1.4.2 Ensure that all Balancing Authorities and Transmission Operator entities¹ are under the responsibility of one and only one Reliability Coordinator. 1.4.3 Ensure that all transmission Facilities of the Bulk Power System are the responsibility and under the control of one and only one Transmission Planner, Planning Authority, and Transmission Operator. 1.4.4 Ensure that all loads and generators are under the responsibility and control of one and only one Balancing Authority.”
Notes:	
IRO-001-1 R2. The Reliability Coordinator shall comply with a regional reliability plan approved by the NERC Operating Committee. <i>[Violation Risk Factor: High]</i> R5. The Reliability Coordinator shall list within its reliability plan all entities to which the Reliability Coordinator has delegated required tasks. <i>[Violation Risk Factor: Lower]</i>	None – The RC SDT proposes retiring the requirements.
Notes: The RC SDT proposes retiring R2 and R5 as the regional reliability plan is a “how” document that shows how a Reliability	

¹ Some organizations perform the listed functions (e.g., Balancing Authority, Transmission Operator) over areas that transcend the Footprints of more than one Reliability Coordinator. Such organizations will have multiple Registrations, with each such Registration corresponding to that portion of the organization’s overall area that is within the Footprint of a particular Reliability Coordinator.

Already Approved Standard	Proposed Replacement Requirement(s)
Coordinator will comply with all other NERC Standards, making this requirement redundant.	
IRO-001-1 R3. The Reliability Coordinator shall have clear decision-making authority to act and direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities and Purchasing-Selling Entities within its Reliability Coordinator Area to preserve the integrity and reliability of the Bulk Electric System. These actions shall be taken without delay, but no longer than 30 minutes. <i>[Violation Risk Factor: High]</i>	IRO-001-3 R1. Each Reliability Coordinator shall take have the authority to actions or direct others to actions (which could include issuing Reliability Directives) to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impacts. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i>
Notes: The RC SDT is proposing that the last sentence of R3 be retired. The timing of RC response to events varies based on system conditions. The specific timing criteria for responses to IROLs are contained in other standards (e.g., TOP-007, R2). This will add clarity and measurability to the standard. The last part of the second sentence should be removed as it is implicit in IRO-001-1, R1, which states that the Reliability Coordination will act or direct actions to mitigate issues. Additionally, stakeholders indicated issues with the ability to measure compliance with the phrase, “without intentional delay” and this was removed.	
IRO-001-1 R4. Reliability Coordinators that delegate tasks to other entities shall have formal operating agreements with each entity to which tasks are delegated. The Reliability Coordinator shall verify that all delegated tasks are understood, communicated, and addressed within its Reliability Coordinator Area. All responsibilities for complying with NERC and regional standards applicable to Reliability	None – The RC SDT proposes retiring the requirement. RC SDT contends that original IRO-001-1, R4 is redundant with NERC Rules of Procedure, Section 500 (March 15, 2012) and should be retired from the standard. (Section 501)

Already Approved Standard	Proposed Replacement Requirement(s)
Coordinators shall remain with the Reliability Coordinator. <i>[Violation Risk Factor: Medium]</i>	“The purpose of the Organization Registration Program is to clearly identify those entities that are responsible for compliance with the FERC approved Reliability Standards. Organizations that are registered are included on the NERC Compliance Registry (NCR) and are responsible for knowing the content of and for complying with all applicable Reliability Standards.” (Section 508) Provisions Relating to Coordinated Functional Registration (CFR) Entities In addition to registering as an entity responsible for all functions that it performs itself, multiple entities may each register using a CFR for one or more Reliability Standard(s) and/or for one or more Requirements/sub-Requirements within particular Reliability Standard(s) applicable to a specific function. The CFR submission must include a written agreement that governs itself and clearly specifies the entities’ respective compliance responsibilities. The Registration of the CFR is the complete Registration for each entity. Additionally, each entity shall take full compliance responsibility for those Reliability Standards and/or Requirements/sub-Requirements it has registered for in the CFR. Neither NERC nor the Regional Entity shall be parties to any such agreement, nor shall NERC or the Regional Entity have responsibility for reviewing or approving any such agreement, other than to verify that the agreement provides for an allocation or assignment of responsibilities consistent with the CFR.

Already Approved Standard	Proposed Replacement Requirement(s)
Notes: Section 508 addresses written agreements.	
IRO-001-1 R6. The Reliability Coordinator shall verify that all delegated tasks are carried out by NERC-certified Reliability Coordinator operating personnel. <i>[Violation Risk Factor: Medium]</i>	None – The RC SDT proposes retiring the requirement because it is covered by PER-003-0, R1. PER-003-0 R1. Each Transmission Operator, Balancing Authority, and Reliability Coordinator shall staff all operating positions that meet both of the following criteria with personnel that are NERC certified for the applicable functions: R1.1. Positions that have the primary responsibility, either directly or through communications with others, for the real-time operation of the interconnected Bulk Electric System. R1.2. Positions directly responsible for complying with NERC standards.
Notes: The RC SDT recommends retiring IRO-001-1, R6 as it is redundant with PER-003-0, R1, R1.1., and R1.2.	
IRO-001-1 R7. The Reliability Coordinator shall have clear, comprehensive coordination agreements with adjacent Reliability Coordinators to ensure that System Operating Limit (SOL) or Interconnection Reliability Operating Limit (IROL) violation mitigation requiring actions in adjacent Reliability	None – The RC SDT proposes retiring the requirement because it is covered by IRO-014-2, R1. IRO-014-2 R1. Each Reliability Coordinator shall have Operating Procedures, Operating Processes, or Operating Plans for activities that require

Already Approved Standard	Proposed Replacement Requirement(s)
Coordinator Areas are coordinated. <i>[Violation Risk Factor: High]</i>	notification, exchange of information or coordination of actions that may impact other Reliability Coordinator Areas to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following: <i>[Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning]</i>
Notes: The RC SDT proposes retiring the retirement of IRO-001-1, R7 as this is redundant with IRO-014-1 R1.	
IRO-001-1 R8: Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities shall comply with Reliability Coordinator directives unless such actions would violate safety, equipment, or regulatory or statutory requirements. Under these circumstances, the Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, or Purchasing-Selling Entity shall immediately inform the Reliability Coordinator of the inability to perform the directive so that the Reliability Coordinator may implement alternate remedial actions. <i>[Violation Risk Factor: High]</i>	IRO-001-3 R2. Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall comply with its Reliability Coordinator's direction unless compliance with the direction cannot be physically implemented or unless such actions would violate safety, equipment, regulatory or statutory requirements. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i> R3. Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to perform as directed in accordance with Requirement R2. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i>
Notes: The RC SDT added the Distribution Provider per FERC Order 693. The RC SDT proposes the replacement of IRO-001-1, R8 with two requirements IRO-001-3, R2, and R3. The Distribution Provider was added as an applicable entity per FERC Order 693.	

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R9. The Reliability Coordinator shall act in the interests of reliability for the overall Reliability Coordinator Area and the Interconnection before the interests of any other entity. <i>[Violation Risk Factor: High]</i>	None – Retire requirement because it is redundant.
Notes: The RC SDT proposes retiring this requirement. All Reliability Coordinator Standard Requirements are developed so that the Reliability Coordinator shall act in the interest of reliability for the RC Area and the Interconnection. Section 6 of the NERC Standard Development Procedure states that NERC develops and maintains Reliability Standards. Equity issues are covered under the Reliability Coordinator Standards of Conduct.	

Functions that Must Comply with the Requirements in the Standards

Standard	Functions that Must Comply With the Requirements							
	Reliability Coordinator	Balancing Authority	Distribution Provider	Transmission Operator	Transmission Service Provider	Purchasing Selling Entity	Generator Operator	Load Serving Entity
IRO-001-2	X	X	X	X			X	

Implementation Plan
IRO-002-3 – Reliability Coordination – Analysis Tools

Approvals Required

IRO-002-3 – Reliability Coordination – Analysis Tools

Prerequisite Approvals

None

Revisions to Glossary Terms

None

Applicable Entities

Reliability Coordinator

Conforming Changes to Other Standards

None

Effective Dates

IRO-002-3 shall become effective on the first day of the first calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees approval.

Retirements

IRO-002-2 should be retired at midnight of the day immediately prior to the Effective Date of IRO-002-3 in the particular jurisdiction in which the new standard is becoming effective.

Summary of Changes

The RCSDT revised the standard and is proposing retiring several requirements (R1, R3, R4, R5, R6, R7 and R8). Changes were made to eliminate redundancies between standards (existing and proposed), align with NERCs Rules of Procedure, and to address the FERC Order 693 directive for IRO-002:

In addition we direct the ERO to develop a modification to IRO-002-1 through the Reliability Standards development process that requires a minimum set of tools that should be made available to reliability coordinators.

RCSDT response: The development of a minimum set of tools should be addressed through the work of the Real-Time Tools Best Practices Task Force. Their charge was to develop a list of tools required to perform real time operations functions and submit SARs based on their work. As requirements for these tools are developed, appropriate standards projects will be initiated to incorporate the tools within the NERC Organization Registration and Certification Process, and the applicable reliability standards. The RCSDT submits that this directive be addressed in that effort. This action is accommodated by the Standards Development Work Plan.

The following table identifies the sections of approved standards that shall be retired or revised when this standard is implemented.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-002-2 R1. Each Reliability Coordinator shall have adequate communications facilities (voice and data links) to appropriate entities within its Reliability Coordinator Area. These communications facilities shall be staffed and available to act in addressing a real-time emergency condition. [<i>Violation Risk Factor: High</i>]	The first sentence of this requirement should be retired because it is a basic facility issue that should be addressed in certification. The second sentence is redundant with PER-004, R1 which requires the RC to be staffed 24x7. PER-004-1 R1. Each Reliability Coordinator shall be staffed with adequately trained and NERC-certified Reliability Coordinator operators, 24 hours per day, seven days per week.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-002-2 R2. Each Reliability Coordinator — or its Transmission Operators and Balancing Authorities — shall provide, or arrange provisions for, data exchange to other Reliability Coordinators or Transmission Operators and Balancing Authorities via a secure network. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]	None. Retire requirement as it is redundant with: TOP-005-1 R1. Each Transmission Operator and Balancing Authority shall provide its Reliability Coordinator with the operating data that the Reliability Coordinator requires to perform operational reliability assessments and to coordinate reliable operations within the Reliability Coordinator Area. (This requirement will be retired upon the implementation of IRO-010-1) IRO-014-1 R1. Each Reliability Coordinator shall have Operating Procedures, Operating Processes, or Operating Plans for activities that require notification, exchange of information or coordination of actions that may impact other Reliability Coordinator Areas to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following: <i>[Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning]</i> R1.1. Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators. R1.2. Energy and capacity shortages. R1.3. Planned or unplanned outage information. R1.4. Control of voltage, including the coordination of reactive resources. R1.5. Coordination of information exchange to support reliability assessments. R1.6. Authority to act to prevent and mitigate system conditions which could cause Adverse Reliability Impacts to other Reliability Coordinator Areas. R1.7. Weekly conference calls

Already Approved Standard	Proposed Replacement Requirement(s)
Notes: The “secure network” provisions of IRO-002-2 R2 are covered under the NERC Rules of Procedure, Section 1002 which states: <i>NERC will provide tools and other support services for the benefit of reliability coordinators and other system operators, including the Area Control Error (ACE) and Frequency Monitoring System, NERC Hotline, Real-time Flows, System Data Exchange (SDX), Reliability Coordinator Information System (RCIS), Transmission Services Information Network (TSIN), Interchange Distribution Calculator (IDC), Interregional Security Network (ISN), and Central Repository for Security Events (CRC). To accomplish this goal, NERC will:</i> <i>1. Maintain the reliability and effectiveness of all mission-critical operating reliability support systems and services;</i> <i>2. Continue to support maintenance of a transmission provider curtailment report on the CRC site in response to Federal Energy Regulatory Commission Order 605;</i> <i>3. Investigate and analyze the use of high-speed real-time system measurements, including phasors, in predicting the behavior and performance of the Eastern Interconnection; and</i> <i>4. Facilitate real-time voice and data exchange services among reliability coordinators (e.g., Hotline, Interregional Security Network, NERCnet, System Data Exchange, etc.).</i>	
IRO-002-2 R3. Each Reliability Coordinator shall have multi-directional communications capabilities with its Transmission Operators and Balancing Authorities, and with neighboring Reliability Coordinators, for both voice and data exchange as required to meet reliability needs of the Interconnection. <i>[Violation Risk Factor: Medium]</i>	None. Retire this requirement. R3 is addressed in COM-001-1, R1 as well as the proposed revisions to COM-001-2, R1-R8.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-002-2 R4. Each Reliability Coordinator shall have detailed real-time monitoring capability of its Reliability Coordinator Area and sufficient monitoring capability of its surrounding Reliability Coordinator Areas to ensure that potential or actual System Operating Limit or Interconnection Reliability Operating Limit violations are identified. Each Reliability Coordinator shall have monitoring systems that provide information that can be easily understood and interpreted by the Reliability Coordinator's operating personnel, giving particular emphasis to alarm management and awareness systems, automated data transfers, and synchronized information systems, over a redundant and highly reliable infrastructure. R5. Each Reliability Coordinator shall monitor Bulk Electric System elements (generators, transmission lines, buses, transformers, breakers, etc.) that could result in SOL or IROL violations within its Reliability Coordinator Area. Each Reliability Coordinator shall monitor both real and reactive power system flows, and operating reserves, and the status of Bulk Electric System elements that are or could be critical to SOLs and IROLs and system restoration requirements within its Reliability Coordinator Area.	None. Both should be retired based on the notes below.
Notes: R4 is a basic facility requirement that should be addressed in certification. For R5, real-time monitoring is a supporting activity and is only one of several processes used to support operation within SOLs or IROLs. It is not practical to measure real-time monitoring, nor is this necessary. The real reliability objective is to operate within identified parameters, not to monitor.	
IRO-002-2 R6. Each Reliability Coordinator shall have adequate analysis tools such as state estimation, pre- and post-contingency analysis capabilities (thermal, stability, and voltage), and wide-area overview displays. <i>[Violation Risk Factor: High]</i>	None. Retire this requirement. R7 is a basic facility requirement that should be addressed in certification.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-002-2 R7. Each Reliability Coordinator shall continuously monitor its Reliability Coordinator Area. Each Reliability Coordinator shall have provisions for backup facilities that shall be exercised if the main monitoring system is unavailable. Each Reliability Coordinator shall ensure SOL and IROL monitoring and derivations continue if the main monitoring system is unavailable. <i>[Violation Risk Factor: High]</i>	None. This requirement should be retired because it is redundant with: EOP-008-0 R1. Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have a plan to continue reliability operations in the event its control center becomes inoperable. The contingency plan must meet the following requirements: The contingency plan shall not rely on data or voice communication from the primary control facility to be viable. R1.2. The plan shall include procedures and responsibilities for providing basic tie line control and procedures and for maintaining the status of all inter-area schedules, such that there is an hourly accounting of all schedules. R1.3. The contingency plan must address monitoring and control of critical transmission facilities, generation control, voltage control, time and frequency control, control of critical substation devices, and logging of significant power system events. The plan shall list the critical facilities. R1.4. The plan shall include procedures and responsibilities for maintaining basic voice communication capabilities with other areas. R1.5. The plan shall include procedures and responsibilities for conducting periodic tests, at least annually, to ensure viability of the plan. R1.6. The plan shall include procedures and responsibilities for providing annual training to ensure that operating personnel are able to implement the contingency plans. R1.7. The plan shall be reviewed and updated annually. R1.8. Interim provisions must be included if it is expected to take more than one hour to implement the contingency plan for loss of primary control facility.

Already Approved Standard	Proposed Replacement Requirement(s)
Notes: Real-time monitoring is a supporting activity and is only one of several processes used to support operation within SOLs or IROLs. It is not practical to measure real-time monitoring, nor is this necessary. The real reliability objective is to operate within SOLs and IROLs, not to monitor. The proposed revisions to EOP-008 require the RC to have specific backup capabilities sufficient to, among other things, provide visualization capabilities that ensure that operating personnel have situational awareness of the BES.	
IRO-002-2 R8. Each Reliability Coordinator shall control its Reliability Coordinator analysis tools, including approvals for planned maintenance. Each Reliability Coordinator shall have procedures in place to mitigate the effects of analysis tool outages. <i>[Violation Risk Factor: Medium]</i>	IRO-002-2 R2. Each Reliability Coordinator shall provide its System Operators with the authority to approve, deny or cancel planned outages of its own analysis tools. <i>[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i> R3. Each Reliability Coordinator shall have procedures in place to mitigate the effects of analysis tool outages. <i>[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i>

Implementation Plan
IRO-005-4 – Reliability Coordination – Current Day Operations

Approvals Required

IRO-005-4 – Reliability Coordination – Current Day Operations

Prerequisite Approvals

None

Revisions to Glossary Terms

Adverse Reliability Impact - The impact of an event that results in Bulk Electric System instability or Cascading.

Applicable Entities

Reliability Coordinator

Conforming Changes to Other Standards

None

Effective Dates

IRO-005-4 shall become effective on the first day of the first calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees approval.

Retirements

IRO-005-3a should be retired at midnight of the day immediately prior to the Effective Date of IRO-005-4 in the particular jurisdiction in which the new standard is becoming effective.

Summary of Changes

The RC SDT proposes retiring other requirements and revising R15 into two separate requirements.

The following tables identify the sections of approved standards that shall be retired or revised when this standard is implemented.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-3a R1. and sub-requirements Each Reliability Coordinator shall monitor its Reliability Coordinator Area parameters, including but not limited to the following: <i>[Violation Risk Factor: High]</i>	Retire R1 and its sub-requirements – Monitoring capability can be objectively measured and is essential to real-time operations – however real-time monitoring is a supporting activity and is only one of several processes used to support operation within defined parameters. Monitoring capability should be assessed during certification and not as a requirement.
IRO-005-3a R2. Each Reliability Coordinator shall monitor its Balancing Authorities' parameters to ensure that the required amount of operating reserves is provided and available as required to meet the Control Performance Standard (CPS) and Disturbance Control Standard (DCS) requirements. If necessary, the Reliability Coordinator shall direct the Balancing Authorities in the Reliability Coordinator Area to arrange for assistance from neighboring Balancing Authorities. The Reliability Coordinator shall issue Energy Emergency Alerts as needed and at the request of its Balancing Authorities and Load-Serving Entities. <i>[Violation Risk Factor: High]</i>	None. The RCSDT proposes that this requirement be retired. The BA has its own requirements regarding compliance with CPS and DCS standards as well as requesting emergency assistance. We view these as vestiges of an earlier program that no longer apply given the current mandatory requirements with which the BA must comply. This requirement should be retired. The requirement is also redundant with existing EOP-002-2.
Notes: EOP-002-2 R1. Each Balancing Authority and Reliability Coordinator shall have the responsibility and clear decision-making authority to take whatever actions are needed to ensure the reliability of its respective area and shall exercise specific authority to alleviate capacity and energy	

Already Approved Standard	Proposed Replacement Requirement(s)
	emergencies. R2. Each Balancing Authority shall implement its capacity and energy emergency plan, when required and as appropriate, to reduce risks to the interconnected system. R3. A Balancing Authority that is experiencing an operating capacity or energy emergency shall communicate its current and future system conditions to its Reliability Coordinator and neighboring Balancing Authorities. R4. A Balancing Authority anticipating an operating capacity or energy emergency shall perform all actions necessary including bringing on all available generation, postponing equipment maintenance, scheduling interchange purchases in advance, and being prepared to reduce firm load. R5. A deficient Balancing Authority shall only use the assistance provided by the Interconnection's frequency bias for the time needed to implement corrective actions. The Balancing Authority shall not unilaterally adjust generation in an attempt to return Interconnection frequency to normal beyond that supplied through frequency bias action and Interchange Schedule changes. Such unilateral adjustment may overload transmission facilities. R6. If the Balancing Authority cannot comply with the Control Performance and Disturbance Control Standards, then it shall immediately implement remedies to do so. These remedies include, but are not limited to: R6.1. Loading all available generating capacity. R6.2. Deploying all available operating reserve. R6.3. Interrupting interruptible load and exports. R6.4. Requesting emergency assistance from other Balancing Authorities. R6.5. Declaring an Energy Emergency through its Reliability Coordinator; and R6.6. Reducing load, through procedures such as public appeals, voltage reductions, curtailing interruptible loads and firm loads. R7. Once the Balancing Authority has exhausted the steps listed in Requirement 6, or if these steps cannot be completed in sufficient time to resolve the emergency condition, the Balancing Authority shall: R7.1. Manually shed firm load without delay to return its ACE to zero; and R7.2. Request the Reliability Coordinator to declare an Energy Emergency Alert in accordance with Attachment 1-EOP-002-0 "Energy Emergency Alert Levels." R8. A Reliability Coordinator that has any Balancing Authority within its Reliability Coordinator area experiencing a potential or actual Energy Emergency shall initiate an Energy Emergency Alert as detailed in Attachment 1-EOP-002-0 "Energy Emergency Alert Levels." The Reliability

Already Approved Standard	Proposed Replacement Requirement(s)
Coordinator shall act to mitigate the emergency condition, including a request for emergency assistance if required. R9. When a Transmission Service Provider expects to elevate the transmission service priority of an Interchange Transaction from Priority 6 (Network Integration Transmission Service from Non-designated Resources) to Priority 7 (Network Integration Transmission Service from designated Network Resources) as permitted in its transmission tariff (See Attachment 1-IRO-006-0 “Transmission Loading Relief Procedure” for explanation of Transmission Service Priorities): R9.1. The deficient Load-Serving Entity shall request its Reliability Coordinator to initiate an Energy Emergency Alert in accordance with Attachment 1-EOP-002-0. R9.2. The Reliability Coordinator shall submit the report to NERC for posting on the NERC Website, noting the expected total MW that may have its transmission service priority changed. R9.3. The Reliability Coordinator shall use EEA 1 to forecast the change of the priority of transmission service of an Interchange Transaction on the system from Priority 6 to Priority 7. R9.4. The Reliability Coordinator shall use EEA 2 to announce the change of the priority of transmission service of an Interchange Transaction on the system from Priority 6 to Priority 7.	
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R3. Each Reliability Coordinator shall ensure its Transmission Operators and Balancing Authorities are aware of Geo-Magnetic Disturbance (GMD) forecast information and assist as needed in the development of any required response plans.	The RCSDT proposes retiring this requirement as it is addressed in R15 below. A GMD is one of the “expected or actual threats with Adverse Reliability Impacts”. IRO-005-4 (proposed) R2. Each Reliability Coordinator that identifies an expected or actual condition with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when the problem has been mitigated. <i>[Violation Risk Factor: Medium]</i> <i>[Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i>
IRO-005-3	

Already Approved Standard	Proposed Replacement Requirement(s)
R4. The Reliability Coordinator shall disseminate information within its Reliability Coordinator Area, as required.	None. The RCSDT recommends retiring this requirement.
Notes: The RCSDT proposes that this requirement is too vague and ambiguous to measure. We recommend retiring this requirement.	
IRO-005-3a R5. Each Reliability Coordinator shall monitor system frequency and its Balancing Authorities' performance and direct any necessary rebalancing to return to CPS and DCS compliance. The Transmission Operators and Balancing Authorities shall utilize all resources, including firm load shedding, as directed by its Reliability Coordinator to relieve the emergent condition.	None. The BA has its own requirements regarding compliance with CPS and DCS standards as well as requesting emergency assistance. RCSDT views these as vestiges of an earlier program that no longer apply given the current mandatory requirements with which the BA must comply. The second sentence is redundant with EOP-002, R4, R6, R7, and R9. This requirement should be retired. The RCSDT recommends retiring this requirement as it is redundant with: TOP-006-1 R7. Each Reliability Coordinator, Transmission Operator and Balancing Authority shall monitor system frequency. EOP-002-2 R4. A Balancing Authority anticipating an operating capacity or energy emergency shall perform all actions necessary including bringing on all available generation, postponing equipment maintenance, scheduling interchange purchases in advance, and being prepared to reduce firm load. R6. If the Balancing Authority cannot comply with the Control Performance and Disturbance Control Standards, then it shall immediately implement remedies to do so. These remedies include, but are not limited to: R6.1. Loading all available generating capacity. R6.2. Deploying all available operating reserve.

Already Approved Standard	Proposed Replacement Requirement(s)
	R6.3. Interrupting interruptible load and exports. R6.4. Requesting emergency assistance from other Balancing Authorities. R6.5. Declaring an Energy Emergency through its Reliability Coordinator; and R6.6. Reducing load, through procedures such as public appeals, voltage reductions, curtailing interruptible loads and firm loads. R7. Once the Balancing Authority has exhausted the steps listed in Requirement 6, or if these steps cannot be completed in sufficient time to resolve the emergency condition, the Balancing Authority shall: R7.1. Manually shed firm load without delay to return its ACE to zero; and R7.2. Request the Reliability Coordinator to declare an Energy Emergency Alert in accordance with Attachment 1-EOP-002-0 "Energy Emergency Alert Levels."
IRO-005-2 R6. The Reliability Coordinator shall coordinate with Transmission Operators, Balancing Authorities, and Generator Operators as needed to develop and implement action plans to mitigate potential or actual SOL, IROL, CPS or DCS violations. The Reliability Coordinator shall coordinate pending generation and transmission maintenance outages with Transmission Operators, Balancing Authorities, and Generator Operators as needed in both the real time and next-day reliability analysis timeframes.	None. The RCS DT proposes to retire this requirement from IRO-005. The RCS DT proposes retiring this requirement as it is redundant with TOP-003 and IRO-004 (all requirements) for next day requirements. The RC has the authority to coordinate pending outages in real-time through IRO-001-2, R1 (proposed). The issue of CPS and DCS is covered in EOP-002-2, R6, R7 and R8 (see above).

Already Approved Standard	Proposed Replacement Requirement(s)
Notes: TOP-003-0 R1. Generator Operators and Transmission Operators shall provide planned outage information. R1.1. Each Generator Operator shall provide outage information daily to its Transmission Operator for scheduled generator outages planned for the next day (any foreseen outage of a generator greater than 50 MW). The Transmission Operator shall establish the outage reporting requirements. R1.2. Each Transmission Operator shall provide outage information daily to its Reliability Coordinator, and to affected Balancing Authorities and Transmission Operators for scheduled generator and bulk transmission outages planned for the next day (any foreseen outage of a transmission line or transformer greater than 100 kV or generator greater than 50 MW) that may collectively cause or contribute to an SOL or IROL violation or a regional operating area limitation. The Reliability Coordinator shall establish the outage reporting requirements. R1.3. Such information shall be available by 1200 Central Standard Time for the Eastern Interconnection and 1200 Pacific Standard Time for the Western Interconnection. R2. Each Transmission Operator, Balancing Authority, and Generator Operator shall plan and coordinate scheduled outages of system voltage regulating equipment, such as automatic voltage regulators on generators, supplementary excitation control, synchronous condensers, shunt and series capacitors, reactors, etc., among affected Balancing Authorities and Transmission Operators as required. R3. Each Transmission Operator, Balancing Authority, and Generator Operator shall plan and coordinate scheduled outages of telemetering and control equipment and associated communication channels between the affected areas. R4. Each Reliability Coordinator shall resolve any scheduling of potential reliability conflicts. IRO-004-1 R1. Each Reliability Coordinator shall conduct next-day reliability analyses for its Reliability Coordinator Area to ensure that the Bulk Electric System can be operated reliably in anticipated normal and Contingency event conditions. The Reliability Coordinator shall conduct Contingency analysis studies to identify potential interface and other SOL and IROL violations, including overloaded transmission lines and transformers, voltage and stability limits, etc. R2. Each Reliability Coordinator shall pay particular attention to parallel flows to ensure one Reliability Coordinator Area does not place an unacceptable or undue Burden on an adjacent Reliability Coordinator Area. R3. Each Reliability Coordinator shall, in conjunction with its Transmission Operators and Balancing Authorities, develop action plans that may be required, including reconfiguration of the transmission system, re-dispatching of generation, reduction or curtailment of Interchange	

Already Approved Standard	Proposed Replacement Requirement(s)
Transactions, or reducing load to return transmission loading to within acceptable SOLs or IROLs. R4. Each Transmission Operator, Balancing Authority, Transmission Owner, Generator Owner, Generator Operator, and Load-Serving Entity in the Reliability Coordinator Area shall provide information required for system studies, such as critical facility status, Load, generation, operating reserve projections, and known Interchange Transactions. This information shall be available by 1200 Central Standard Time for the Eastern Interconnection and 1200 Pacific Standard Time for the Western Interconnection. R5. Each Reliability Coordinator shall share the results of its system studies, when conditions warrant or upon request, with other Reliability Coordinators and with Transmission Operators, Balancing Authorities, and Transmission Service Providers within its Reliability Coordinator Area. The Reliability Coordinator shall make study results available no later than 1500 Central Standard Time for the Eastern Interconnection and 1500 Pacific Standard Time for the Western Interconnection, unless circumstances warrant otherwise. R6. If the results of these studies indicate potential SOL or IROL violations, the Reliability Coordinator shall direct its Transmission Operators, Balancing Authorities and Transmission Service Providers to take any necessary action the Reliability Coordinator deems appropriate to address the potential SOL or IROL violation. R7. Each Transmission Operator, Balancing Authority, and Transmission Service Provider shall comply with the directives of its Reliability Coordinator based on the next day assessments in the same manner in which it would comply during real time operating events. IRO-001-2, R1 (proposed) R1. The Reliability Coordinator shall act or direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations and Same Day Operations]</i>	
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-3a R7. As necessary, the Reliability Coordinator shall assist the Balancing Authorities in its Reliability Coordinator Area in arranging for assistance from neighboring Reliability Coordinator Areas or Balancing Authorities. <i>[Violation Risk Factor: High]</i>	None. The RCSdT proposes to retire this requirement as it is redundant with: EOP-002-2 R7.2. Request the Reliability Coordinator to declare an Energy Emergency Alert in accordance with Attachment 1-EOP-002-0 “Energy Emergency Alert Levels.” R8. A Reliability Coordinator that has any Balancing Authority within its

Already Approved Standard	Proposed Replacement Requirement(s)
	Reliability Coordinator area experiencing a potential or actual Energy Emergency shall initiate an Energy Emergency Alert as detailed in Attachment 1-EOP-002-0 "Energy Emergency Alert Levels." The Reliability Coordinator shall act to mitigate the emergency condition, including a request for emergency assistance if required.
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-3a R8. The Reliability Coordinator shall identify sources of large Area Control Errors that may be contributing to Frequency Error, Time Error, or Inadvertent Interchange and shall discuss corrective actions with the appropriate Balancing Authority. The Reliability Coordinator shall direct its Balancing Authority to comply with CPS and DCS.	None. The RCS DT recommends retiring this requirement as it is redundant with: IRO-001-2 (proposed) R2. Each Reliability Coordinator shall take actions or direct actions (which could include issuing Reliability Directives) by Transmission Operators, Balancing Authorities, Generator Operators, and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i> TOP-006-1, R7 (existing) R7. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall monitor system frequency.
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-3a R9. Whenever a Special Protection System that may have an inter-Balancing Authority, or inter-Transmission Operator impact (e.g., could potentially affect transmission flows resulting in a SOL or IROL violation) is	None. The RCS DT recommends retiring this requirement as it is redundant with proposed IRO-010: IRO-010-1 R1. The Reliability Coordinator shall have a documented data

Already Approved Standard	Proposed Replacement Requirement(s)
armed, the Reliability Coordinators shall be aware of the impact of the operation of that Special Protection System on inter-area flows. The Transmission Operator shall immediately inform the Reliability Coordinator of the status of the Special Protection System including any degradation or potential failure to operate as expected.	specification for data and information to build and maintain models to support Real-Time monitoring, Operational Planning Analyses, and Real-time Assessments. The specification shall include the following: <i>(Violation Risk Factor: Low) (Time Horizon: Operations Planning)</i> R1.1. List of required data and information. R1.2. Mutually agreeable format. R1.3. Timeframe and periodicity for providing data and information (based on its hardware and software requirements, and the time needed to do its Operational Planning Analyses). R1.4. Process for data provision when automated Real-Time system operating data is unavailable. R2. The Reliability Coordinator shall distribute its data specification to entities that have Facilities monitored by the Reliability Coordinator and to entities that provide Facility status to the Reliability Coordinator. <i>(Violation Risk Factor: Low) (Time Horizon: Operations Planning)</i> R3. Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. The data and information is limited to data needed by the Reliability Coordinator to support Real-Time Monitoring, Operational Planning Analyses, and Real-Time Assessments. <i>(Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations)</i>
Notes: The RCSDT recommends retiring this requirement as it is redundant with proposed IRO-010, R1 and R3. Also, the scope of project	

Already Approved Standard	Proposed Replacement Requirement(s)
2007-3 includes enhancing the SPS provisions of TOP-005. IRO-003, R1 indicates the RC will monitor all items that will impact reliability, and SPSs are a part of that.	
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-3a R10. In instances where there is a difference in derived limits, the Reliability Coordinator and its Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities shall always operate the Bulk Electric System to the most limiting parameter.	None. The RCSDT recommends retiring the requirement as it is a facet of the SOL / IROL methodology required in FAC-010-1, FAC-011-1 and FAC-014-1.
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-3a R11. The Transmission Service Providers shall respect these SOLs or IROLs in accordance with filed tariffs and regional Total Transfer Calculation and Available Transfer Calculation processes.	None. The RC SDT proposes retiring this requirement. The concept of this requirement is more appropriately addressed in the proposed MOD standards under project 2006-7. As written, this requirement is not measureable and unenforceable as a TSP's tariff may supersede the requirement.
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-3a R12. Each Reliability Coordinator who foresees a transmission problem (such as an SOL or IROL violation, loss of reactive reserves, etc.) within its Reliability Coordinator Area shall issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area without delay. The receiving Reliability Coordinator shall disseminate this information to its	IRO-005-4 R1. When the results of an Operational Planning Analysis or Real-time Assessment indicate an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. <i>[Violation Risk Factor: High] [Time Horizon: Real-time</i>

Already Approved Standard	Proposed Replacement Requirement(s)
impacted Transmission Operators and Balancing Authorities. The Reliability Coordinator shall notify all impacted Transmission Operators, Balancing Authorities, when the transmission problem has been mitigated.	<i>Operations, Same Day Operations and Operations Planning]</i> R2. The Each Reliability Coordinator that identifies an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when the problem has been mitigated. <i>[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i>

Implementation Plan
IRO-014-2 – Coordination Among Reliability Coordinators

Approvals Required

IRO-014-2 – Coordination Among Reliability Coordinators

Prerequisite Approvals

None

Revisions to Glossary Terms

Adverse Reliability Impact - The impact of an event that results in Bulk Electric System instability or Cascading.

Applicable Entities

Reliability Coordinator

Conforming Changes to Other Standards

Modify IRO-001.1 to eliminate R7, as discussed below.

Effective Dates

In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter that is 12 months after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter that is 12 months after Board of Trustees approval.

Retirements

IRO-014-1, IRO-015-1 and IRO-016-1 should be retired at midnight of the day immediately prior to the Effective Date of IRO-014-2 in the particular jurisdiction in which the new standard is becoming effective.

Summary of Changes

The Reliability Coordination Standard Drafting Team (RC SDT) revised the standard and proposes retiring two requirements (R3 and R4). New requirements were brought into this standard from IRO-015-1 (R1-R2) and IRO-016-1 (R1 and its sub requirements). Changes were made to eliminate redundancies between standards (existing and proposed), eliminate administrative items, and align with NERC's Rules of Procedure and to address issues in FERC Order 693.

The following tables identify the sections of approved standards that shall be retired or revised when this standard is implemented.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1.1 R7. The Reliability Coordinator shall have clear, comprehensive coordination agreements with adjacent Reliability Coordinators to ensure that System Operating Limit or Interconnection Reliability Operating Limit violation mitigation requiring actions in adjacent Reliability Coordinator Areas are coordinated.	IRO-014-2 R1. Each Reliability Coordinator shall have Operating Procedures, Operating Processes, or Operating Plans for activities that require notification, exchange of information or coordination of actions that may impact other Reliability Coordinator Areas to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following: <i>[Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning]</i> 1.1. Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators. 1.2. Energy and capacity shortages. 1.3. Planned or unplanned outage information.

Already Approved Standard	Proposed Replacement Requirement(s)
	1.4. Control of voltage, including the coordination of reactive resources. 1.5. Coordination of information exchange to support reliability assessments. 1.6. Authority to act to prevent and mitigate system conditions which could cause Adverse Reliability Impacts to other Reliability Coordinator Areas. 1.7. Weekly conference calls
Notes: The RC SDT proposes retiring IRO-001.1 R7, as it is redundant with IRO-014, R1.	
IRO-014-1 R1. The Reliability Coordinator shall have Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with one or more other Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall address Scenarios that affect other Reliability Coordinator Areas as well as those developed in coordination with other Reliability Coordinators. <i>[Violation Risk Factor: Medium]</i> R1.1 These Operating Procedures, Processes, or Plans shall collectively address, as a minimum, the following: <i>[Violation Risk Factor: Lower]</i> R1.1.1 Communications and notifications, including the conditions¹ under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in	IRO-014-2 R1. Each Reliability Coordinator shall have Operating Procedures, Operating Processes, or Operating Plans for activities that require notification, exchange of information or coordination of actions that may impact other Reliability Coordinator Areas to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following: <i>[Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning]</i> 1.1 Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the

¹ Examples of conditions when one Reliability Coordinator may need to notify another Reliability Coordinator may include (but aren't limited to) sabotage events, Interconnection Reliability Operating Limit violations, voltage reductions, insufficient resources, arming of special protection systems, etc.

Already Approved Standard	Proposed Replacement Requirement(s)
making those notifications; and the data and information to be exchanged with other Reliability Coordinators. [Violation Risk Factor: Medium] R1.1.2 Energy and capacity shortages. [Violation Risk Factor: Medium] R1.1.3 Planned or unplanned outage information. [Violation Risk Factor: Medium] R1.1.4 Voltage control, including the coordination of reactive resources for voltage control. [Violation Risk Factor: Medium] R1.1.5 Coordination of information exchange to support reliability assessments. [Violation Risk Factor: Lower] R1.1.6 Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas. [Violation Risk Factor: Lower]	data and information to be exchanged with other Reliability Coordinators. 1.2 Energy and capacity shortages. 1.3 Planned or unplanned outage information. 1.4 Control of voltage, including the coordination of reactive resources. 1.5 Coordination of information exchange to support reliability assessments. 1.6 Authority to act to prevent and mitigate system conditions which could cause Adverse Reliability Impacts to other Reliability Coordinator Areas. 1.7 Weekly conference calls Authority to act to prevent and mitigate system conditions which could cause Adverse Reliability Impacts to other Reliability Coordinator Areas.
Notes: Revise R1 as shown and delete the footnote.	
IRO-014-1 R2. Each Reliability Coordinator's Operating Procedure, Process, or Plan that requires one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) shall be: R2.1. Agreed to by all the Reliability Coordinators required to take the indicated action(s). R2.2. Distributed to all Reliability Coordinators that are required to take the indicated action(s).	IRO-014-2 R2. Each Reliability Coordinator shall maintain its Operating Procedure, Operating Process, or Operating Plan identified in Requirement R1 as follows: <i>[Violation Risk Factor: Lower]</i> <i>[Time Horizon: Same Day Operations and Long-term Planning]</i> 2.1 Review and update annually with no more that 15 months between reviews. 2.2 Obtain written agreement from all of the Reliability Coordinators required to take the indicated action(s) for each update. 2.3 Distribute to all Reliability Coordinators that are required

Already Approved Standard	Proposed Replacement Requirement(s)
	to take the indicated action(s) within 30 days of an update.
Notes: The RC SDT added a Time Horizon to the requirement and eliminated the VRFs that were applied to the subrequirements.	
IRO-014-1 R3. A Reliability Coordinator’s Operating Procedures, Processes, or Plans developed to support a Reliability Coordinator-to-Reliability Coordinator Operating Procedure, Process, or Plan shall include: R3.1. A reference to the associated Reliability Coordinator-to-Reliability Coordinator Operating Procedure, Process, or Plan. R3.2. The agreed-upon actions from the associated Reliability Coordinator-to-Reliability Coordinator Operating Procedure, Process, or Plan.	None. Retire the requirement
Notes: This requirement is administrative in nature describing the contents of the plans and should not be in a standard. The RC SDT proposes retiring R3 and its subrequirements and recommends converting these good utility practices into a guideline document for use in developing the operating procedures, processes or plans.	
IRO-014-1 R4. Each of the Operating Procedures, Processes, and Plans addressed in Reliability Standard IRO-014 Requirement 1 and Requirement 3 shall: R4.1. Include version control number or date. R4.2. Include a distribution list. R4.3. Be reviewed, at least once every three years, and updated if needed	None. Retire the requirement.
Notes: This requirement is administrative in nature describing the contents of the plans and should not be in a standard. The RC SDT proposes retiring R4 and its subrequirements and recommends converting these good utility practices into a guideline document for use in developing	

Already Approved Standard	Proposed Replacement Requirement(s)
the operating procedures, processes or plans.	
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-015-1 R1. The Reliability Coordinator shall follow its Operating Procedures, Processes, or Plans for making notifications and exchanging reliability-related information with other Reliability Coordinators. <i>[Violation Risk Factor: Medium]</i> R1.1 The Reliability Coordinator shall make notifications to other Reliability Coordinators of conditions in its Reliability Coordinator Area that may impact other Reliability Coordinator Areas. <i>[Violation Risk Factor: Medium]</i> R2. The Reliability Coordinator shall participate in agreed upon conference calls and other communication forums with adjacent Reliability Coordinators. <i>[Violation Risk Factor: Lower]</i> R2.1 The frequency of these conference calls shall be agreed upon by all involved Reliability Coordinators and shall be at least weekly. <i>[Violation Risk Factor: Lower]</i> R3. The Reliability Coordinator shall provide reliability-related information as requested by other Reliability Coordinators. <i>[Violation Risk Factor: Medium]</i>	IRO-014-2 R3. Each Reliability Coordinator shall make notifications and exchange reliability-related information with other Reliability Coordinators in accordance with the Operating Procedures, Operating Processes, or Operating Plans identified in Requirement R1. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations and Operations Planning]</i> R4. Each Reliability Coordinator shall participate in agreed upon conference calls, at least weekly (per Requirement 1, Part 1.7) with other Reliability Coordinators within the same Interconnection. <i>[Violation Risk Factor: Lower] [Time Horizon: Real-time Operations]</i>
Notes: The RC SDT recommends retiring Standard IRO-015 and moving Requirements R1 and R2 to IRO-014-2 and revising as shown. The RC SDT proposes retiring R3 (as shown in the left column) as it is redundant with proposed R5 above. Reliability Coordinators already have several requirements aimed at providing data or information to other Reliability Coordinators in support of Reliability Coordinator responsibilities. For example, Reliability Coordinators provide reliability-related information to other Reliability Coordinators as part of IRO-010-1, R3 – they share information as they try to confirm the existence of operating issues as part of IRO-014-2 R5, etc.	
Already Approved Standard	Proposed Replacement Requirement(s)

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-016-1 R1. The Reliability Coordinator that identifies a potential, expected, or actual problem that requires the actions of one or more other Reliability Coordinators shall contact the other Reliability Coordinator(s) to confirm that there is a problem and then discuss options and decide upon a solution to prevent or resolve the identified problem. <i>[Violation Risk Factor: Medium]</i> R1.1 If the involved Reliability Coordinators agree on the problem and the actions to take to prevent or mitigate the system condition, each involved Reliability Coordinator shall implement the agreed-upon solution, and notify the involved Reliability Coordinators of the action(s) taken. <i>[Violation Risk Factor: Medium]</i> R1.2 If the involved Reliability Coordinators cannot agree on the problem(s) each Reliability Coordinator shall re-evaluate the causes of the disagreement (bad data, status, study results, tools, etc.). <i>[Violation Risk Factor: Medium]</i> R1.2.1 If time permits, this re-evaluation shall be done before taking corrective actions. <i>[Violation Risk Factor: Medium]</i> R1.2.2 If time does not permit, then each Reliability Coordinator shall operate as though the problem(s) exist(s) until the conflicting system status is resolved. <i>[Violation Risk Factor: Medium]</i> R1.3 If the involved Reliability Coordinators cannot agree on the solution, the more conservative solution shall be implemented. <i>[Violation Risk Factor: Medium]</i>	IRO-014-2 R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify all other Reliability Coordinators. <i>[Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i> R6. During each instance where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact each impacted Reliability Coordinator shall operate as though the problem exists. <i>[Violation Risk Factor: High [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i> R7. During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, the Reliability Coordinator that identified the Adverse Reliability Impact shall develop an action plan to resolve the Adverse Reliability Impact. <i>[Violation Risk Factor: High][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i> R8. During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact , each Reliability Coordinator shall implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact unless such actions would violate safety, equipment, regulatory or statutory requirements. <i>[Violation Risk Factor: High][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i>
Notes: IRO-014-2 R5 and R6 are revised versions of IRO-016-1, R1 and its subrequirements which were moved to this standard. The RC SDT	

Already Approved Standard	Proposed Replacement Requirement(s)
removed the wording relating to the “most conservative solution” because it can not be measured. We are proposing to use the mitigation plan of the RC who is experiencing the issue in cases where an agreed to mitigation plan can not be developed. Note that stakeholders proposed revisions to these requirements, and the RC SDT subdivided the requirements to add more clarity.	
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-016-1 R2. The Reliability Coordinator shall document (via operator logs or other data sources) its actions taken for either the event or for the disagreement on the problem(s) or for both.	IRO-014-2 None. Retire the requirement as it is a measure of Requirement R1.

Exhibit D

Violation Risk Factors and Violation Severity Levels Analysis

Violation Risk Factor and Violation Severity Level Justifications

IRO-001-3 – Reliability Coordination – Responsibilities and Authorities

Violation Risk Factor and Violation Severity Level Justifications

This document provides the drafting team's justification for assignment of violation risk factors (VRFs) and violation severity levels (VSLs) for each requirement in: IRO-001-3 – Reliability Coordination – Responsibilities and Authorities

Each primary requirement is assigned a VRF and a set of one or more VSLs. These elements support the determination of an initial value range for the Base Penalty Amount regarding violations of requirements in FERC-approved Reliability Standards, as defined in the ERO Sanction Guidelines.

The Reliability Coordination Standard Drafting Team (SDT) applied the following NERC criteria and FERC Guidelines when proposing VRFs and VSL for the requirements under this project.

NERC Criteria – Violation Risk Factors

High Risk Requirement

A requirement that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.

Medium Risk Requirement

A requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or

restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.

Lower Risk Requirement

A requirement that is administrative in nature and a requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system; or, a requirement that is administrative in nature and a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. A planning requirement that is administrative in nature.

FERC Violation Risk Factor Guidelines

The SDT also considered consistency with the FERC Violation Risk Factor Guidelines for setting VRFs:¹

Guideline 1 – Consistency with the Conclusions of the Final Blackout Report

The Commission seeks to ensure that Violation Risk Factors assigned to Requirements of Reliability Standards in these identified areas appropriately reflect their historical critical impact on the reliability of the Bulk-Power System.

In the VSL Order, FERC listed critical areas (from the Final Blackout Report) where violations could severely affect the reliability of the Bulk-Power System:²

- Emergency operations
- Vegetation management
- Operator personnel training
- Protection systems and their coordination
- Operating tools and backup facilities
- Reactive power and voltage control
- System modeling and data exchange
- Communication protocol and facilities
- Requirements to determine equipment ratings
- Synchronized data recorders

¹ North American Electric Reliability Corp., 119 FERC ¶ 61,145, order on reh'g and compliance filing, 120 FERC ¶ 61,145 (2007) ("VRF Rehearing Order").

² Id. at footnote 15.

- Clearer criteria for operationally critical facilities
- Appropriate use of transmission loading relief

Guideline 2 – Consistency within a Reliability Standard

The Commission expects a rational connection between the sub-Requirement Violation Risk Factor assignments and the main Requirement Violation Risk Factor assignment.

Guideline 3 – Consistency among Reliability Standards

The Commission expects the assignment of Violation Risk Factors corresponding to Requirements that address similar reliability goals in different Reliability Standards would be treated comparably.

Guideline 4 – Consistency with NERC’s Definition of the Violation Risk Factor Level

Guideline (4) was developed to evaluate whether the assignment of a particular Violation Risk Factor level conforms to NERC’s definition of that risk level.

Guideline 5 – Treatment of Requirements that Co-mingle More Than One Obligation

Where a single Requirement co-mingles a higher risk reliability objective and a lesser risk reliability objective, the VRF assignment for such Requirements must not be watered down to reflect the lower risk level associated with the less important objective of the Reliability Standard.

The following discussion addresses how the SDT considered FERC’s VRF Guidelines 2 through 5. The team did not address Guideline 1 directly because of an apparent conflict between Guidelines 1 and 4. Whereas Guideline 1 identifies a list of topics that encompass nearly all topics within NERC’s Reliability Standards and implies that these requirements should be assigned a “High” VRF, Guideline 4 directs assignment of VRFs based on the impact of a specific requirement to the reliability of the system. The SDT believes that Guideline 4 is reflective of the intent of VRFs in the first instance and therefore concentrated its approach on the reliability impact of the requirements.

There are three requirements in IRO-001-3. None of the requirements were assigned a “Lower” VRF. Requirements R1, R2, and R3 are assigned a “High” VRF because this standard’s purpose is to establish the authority of Reliability Coordinators to direct other entities to prevent an Emergency or Adverse Reliability Impact.

NERC Criteria – Violation Severity Levels

Violation Severity Levels (VSLs) define the degree to which compliance with a requirement was not achieved. Each requirement must have at least one VSL. While it is preferable to have four VSLs for each requirement, some requirements do not have multiple “degrees” of noncompliant performance, and may have only one, two, or three VSLs.

Violation severity levels should be based on the guidelines shown in the table below:

Lower	Moderate	High	Severe
Missing a minor element (or a small percentage) of the required performance The performance or product measured has significant value as it almost meets the full intent of the requirement.	Missing at least one significant element (or a moderate percentage) of the required performance. The performance or product measured still has significant value in meeting the intent of the requirement.	Missing more than one significant element (or is missing a high percentage) of the required performance or is missing a single vital component. The performance or product has limited value in meeting the intent of the requirement.	Missing most or all of the significant elements (or a significant percentage) of the required performance. The performance measured does not meet the intent of the requirement or the product delivered cannot be used in meeting the intent of the requirement.

FERC Order of Violation Severity Levels

FERC's VSL guidelines are presented below, followed by an analysis of whether the VSLs proposed for each requirement in the standard meet the FERC Guidelines for assessing VSLs:

Guideline 1 – Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance

Compare the VSLs to any prior levels of non-compliance and avoid significant changes that may encourage a lower level of compliance than was required when levels of non-compliance were used.

Guideline 2 – Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties

A violation of a "binary" type requirement must be a "Severe" VSL.

Do not use ambiguous terms such as "minor" and "significant" to describe noncompliant performance.

Guideline 3 – Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement

VSLs should not expand on what is required in the requirement.

Guideline 4 – Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations

... unless otherwise stated in the requirement, each instance of non-compliance with a requirement is a separate violation. Section 4 of the Sanction Guidelines states that assessing penalties on a per violation per day basis is the “default” for penalty calculations.

VRF and VSL Justifications

VRF Justifications – IRO-001-3, R1	
Proposed VRF	High
NERC VRF Discussion	
FERC VRF G1 Discussion	Guideline 1- Consistency w/ Blackout Report: N/A
FERC VRF G2 Discussion	Guideline 2- Consistency within a Reliability Standard: The requirement has no sub-requirements; only one VRF was assigned so there is no conflict
FERC VRF G3 Discussion	Guideline 3- Consistency among Reliability Standards: There is a similar requirement (Requirement R1) in EOP-002-2.1 that is assigned a High VRF. The requirements are viewed as similar since they both refer to having responsibility to act to ensure reliability.
FERC VRF G4 Discussion	Guideline 4- Consistency with NERC Definitions of VRFs: Failure to act, direct actions or issue Reliability Directives may directly affect the electrical state or the capability of the bulk power system and may lead to bulk power system instability, separation, or cascading failures. Therefore, this requirement is assigned a High VRF.
FERC VRF G5 Discussion	Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation: The requirement contains only one objective; therefore, only one VRF was assigned.

Proposed VSLs for IRO-001-3, R1				
R#	Lower	Moderate	High	Severe
R1	N/A	N/A	N/A	The Reliability Coordinator failed to exercise its authority to take action or direct actions, to prevent an identified event that resulted in an Emergency or Adverse Reliability Impact. OR The Reliability Coordinator failed to exercise its authority to take action or direct actions to mitigate the magnitude or duration of an event that resulted in an Emergency or Adverse Reliability Impact.
VSL Justifications – IRO-001-3, R1				
NERC VSL Guidelines			Meets NERC’s VSL guidelines - Severe: The performance or product measured does not substantively meet the intent of the requirement.	
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance			The proposed requirement is comparable to approved EOP-002-2, Requirement. That is a binary requirement and thus, the VSL in the proposed standard is assigned a Severe VSL.	
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language			Guideline 2a: N/A Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.	

FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is based on a single violation and not cumulative violations.

VRF Justifications – IRO-001-3, R2	
Proposed VRF	High
NERC VRF Discussion	
FERC VRF G1 Discussion	Guideline 1- Consistency w/ Blackout Report: N/A
FERC VRF G2 Discussion	Guideline 2- Consistency within a Reliability Standard: The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
FERC VRF G3 Discussion	Guideline 3- Consistency among Reliability Standards: There is a similar requirement (Requirement R3) in TOP-001-1 that is assigned a High VRF. The requirements are viewed as similar since they both refer to the complying with directives unless the following the directive would violate safety, equipment, regulatory or statutory requirements.
FERC VRF G4 Discussion	Guideline 4- Consistency with NERC Definitions of VRFs: Failure to comply with a reliability directive could lead to bulk power system instability, separation, or cascading failures. Therefore, this requirement is assigned a High VRF.
FERC VRF G5	Guideline 5- Treatment of Requirements that Co-mingle More than One

VRF Justifications – IRO-001-3, R2	
Proposed VRF	High
Discussion	Obligation: The requirement contains only one objective; therefore, only one VRF was assigned.

Proposed VSLs for IRO-001-3, R2				
R#	Lower	Moderate	High	Severe
R7	N/A	N/A	N/A	The responsible entity did not comply with the Reliability Coordinator's direction, unless compliance with the direction could not be physically implemented or unless such actions would have violated safety, equipment, regulatory, or statutory requirements.
VSL Justifications – IRO-001-3, R2				
NERC VSL Guidelines			Meets NERC's VSL guidelines - Severe: The performance or product measured does not substantively meet the intent of the requirement.	
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance			The proposed requirement is comparable to approved TOP-001-1, Requirement R3. That VSL is binary but the SDT notes that there are two possible levels of violation for this requirement. The two conditions are that 1) the responsible entity did not comply (severe) or 2) the responsible initiated action but did not fully comply (high). Thus, the VSL in the proposed standard does not lower the level of compliance currently required by setting VSLs that are less punitive than those already proposed.	
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties			Guideline 2a: N/A Guideline 2b:	

Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.
FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is based on a single violation and not cumulative violations

VRF Justifications – IRO-001-3, R3	
Proposed VRF	High
NERC VRF Discussion	
FERC VRF G1 Discussion	Guideline 1- Consistency w/ Blackout Report: N/A
FERC VRF G2 Discussion	Guideline 2- Consistency within a Reliability Standard: The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
FERC VRF G3	Guideline 3- Consistency among Reliability Standards:

VRF Justifications – IRO-001-3, R3	
Proposed VRF	High
Discussion	There is a similar requirement (Requirement R3) in TOP-001-1 that is assigned a High VRF. The requirements are viewed as similar since they both refer to informing the Reliability Coordinator when a directive cannot be performed.
FERC VRF G4 Discussion	Guideline 4- Consistency with NERC Definitions of VRFs: Failure to inform the Reliability Coordinator of the inability to perform a reliability directive would prevent the Reliability Coordinator from developing an alternative solution to the reliability concern. This could lead to directly affect the electrical state or the capability of the bulk power system and will not lead to bulk power system instability, separation, or cascading failures.
FERC VRF G5 Discussion	Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation: The requirement contains only one objective; therefore, only one VRF was assigned.

Proposed VSLs for IRO-001-3, R3				
R#	Lower	Moderate	High	Severe
R7	N/A	N/A	N/A	The responsible entity failed to inform its Reliability Coordinator upon recognition of its inability to perform as directed.
VSL Justifications – IRO-001-3, R3				
NERC VSL Guidelines			Meets NERC’s VSL guidelines - Severe: The performance or product measured does not substantively meet the intent of the requirement.	
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level			The proposed requirement is comparable to approved TOP-001-1, Requirement R3. That VSL is binary and the proposed VSL is also binary. Thus, the VSL in the proposed standard does not lower the level of compliance currently required by setting VSLs that are less punitive than those already proposed.	

of Compliance	
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	Guideline 2a: N/A Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.
FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is based on a single violation and not cumulative violations.

Violation Risk Factor and Violation Severity Level Assignments

This document provides the drafting team's justification for assignment of violation risk factors (VRFs) and violation severity levels (VSLs) for each requirement in:

- IRO-002-3 — Reliability Coordination – Analysis Tools
- IRO-005-4 — Reliability Coordination – Current Day Operations
- IRO-014-2 — Coordination Among Reliability Coordinators

Each primary requirement is assigned a VRF and a set of one or more VSLs. These elements support the determination of an initial value range for the Base Penalty Amount regarding violations of requirements in FERC-approved Reliability Standards, as defined in the ERO Sanction Guidelines.

Justification for Assignment of Violation Risk Factors in IRO-002-3, IRO-005-4, and IRO-014-2:

The SDT applied the following NERC criteria when proposing VRFs for the requirements in IRO-002-3, IRO-005-4, and IRO-014-2:

High Risk Requirement

A requirement that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.

Medium Risk Requirement

A requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.

Lower Risk Requirement

A requirement that is administrative in nature and a requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system; or, a requirement that is administrative in nature and a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. A planning requirement that is administrative in nature.

The SDT also considered consistency with the FERC Violation Risk Factor Guidelines for setting VRFs:¹

Guideline (1) — Consistency with the Conclusions of the Final Blackout Report

The Commission seeks to ensure that Violation Risk Factors assigned to Requirements of Reliability Standards in these identified areas appropriately reflect their historical critical impact on the reliability of the Bulk-Power System.

In the VSL Order, FERC listed critical areas (from the Final Blackout Report) where violations could severely affect the reliability of the Bulk-Power System:²

- Emergency operations
- Vegetation management
- Operator personnel training
- Protection systems and their coordination
- Operating tools and backup facilities
- Reactive power and voltage control
- System modeling and data exchange
- Communication protocol and facilities
- Requirements to determine equipment ratings
- Synchronized data recorders
- Clearer criteria for operationally critical facilities
- Appropriate use of transmission loading relief.

Guideline (2) — Consistency within a Reliability Standard

The Commission expects a rational connection between the sub-Requirement Violation Risk Factor assignments and the main Requirement Violation Risk Factor assignment.

¹ North American Electric Reliability Corp., 119 FERC ¶ 61,145, order on reh’g and compliance filing, 120 FERC ¶ 61,145 (2007) (“VRF Rehearing Order”).

² Id. at footnote 15.

Guideline (3) — Consistency among Reliability Standards

The Commission expects the assignment of Violation Risk Factors corresponding to Requirements that address similar reliability goals in different Reliability Standards would be treated comparably.

Guideline (4) — Consistency with NERC's Definition of the Violation Risk Factor Level

Guideline (4) was developed to evaluate whether the assignment of a particular Violation Risk Factor level conforms to NERC's definition of that risk level.

Guideline (5) — Treatment of Requirements that Co-mingle More Than One Obligation

Where a single Requirement co-mingles a higher risk reliability objective and a lesser risk reliability objective, the VRF assignment for such Requirements must not be watered down to reflect the lower risk level associated with the less important objective of the Reliability Standard.

The following discussion addresses how the SDT considered FERC's VRF Guidelines 2 through 5. The team did not address Guideline 1 directly because of an apparent conflict between Guidelines 1 and 4. Whereas Guideline 1 identifies a list of topics that encompass nearly all topics within NERC's Reliability Standards and implies that these requirements should be assigned a High VRF, Guideline 4 directs assignment of VRFs based on the impact of a specific requirement to the reliability of the system. The SDT believes that Guideline 4 is reflective of the intent of VRFs in the first instance, therefore, concentrated its approach on the reliability impact of the requirements.

VRF for IRO-002-3:

There are two requirements in IRO-002-3 and both are assigned a Medium VRF.

VRF for IRO-002-3, Requirement R1:

- FERC's Guideline 2 — Consistency within a Reliability Standard. The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
- FERC's Guideline 3 — Consistency among Reliability Standards. This is a unique requirement and is partially replacing IRO-002-1, Requirement R9 that is assigned a Medium VRF.
- FERC's Guideline 4 — Consistency with NERC's Definition of a VRF. Failure to provide System Operators with the authority to deny or cancel outages of its analysis tools does not, in and of itself, directly affect the electrical state or the capability of the bulk power system and will not lead to bulk power system instability, separation, or cascading failures.

However, it greatly increases the likelihood of such problems; therefore, this requirement is assigned a Medium VRF.

- FERC's Guideline 5 — Treatment of Requirements that Co-mingle More Than One Objective. IRO-002-3, Requirement R5 contains only one objective. Therefore, only one VRF was assigned.

VRF for IRO-002-3, Requirement R2:

- FERC's Guideline 2 — Consistency within a Reliability Standard. The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
- FERC's Guideline 3 — Consistency among Reliability Standards. This is a unique requirement and is partially replacing IRO-002-2, Requirement R8 that is assigned a Medium VRF.
- FERC's Guideline 4 — Consistency with NERC's Definition of a VRF. Failure to have a procedures to mitigate the effect of outages of analysis tools does not, in and of itself, directly affect the electrical state or the capability of the bulk power system and will not lead to bulk power system instability, separation, or cascading failures. However, it greatly increases the likelihood of such problems; therefore, this requirement is assigned a Medium VRF.
- FERC's Guideline 5 — Treatment of Requirements that Co-mingle More Than One Objective. TOP-003-2, Requirement R5 contains only one objective. Therefore, only one VRF was assigned.

VRF for IRO-005-4:

There are two requirements in IRO-005-4. Requirement R1 was assigned a High VRF while Requirement R2 was assigned a Medium VRF.

VRF for IRO-005-4, Requirement R1:

- FERC's Guideline 2 — Consistency within a Reliability Standard. The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
- FERC's Guideline 3 — Consistency among Reliability Standards. This requirement is similar to TOP-001-1, Requirement R5, which is assigned a High VRF. The requirements are viewed as similar since they both refer to notifying other entities of emergency or similar conditions.
- FERC's Guideline 4 — Consistency with NERC's Definition of a VRF. Failure to notify impacted Transmission Operators or Balancing Authorities of actual or expected conditions with Adverse Reliability Impacts could affect the electrical state or the capability of the bulk power system and may lead to bulk power system instability, separation, or cascading failures. However, it greatly increases the likelihood of such problems; therefore, this requirement is assigned a High VRF.

- FERC's Guideline 5 — Treatment of Requirements that Co-mingle More Than One Objective. IRO-005-4, Requirement R5 contains only one objective. Therefore, only one VRF was assigned.

VRF for IRO-005-4, Requirement R2:

- FERC's Guideline 2 — Consistency within a Reliability Standard. The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
- FERC's Guideline 3 — Consistency among Reliability Standards. There is not a similar requirement in the standards.
- FERC's Guideline 4 — Consistency with NERC's Definition of a VRF. Failure to notify impacted Transmission Operators or Balancing Authorities when actual or expected conditions with Adverse Reliability Impacts are mitigated, does not, in and of itself, directly affect the electrical state or the capability of the bulk power system and will not lead to bulk power system instability, separation, or cascading failures. However, it greatly increases the likelihood of such problems; therefore, this requirement is assigned a Medium VRF.
- FERC's Guideline 5 — Treatment of Requirements that Co-mingle More Than One Objective. IRO-005-4, Requirement R2 contains only one objective. Therefore, only one VRF was assigned.

VRF for IRO-014-2:

There are eight requirements in IRO-014-2 and of those eight requirements, two were assigned a Lower VRF, three a Medium VRF, and three a High VRF.

VRF for IRO-014-2, Requirement R1:

- FERC's Guideline 2 — Consistency within a Reliability Standard. The requirement has seven parts specifying what is to be included in the Operating Procedures, Operating Processes, or Operating Plans. The VRF applies only to the main requirement. Only one VRF was assigned so there is no conflict.
- FERC's Guideline 3 — Consistency among Reliability Standards. There is a similar requirement in the proposed IRO-009-1, Requirement R2 that is assigned a Medium VRF. The requirements are viewed as similar since they both refer to having Operating Plans, Operating Processes, or Operating Procedures for notifications, exchange of information, or acting to preserve reliability.
- FERC's Guideline 4 — Consistency with NERC's Definition of a VRF. Failure to have Operating Procedures, Operating Processes, or Operating Plans for activities that require notification, exchange of information, or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability does not, in and of itself, directly affect the electrical state or the capability of the bulk power system and will not lead to bulk power system instability, separation, or cascading failures. However, it greatly increases the likelihood of such problems; therefore, this requirement is assigned a Medium VRF.

- FERC's Guideline 5 — Treatment of Requirements that Co-mingle More Than One Objective. IRO-014-2, Requirement R1 contains only one objective. Therefore, only one VRF was assigned.

VRF for IRO-014-2, Requirement R2:

- FERC's Guideline 2 — Consistency within a Reliability Standard. The requirement has three parts but the VRF is only applied to the main requirement. Only one VRF was assigned so there is no conflict.
- FERC's Guideline 3 — Consistency among Reliability Standards. There is a similar requirement in the proposed IRO-010-1, Requirement R1 that is assigned a Lower VRF. The requirements are viewed as similar since they both refer to documentation.
- FERC's Guideline 4 — Consistency with NERC's Definition of a VRF. Failure to agree to the contents of Operating Plans, Operating Process, or Operating Procedures or their distribution does not, in and of itself, directly affect the electrical state or the capability of the bulk power system and will not lead to bulk power system instability, separation, or cascading failures. This requirement is administrative in nature; therefore, this requirement is assigned a Lower VRF.
- FERC's Guideline 5 — Treatment of Requirements that Co-mingle More Than One Objective. IRO-014-2, Requirement R2 contains only one objective. Therefore, only one VRF was assigned.

VRF for IRO-014-2, Requirement R3:

- FERC's Guideline 2 — Consistency within a Reliability Standard. The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
- FERC's Guideline 3 — Consistency among Reliability Standards. There is a similar requirement in the proposed IRO-008-1, Requirement R3 that is assigned a Medium VRF. The requirements are viewed as similar since they both refer to making notifications and sharing information.
- FERC's Guideline 4 — Consistency with NERC's Definition of a VRF. Failure to provide make notifications or share information does not, in and of itself, directly affect the electrical state or the capability of the bulk power system and will not lead to bulk power system instability, separation, or cascading failures. However, it greatly increases the likelihood of such problems; therefore, this requirement is assigned a Medium VRF.
- FERC's Guideline 5 — Treatment of Requirements that Co-mingle More Than One Objective. IRO-014-2, Requirement R3 contains only one objective. Therefore, only one VRF was assigned.

VRF for IRO-014-2, Requirement R4:

- FERC's Guideline 2 — Consistency within a Reliability Standard. The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
- FERC's Guideline 3 — Consistency among Reliability Standards. This is a unique requirement and there are no other similar requirements in the standards. This requirement is a revision to IRO-015-1, Requirement R2, which has an approved Lower VRF.
- FERC's Guideline 4 — Consistency with NERC's Definition of a VRF. Failure to provide participate on weekly conference calls does not, in and of itself, directly affect the electrical state or the capability of the bulk power system and will not lead to bulk power system instability, separation, or cascading failures. However, it greatly increases the likelihood of such problems; therefore, this requirement is assigned a Lower VRF.
- FERC's Guideline 5 — Treatment of Requirements that Co-mingle More Than One Objective. IRO-014-2, Requirement R4 contains only one objective. Therefore, only one VRF was assigned.

VRF for IRO-014-2, Requirement R5:

- FERC's Guideline 2 — Consistency within a Reliability Standard. The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
- FERC's Guideline 3 — Consistency among Reliability Standards. There is a similar requirement in the proposed IRO-008-1, Requirement R3 that is assigned a Medium VRF. The requirements are viewed as similar since they both refer to making notifications and sharing information.
- FERC's Guideline 4 — Consistency with NERC's Definition of a VRF. Failure to provide make notifications or share information does not, in and of itself, directly affect the electrical state or the capability of the bulk power system and will not lead to bulk power system instability, separation, or cascading failures. However, it greatly increases the likelihood of such problems; therefore, this requirement is assigned a Medium VRF.
- FERC's Guideline 5 — Treatment of Requirements that Co-mingle More Than One Objective. IRO-014-2, Requirement R5 contains only one objective. Therefore, only one VRF was assigned.

VRF for IRO-014-2, Requirement R6:

- FERC's Guideline 2 — Consistency within a Reliability Standard. The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
- FERC's Guideline 3 — Consistency among Reliability Standards. There is a similar requirement in the proposed IRO-009-1, Requirement R5 that is assigned a High VRF. The requirements are viewed as similar since they both refer to disagreement between entities as to the nature or the reliability issue.

- FERC's Guideline 4 — Consistency with NERC's Definition of a VRF. Failure to operate as though a problem exists could directly affect the electrical state or the capability of the bulk power system and will not lead to bulk power system instability, separation, or cascading failures. Therefore, the requirement is assigned a High VRF.
- FERC's Guideline 5 — Treatment of Requirements that Co-mingle More Than One Objective. IRO-014-2, Requirement R6 contains only one objective. Therefore, only one VRF was assigned.

VRF for IRO-014-2, Requirement R7:

- FERC's Guideline 2 — Consistency within a Reliability Standard. The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
- FERC's Guideline 3 — Consistency among Reliability Standards. There is a similar requirement in the proposed IRO-009-1, Requirement R5 that is assigned a High VRF. The requirements are viewed as similar since they both refer to disagreement between entities as to the nature or the reliability issue.
- FERC's Guideline 4 — Consistency with NERC's Definition of a VRF. Failure to operate as though a problem exists could directly affect the electrical state or the capability of the bulk power system and will not lead to bulk power system instability, separation, or cascading failures. Therefore, the requirement is assigned a High VRF.
- FERC's Guideline 5 — Treatment of Requirements that Co-mingle More Than One Objective. IRO-014-2, Requirement R7 contains only one objective. Therefore, only one VRF was assigned.

VRF for IRO-014-2, Requirement R8:

- FERC's Guideline 2 — Consistency within a Reliability Standard. The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
- FERC's Guideline 3 — Consistency among Reliability Standards. There is a similar requirement in the proposed IRO-009-1, Requirement R5 that is assigned a High VRF. The requirements are viewed as similar since they both refer to disagreement between entities as to the nature or the reliability issue.
- FERC's Guideline 4 — Consistency with NERC's Definition of a VRF. Failure to operate as though a problem exists could directly affect the electrical state or the capability of the bulk power system and will not lead to bulk power system instability, separation, or cascading failures. Therefore, the requirement is assigned a High VRF.
- FERC's Guideline 5 — Treatment of Requirements that Co-mingle More Than One Objective. IRO-014-2, Requirement R8 contains only one objective. Therefore, only one VRF was assigned.

Justification for Assignment of Violation Severity Levels for COM-001-2, COM-002-3, IRO-001-2, IRO-002-3, IRO-005-4, and IRO-014-2:

In developing the VSLs for the IRO standards, the SDT anticipated the evidence that would be reviewed during an audit, and developed its VSLs based on the noncompliance an auditor may find during a typical audit. The SDT based its assignment of VSLs on the following NERC criteria:

Lower	Moderate	High	Severe
Missing a minor element (or a small percentage) of the required performance The performance or product measured has significant value as it almost meets the full intent of the requirement.	Missing at least one significant element (or a moderate percentage) of the required performance. The performance or product measured still has significant value in meeting the intent of the requirement.	Missing more than one significant element (or is missing a high percentage) of the required performance or is missing a single vital component. The performance or product has limited value in meeting the intent of the requirement.	Missing most or all of the significant elements (or a significant percentage) of the required performance. The performance measured does not meet the intent of the requirement or the product delivered cannot be used in meeting the intent of the requirement.

FERC's VSL guidelines are presented below, followed by an analysis of whether the VSLs proposed for each requirement in IRO-002-3, IRO-004-5, and IRO-014-2 meet the FERC Guidelines for assessing VSLs:

Guideline 1: Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance

Compare the VSLs to any prior levels of non-compliance and avoid significant changes that may encourage a lower level of compliance than was required when levels of non-compliance were used.

Guideline 2: Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties

A violation of a "binary" type requirement must be a "Severe" VSL.

Do not use ambiguous terms such as "minor" and "significant" to describe noncompliant performance.

Guideline 3: Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement

VSLs should not expand on what is required in the requirement.

Guideline 4: Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations

. . . unless otherwise stated in the requirement, each instance of non-compliance with a requirement is a separate violation. Section 4 of the Sanction Guidelines states that assessing penalties on a per violation per day basis is the “default” for penalty calculations.

VSLs for IRO-002-3 Requirement R1:

R#	Compliance with NERC's VSL Guidelines	Guideline 1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	Guideline 2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	Guideline 3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	Guideline 4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations
R1.	Meets NERC's VSL guidelines - Severe: The performance or product measured does not substantively meet the intent of the requirement.	The proposed requirement is a revision of IRO-002-2, R8 which was originally a compound requirement. The RCSDT created two requirements that resulted in them being binary in nature. The Severe VSL was assigned for this binary requirement.	The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.	The VSL is based on a single violation and not cumulative violations.

Justification for Assignment of Violation Risk Factors and Violation Severity Levels

VSLs for IRO-002-3 Requirement R2:

R#	Compliance with NERC's VSL Guidelines	Guideline 1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	Guideline 2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	Guideline 3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	Guideline 4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations
R2.	Meets NERC's VSL guidelines - There is an incremental aspect to the violation and the VSLs follow the guidelines for incremental violations.	The proposed requirement is a revision of IRO-002-2, Requirement R8 which was originally a compound requirement. The RCSDT created two requirements that resulted in them being binary in nature. The Severe VSL was assigned for this binary requirement.	The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.	The VSL is based on a single violation and not cumulative violations.

Justification for Assignment of Violation Risk Factors and Violation Severity Levels

VSLs for IRO-005-4 Requirement R1:

R#	Compliance with NERC's VSL Guidelines	Guideline 1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	Guideline 2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	Guideline 3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	Guideline 4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations
R1.	Meets NERC's VSL guidelines - There is an incremental aspect to the violation and the VSLs follow the guidelines for incremental violations.	The proposed requirement is a revision of IRO-005-3.1a, Requirement R12 which was originally a compound requirement. The RCSDT created two requirements that resulted in them being incremental in nature. The Reliability Coordinator is expected to notify multiple entities per the requirement. VSLs were assigned based on the incremental nature of the requirement. The VSLs do not lower the current level of compliance.	The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.	The VSL is based on a single violation and not cumulative violations.

Justification for Assignment of Violation Risk Factors and Violation Severity Levels

VSLs for IRO-005-4 Requirement R2:

R#	Compliance with NERC's VSL Guidelines	Guideline 1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	Guideline 2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	Guideline 3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	Guideline 4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations
R2.	Meets NERC's VSL guidelines - There is an incremental aspect to the violation and the VSLs follow the guidelines for incremental violations.	The proposed requirement is a revision of IRO-005-3.1a, Requirement R12 which was originally a compound requirement. The RCSDT created two requirements that resulted in them being incremental in nature. The Reliability Coordinator is expected to notify multiple entities per the requirement. VSLs were assigned based on the incremental nature of the requirement. The VSLs do not lower the current level of compliance.	The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.	The VSL is based on a single violation and not cumulative violations.

Justification for Assignment of Violation Risk Factors and Violation Severity Levels

VSLs for IRO-014-2 Requirement R1:

R#	Compliance with NERC's VSL Guidelines	Guideline 1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	Guideline 2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	Guideline 3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	Guideline 4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations
R1.	Meets NERC's VSL guidelines - There is an incremental aspect to the violation and the VSLs follow the guidelines for incremental violations.	The proposed requirement is a revision of IRO-014-1, Requirement R1 and its sub-requirements along with IRO-001-1, Requirement R7. The approved VSLs are incremental as are the proposed VSLs. Thus, the VSLs in the proposed standard do not lower the level of compliance currently required by setting VSLs that are less punitive than those already proposed.	The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.	The VSL is based on a single violation and not cumulative violations.

VSLs for IRO-014-2 Requirement R2:

R#	Compliance with NERC's VSL Guidelines	Guideline 1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	Guideline 2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	Guideline 3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	Guideline 4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations
R2.	Meets NERC's VSL guidelines - There is an incremental aspect to the violation and the VSLs follow the guidelines for incremental violations.	The proposed requirement is a revision of IRO-014-1, Requirement R2 and its sub-requirements. The approved VSLs are binary and applied to the sub-requirements as well. The proposed VSLs are applied only to the requirement and are incremental. Thus, the VSLs in the proposed standard do not lower the level of compliance currently required by setting VSLs that are less punitive than those already proposed.	The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.	The VSL is based on a single violation and not cumulative violations.

VSLs for IRO-014-2 Requirement R3:

R#	Compliance with NERC's VSL Guidelines	Guideline 1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	Guideline 2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	Guideline 3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	Guideline 4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations
R3.	Meets NERC's VSL guidelines - Requirements with Parts that Contribute Equally to the Requirement: If a requirement has several parts, and the parts contribute equally to the reliability-related objective of the requirement, the VSLs should be set either on counts (e.g., missing one of four components) or percentages (e.g., missing 5% of the components).	The proposed requirement is a revision of IRO-015-1, Requirement R1. The proposed VSLs are assigned as High and Severe as there are two components of the requirement – making notifications and sharing information. The approved VSLs are Moderate and Severe. Thus, the VSL in the proposed standard does not lower the level of compliance currently required by setting VSLs that are less punitive than those already proposed.	The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.	The VSL is based on a single violation and not cumulative violations.

Justification for Assignment of Violation Risk Factors and Violation Severity Levels

VSLs for IRO-014-2 Requirement R4:

R#	Compliance with NERC's VSL Guidelines	Guideline 1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	Guideline 2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	Guideline 3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	Guideline 4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations
R4.	Meets NERC's VSL guidelines - Severe: The performance or product measured does not substantively meet the intent of the requirement.	The proposed requirement is a revision of IRO-015-1, Requirement R2. Both the approved VSLs and the proposed VSLs are binary and have been assigned a Severe VSL. Thus, the VSL in the proposed standard does not lower the level of compliance currently required by setting VSLs that are less punitive than those already proposed.	The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.	The VSL is based on a single violation and not cumulative violations.

VSLs for IRO-014-2 Requirement R5:

R#	Compliance with NERC's VSL Guidelines	Guideline 1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	Guideline 2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	Guideline 3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	Guideline 4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations
R5.	Meets NERC's VSL guidelines - Severe: The performance or product measured does not substantively meet the intent of the requirement.	The proposed requirement is derived from IRO-016-1, Requirement R1 and its sub-requirements. The approved VSLs have been applied at both the requirement and sub-requirement level. The proposed requirement has been written to require only one reliability concept and is binary in nature. The VSL assigned is Severe. Thus, the VSL in the proposed standard does not lower the level of compliance currently required by setting VSLs that are less punitive than those already proposed.	The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.	The VSL is based on a single violation and not cumulative violations.

VSLs for IRO-014-2 Requirement R6:

R#	Compliance with NERC's VSL Guidelines	Guideline 1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	Guideline 2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	Guideline 3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	Guideline 4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations
R6.	Meets NERC's VSL guidelines - Severe: The performance or product measured does not substantively meet the intent of the requirement.	The proposed requirement is derived from IRO-016-1, Requirement R1 and its sub-requirements. The approved VSLs have been applied at both the requirement and sub-requirement level. The proposed requirement has been written to require only one reliability concept and is binary in nature. The VSL assigned is Severe. Thus, the VSL in the proposed standard does not lower the level of compliance currently required by setting VSLs that are less punitive than those already proposed.	The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.	The VSL is based on a single violation and not cumulative violations.

VSLs for IRO-014-2 Requirement R7:

R#	Compliance with NERC's VSL Guidelines	Guideline 1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	Guideline 2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	Guideline 3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	Guideline 4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations
R7.	Meets NERC's VSL guidelines - Severe: The performance or product measured does not substantively meet the intent of the requirement.	The proposed requirement is derived from IRO-016-1, Requirement R1 and its sub-requirements. The approved VSLs have been applied at both the requirement and sub-requirement level. The proposed requirement has been written to require only one reliability concept and is binary in nature. The VSL assigned is Severe. Thus, the VSL in the proposed standard does not lower the level of compliance currently required by setting VSLs that are less punitive than those already proposed.	The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.	The VSL is based on a single violation and not cumulative violations.

VSLs for IRO-014-2 Requirement R8:

R#	Compliance with NERC's VSL Guidelines	Guideline 1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	Guideline 2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	Guideline 3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	Guideline 4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations
R8.	Meets NERC's VSL guidelines - Severe: The performance or product measured does not substantively meet the intent of the requirement.	The proposed requirement is derived from IRO-016-1, Requirement R1 and its sub-requirements. The approved VSLs have been applied at both the requirement and sub-requirement level. The proposed requirement has been written to require only one reliability concept and is binary in nature. The VSL assigned is Severe. Thus, the VSL in the proposed standard does not lower the level of compliance currently required by setting VSLs that are less punitive than those already proposed.	The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.	The VSL is based on a single violation and not cumulative violations.

Exhibit E

Consideration of Comments Reports

Project 2006-06 Reliability Coordination

Related Files

Status:

First set of standards:

The industry approved IRO-002, IRO-005, and IRO-014 on July 25, 2011. The BOT approved the standards at their August 4, 2011 meeting. Currently, NERC staff are preparing the filing for these BOT approved standards.

Second set of standards:

The standard COM-001-2 (Communications) is posted for recirculation ballot from September 6 through September 17, 2012. The standard IRO-001-3 was adopted by the Board of Trustees (BOT) at the August 2012 meeting. The COM-002-3 is expected to proceed to the BOT for adoption upon industry stakeholder approval of COM-001-2.

Purpose/Industry Need:

To ensure that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique and enforceable; and to ensure that this set of requirements is sufficient to maintain reliability of the Bulk Electric System.

Draft 7 COM-001-2 Clean Redline to Last Posting Implementation Plan and Mapping Document Clean Redline to Last Posting VRF/VSL Justification Clean Redline to Last Posting	Recirculation Ballot Info>> Vote>>	09/06/12 - 09/17/12 (closed)	Summary>> Ballot Results>>	
Draft 6	Recirculation Ballots and	06/27/12 -	Summary>> Updated	

COM-001-2 Clean Redline to last posting Implementation Plan and Mapping Document Clean Redline to last posting COM-002-3 Clean Redline to last posting Implementation Plan and Mapping Document Clean Redline to last posting IRO-001-3 Clean Redline to last posting Implementation Plan and Mapping Document Clean Redline to last posting Supporting Materials: Comment Form (Word) COM-001-1.1 COM-002-2 VRF/VSL Justification for COM-001-1 Clean Redline VRF/VSL Justification for COM-002-3 Clean Redline VRF/VSL Justification for IRO-001-3 Clean Redline	Non-binding Polls: COM-002-3 IRO-001-3 Ballot Extension>> Updated Info>> Info>> Vote>>	07/06/12 (closed)	Ballot Results: COM-002-3 IRO-001-3 Non-binding Poll Results: COM-002-3 IRO-001-3	
	Successive Ballot and Non-binding Poll: COM-001-2 Info>> Vote>>	06/27/12 - 07/11/12 (closed)	Ballot Results: COM-001-2 Non-binding Poll Results: COM-001-2	
	Comment Period Submit Comments>>	06/07/12 - 07/06/12 (closed)	Comments Received>>	Consideration of Comments(9)
Draft 5	Successive Ballots and Non-Binding	01/30/12 - 02/09/12	Full Records: IRO-001-3	

COM-001-2 Clean Redline to last posting Implementation Plan and Mapping Document Clean Implementation Plan Redline to last posting Mapping Document Redline to last posting	Polls Extension>> Updated Info>> Info>> Vote>>	(closed)	COM-001-2 COM-002-3 Non-Binding Poll Results: IRO-001-3 COM-001-2 COM-002-3	
COM-002-3 Clean Redline to last posting Implementation Plan and Mapping Document Clean Implementation Plan Redline to last posting Mapping Document Redline to last posting IRO-001-3 Clean Redline to last posting Redline to last approved Implementation Plan and Mapping Document Clean Implementation Plan Redline to last posting Mapping Document Redline to last posting Supporting Materials: Comment Form (Word) COM-001-1.1 COM-002-2 VRF/VSL Justification for COM-001-1 VRF/VSL Justification for	Comment Period Submit Comments>>	01/09/12 - 02/09/12 (closed)	Comments Received>>	Consideration of Comments(8)

COM-002-3				
VRF/VSL Justification for IRO-001-3				
Draft 5 IRO-002-3 Clean Redline to last posting Redline to last approval Implementation Plan Clean Redline VRFs and VSLs for IRO-002-3 IRO-005-4 Clean Redline to last posting Redline to last approval Implementation Plan Clean Redline VRFs and VSLs for IRO-005-4 Definition of Adverse Reliability Impact Information on Revision of Definition of Adverse Reliability Impact IRO-014-2 Clean Redline to last posting Redline to last approval Implementation Plan Clean Redline VRFs and VSLs for IRO-014-2 Supporting Materials: IRO-001-2 Clean Redline to last approval	Recirculation Ballot Info>> Vote>>	07/15/11 - 07/25/11 (closed)	Summary>> Full Record - IRO-002 Full Record - IRO-005 Full Record - IRO-014 Non-Binding Results - IRO-002 Non-Binding Results - IRO-005 Non-Binding Results - IRO-014	
			Summary>>	

Draft 4 Reliability Coordination Standards COM-001-2 Clean Redline to last posting Implementation Plan Clean Redline to last posting	Initial Ballot Updated Info>> Info>> Vote>>	02/25/11 - 03/07/11 (closed)	Full Record>> Comments Received>>	Consideration of Comments(7)
	Ballot Pool Join>>	01/25/11 - 02/25/11 (closed)		
COM-002-3 Clean Redline to last posting Implementation Plan Clean Redline to last posting				
IRO-001-2 Clean Redline to last posting Implementation Plan Clean Redline to last posting				
IRO-002-2 Clean Redline Implementation Plan	Formal Comment Period Current Info>>			
IRO-005-2 Clean Redline to last posting Redline to first posting	Info>>	01/18/11 - 03/07/11 (closed)	Comments Received>>	
Implementation Plan Clean Redline to last posting	Submit Comments>>			Consideration of Comments(6)
IRO-014-2 Clean Redline to last posting Implementation Plan Clean Redline to last posting				
IRO-015-1 Redline				

Implementation Plan IRO-016-1 Redline Implementation Plan Supporting Materials: Comment Form (Word)				
Supplemental SAR Supporting Materials: Comment Form (Word)	Formal Comment Period Submit Comments>> Info>>	08/04/10 - 09/03/10 (closed)	Comments Received>>	
Draft 3 Reliability Coordination Standards COM-001-2 Clean Redline to last posting Implementation Plan Clean Redline to last posting COM-002-3 Clean Redline to last posting Implementation Plan Clean Redline to last posting IRO-001-2 Clean Redline to last posting Implementation Plan	Comment Period Info>> Submit Comments>>	01/04/10 - 02/18/10 (closed) Info on Extension of Comment Period>>	Comments Received>>	Consideration of Comments(5)

Clean Redline to last posting IRO-014-2 Clean Redline to last posting Implementation Plan Clean Redline to last posting Supporting Materials: Comment Form (Word)				
Draft 2 Reliability Coordination Standards COM-001-2 Clean Redline to first posting COM-002-3 Clean Redline to first posting IRO-001-2 Clean Redline to first posting IRO-014-2 Clean Redline to first posting Supporting Materials: Comment Form (Word) COM-001-2 Implementation Plan Clean Redline to first posting COM-002-3 Implementation Plan Clean Redline to first posting	Comment Period Info>> Submit Comments>>	07/10/09 - 08/09/09 (closed)	Comments Received>>	Consideration of Comments(4)

IRO-001-2 Implementation Plan Clean Redline to first posting				
IRO-014-2 Implementation Plan Clean Redline to first posting				
Draft 1 Reliability Coordination Standards Supporting Materials: Comment Form (Word) Comments	Comment Period Submit Comments>>	08/05/08 - 09/16/08 (closed)	Comments Received>>	Consideration of Comments(3)
Project 2006-06 — Reliability Coordination — How Scope of Work was Addressed				
COM-001-2 Clean Redline to last approval				
COM-002-3 Clean Redline to last approval Supporting Materials: Implementation Plan (001) Implementation Plan (002)				
IRO-001-2 Clean Redline to last approval				
IRO-002-2 Clean Redline to last approval				
IRO-005-1				

Clean Redline to last approval Supporting Materials: Implementation Plan (001) Implementation Plan (002) Implementation Plan (005)				
IRO-014-2 Clean Redline to last approval IRO-015-1 Clean Redline to last approval IRO-016-1 Clean Redline to last approval Supporting Materials: Implementation Plan (014) Implementation Plan (015) Implementation Plan (016)				
Final SAR Approved by SC Clean Redline to last posted	Nominations for Standard Drafting Team Info>> Submit Nomination>>	05/14/07 - 05/25/07 (closed)		
Draft SAR Version 2 Reliability Coordination	Comment Period	03/19/07 - 04/17/07	Comments Received>>	Consideration of Comments(2)

Standards Draft SAR Version 2	Info>> Submit Comments>>	(closed)		
Draft SAR Version 1 Reliability Coordination Standards Draft SAR Version 1	Comment Period Info>> Submit Comments>>	01/15/07 - 02/14/07 (closed)	Comments Received>>	Consideration of Comments(1)

Consideration of Comments on 1st Posting of Reliability Coordination SAR

The Reliability Coordination SAR Requesters thank all commenters who submitted comments on Draft 1 of the Reliability Coordination SAR. This SAR was posted for a 30- day public comment period from January 15 through February 14, 2007. The requesters asked stakeholders to provide feedback on the standard through a special standard Comment Form. There were 11 sets of comments, including comments from more than 31 different people from more than 15 companies representing 9 of the 10 Industry Segments as shown in the table on the following pages.

While most stakeholders agreed with the reliability-related need to modify the standards addressed by this SAR, most stakeholders disagreed with the proposed scope of the original SAR and the drafting team made the following revisions to reduce the scope:

- Revised the purpose statement to more narrowly focus on the reliability-related purpose of revising the set of standards addressed by the SAR
- Removed the standards that were listed in the original SAR that are still under development, including the certification standards (ORG-020-1 through ORG-027-1), the Version 1 IROL Standards that are still under development (IRO-007-1 through IRO-013-1) and the standards that are identified in the Version 1 IROL Implementation Plan as proposed for retirement when the Version 1 IROL Standards become effective (IRO-003-1, IRO-004-1).
- Removed the paragraph that referenced facilities.
- Removed the paragraph that would have allowed the standard drafting team to make 'any' additions to requirements as long as those additions met stakeholder approval.
- Added more specificity to the drafting team's approach to modifying the set of standards identified in the SAR.

Based on the comments received, the drafting team is posting the revised SAR for another comment period.

In this "Consideration of Comments" document stakeholder comments have been organized so that it is easier to see the responses associated with each question. All comments received on the standards can be viewed in their original format at:

http://www.nerc.com/~filez/standards/Reliability-Coordination_Project_2006-6.html

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Director of Standards, Gerry Adamski, at 609-452-8060 or at gerry.adamski@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.¹

¹ The appeals process is in the Reliability Standards Development Procedures: <http://www.nerc.com/standards/newstandardsprocess.html>.

Consideration of Comments on 1st Posting of Reliability Coordination SAR

Commenter		Organization	Industry Segment									
			1	2	3	4	5	6	7	8	9	10
1.	Jason Shaver	American Transmission Co.	✓									
2.	David Kiguel	Hydro One Networks, Inc.	✓									
3.	Roger Champagne	Hydro Québec TransÉnergie	✓									
4.	Ron Falsetti	Independent Electricity System Operator		✓								
5.	Kathleen Goodman	ISO New England		✓								
6.	Charles Yeung (SPP)	ISO/RTO Council		✓								
7.	Mike Calimano (NYISO)	ISO/RTO Council		✓								
8.	Alicia Daughtery (PJM)	ISO/RTO Council		✓								
9.	Ron Falsetti (IESO)	ISO/RTO Council		✓								
10.	Matt Goldberg (ISONE)	ISO/RTO Council		✓								
11.	Brent Kingsford (CAISO)	ISO/RTO Council		✓								
12.	Anita Lee (AESO)	ISO/RTO Council		✓								
13.	Steve Myers (ERCOT)	ISO/RTO Council		✓								
14.	Bill Phillips (MISO)	ISO/RTO Council		✓								
15.	Brian Thumm	ITC Transmission	✓									
16.	Jim Cyrulewski	JDRJC Associates								✓		
17.	Jason Marshall	Midwest ISO Stakeholders Standards Collaboration Participants		✓								
18.	Phil Riley	PSC of South Carolina									✓	
19.	Mignon L. Clyburn	PSC of South Carolina									✓	
20.	Elizabeth B. Fleming	PSC of South Carolina									✓	
21.	G. O'Neal Hamilton	PSC of South Carolina									✓	
22.	John E. Howard	PSC of South Carolina									✓	
23.	Randy Mitchell	PSC of South Carolina									✓	
24.	C. Robert Moseley	PSC of South Carolina									✓	
25.	David A. Wright	PSC of South Carolina									✓	
26.	Mike Gentry	Salt River Project	✓									✓
27.	Nancy Bellows (WACM)	WECC Reliability Coordination Comments Work Group										✓
28.	Jack Bernhardsen (PNSC)	WECC Reliability Coordination Comments Work Group										✓
29.	Bob Johnson (PSC)	WECC Reliability Coordination Comments Work Group										✓
30.	Frank McElvain (RDRC)	WECC Reliability Coordination Comments Work Group										✓
31.	Greg Tillitson (CMRC)	WECC Reliability Coordination Comments Work Group										✓

Index to Questions, Comments, and Responses

1. Do you agree that there is a reliability-related need for the proposed revisions to this set of standards? If not, please explain in the comment area.	4
2. Do you agree with the scope of the SAR? If not, please explain in the comment area.	6
3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?	11

Consideration of Comments on 1st Draft of the Reliability Coordination SAR

1. Do you agree that there is a reliability-related need for the proposed revisions to this set of standards? If not, please explain in the comment area.

Summary Consideration: Most commenters indicated that they do believe that there is a reliability-related need for the proposed revisions to the standards.

Question #1			
Commenter	Yes	No	Comment
ISO/RTO Council ISO New England	☒	☒	The IRC and ISO-NE agrees with the objective but does not agree with the process. We agree there is a general need to clean up the standards and where appropriate consolidate the standards. However, this SAR covers too large a swath of standards, and as a consequence the resulting standard has the potential of being too large for reasoned comments. The SRC believes that the wide perspective proposed by this SAR could compromise the internal consistency within individual standards. Subject Matter experts created interrelated requirements in given areas. This SAR proposes to impose a vertically integrated prospective, linking standards in widely dispersed areas of operational expertise. While a review of the vertical integration is useful and in places needed, it is recommended that the results of the review should themselves be sent as recommended SARs for industry consideration by the SMEs for the individual standards, and not as a proposed ad hoc standard. Grouping them as proposed in the SAR may result in unintended disconnects within the other standards, and in the worst case result in an ongoing series of iterative SARs.
Response: The intent is not to develop a single standard from the list of standards. The Standards Committee may assign more than one drafting team to develop the standards and when the SAR drafting team asks the Standards Committee for authorization to move the SAR forward to standard drafting, the drafting team may recommend that more than one SDT be assigned to draft the standards. The list of standards included in the scope of this SAR has been reduced to eliminate standards that will already be addressed by the IROL SDT and to eliminate the list of proposed certification standards.			
Midwest ISO Stakeholders Standards Collaboration Participants	☒	☒	We agree there is a general need to consolidate where necessary and clean up the standards. However, this SAR covers too large a swath of standards. It very confusing what the overall goal is. Additionally, we are concerned that the range of expertise required by this SAR will result in a drafting team that is too large and will result in little to no progress unless the drafting team is subdivided. If the drafting team is subdivided,

Consideration of Comments on 1st Draft of the Reliability Coordination SAR

Question #1			
Commenter	Yes	No	Comment
			then this SAR should be subdivided into other SARs.
Response: The SAR was revised to more clearly define the scope of work. The Standards Committee may assign more than one drafting team to develop the standards and when the SAR drafting team asks the Standards Committee for authorization to move the SAR forward to standard drafting, the drafting team may recommend that more than one SDT be assigned to draft the standards. The list of standards included in the scope of this SAR has been reduced to eliminate standards that will already be addressed by the IROL SDT and to eliminate the list of proposed certification standards.			
Independent Electricity System Operator	☒	☒	The IESO agrees with the objective but does not agree with the process. There is a general need to clean up the standards and where appropriate consolidate the standards. However, this SAR covers too large a swath of standards, and as a consequence the resulting standard has the potential of being too large for reasoned comments.
Response: The SAR was revised to more clearly define the scope of work. The Standards Committee may assign more than one drafting team to develop the standards and when the SAR drafting team asks the Standards Committee for authorization to move the SAR forward to standard drafting, the drafting team may recommend that more than one SDT be assigned to draft the standards. The list of standards included in the scope of this SAR has been reduced to eliminate standards that will already be addressed by the IROL SDT and to eliminate the list of proposed certification standards.			
ITC Transmission	☒		Yes, there is a reliability need to revise the Standards identified in this SAR. Not all of the revisions described, however, are reliability related and in fact should not be included in the standards (e.g., exempting an operator from liability).
Response: The SAR was revised to omit the reference to the liability exemption.			
American Transmission Co.	☒		
Hydro One Networks, Inc. Hydro Québec TransÉnergie	☒		
Salt River Project	☒		
WECC Reliability Coordination Comments Work Group	☒		
PSC of South Carolina	☒		

Consideration of Comments on 1st Draft of the Reliability Coordination SAR

2. Do you agree with the scope of the SAR? If not, please explain in the comment area.

Summary Consideration: Most commenters disagreed with the scope of the original SAR and the drafting team made major modifications to reduce the scope of the SAR to only include standards that are already approved and to identify more specifically the range of changes contemplated to the standards that remain in the revised SAR.

Question #2			
Commenter	Yes	No	Comment
Hydro One Networks, Inc. Hydro Québec TransÉnergie		☒	Please see our answer to question No. 3.
Response: Please see the response to question 3.			
ITC		☒	The Standard Drafting Team should not be given latitude to "include other improvements to the standards deemed appropriate by the drafting team." The purpose of the SAR is to identify the changes contemplated by the need for the Standard Revision. If there are changes that the SAR requestor would like to make to the Standard, they should be spelled out in the SAR. If the SAR requestor does not really know the changes that should be made to the standard, then the SAR should be withdrawn until the need for a SAR can be adequately justified. The remainder of the SAR is very broad; perhaps too broad. The requestor should consider reducing the scope of the SAR to make specific changes to the standards, rather than try to consolidate all of the Standards in one swift stroke.
Response: The intent is not to develop a single standard from the list of standards. The list of standards included in the scope of this SAR has been reduced to eliminate standards that will already be addressed by the IROL SDT and to eliminate the list of proposed certification standards. The intent of the <i>original</i> SAR was to give the Standard Drafting Team enough latitude to address requirements that fall within a list of performance requirements. Looking to the future, the Standard Drafting Team cannot expand on the scope of its SAR but may develop a set of requirements that is smaller than the scope of the SAR. Based on stakeholder comments, the scope has been revised and is more clearly and more narrowly defined.			
ISO/RTO Council ISO New England		☒	We do agree the standards should be consolidated and redundancies eliminated where appropriate. However, it is not appropriate to include standards in this SAR that have not yet been approved. For example, it is not necessary to expand on the requirement to have facilities in place by adding a testing requirement. If an entity is required to

Consideration of Comments on 1st Draft of the Reliability Coordination SAR

Question #2			
Commenter	Yes	No	Comment
			have facilities in place and they are not maintained and available, they do not meet the requirement. The "boiler plate" language that this "development may include other improvements deemed appropriate by the drafting team" is too vague and essentially opens the scope to include anything the drafting team wants to do with the standard. This is not appropriate. The scope should be specific and the drafting team should only focus on those specifics. The SRC supports the approach of prioritizing and revising individual standards to FERC's comments as part of the consideration process. Only a few standards should be revised at a time to make the process more manageable.
Response: The SAR was revised to omit all of the standards that were listed in the original SAR but weren't approved (draft IROL Standards and the draft Certification Standards). The SAR was revised to omit the paragraph that referenced facilities. Note that there is a new performance objective in the revised SAR that indicates the resultant standards will have requirements to address the RC's facility capabilities. The intent of the <i>original</i> SAR was to give the Standard Drafting Team enough latitude to address requirements that fall within a list of performance requirements. Looking to the future, the Standard Drafting Team cannot expand on the scope of its SAR but may develop a set of requirements that is smaller than the scope of the SAR. Based on stakeholder comments, the scope has been revised and is more clearly and more narrowly defined. The drafting team revised the SAR to omit the 'boiler plate' language. The intent is not to develop a single standard from the list of standards. The SAR DT can recommend that the standards be revised in a specific sequence but the final determination of which standards are revised or developed first is a decision that belongs to the Standards Committee. The Standards Committee may assign more than one drafting team to develop the standards and when the SAR drafting team asks the Standards Committee for authorization to move the SAR forward to standard drafting, the drafting team may recommend that more than one SDT be assigned to draft the standards.			
Midwest ISO Stakeholders Standards Collaboration Participants		☒	We do agree the standards should be consolidated and redundancies eliminated where appropriate. However, it is not appropriate to include standards in this SAR that have not yet been approved. It is not necessary to expand on the requirement to have facilities in place by

Consideration of Comments on 1st Draft of the Reliability Coordination SAR

Question #2			
Commenter	Yes	No	Comment
			adding a testing requirement. If an entity is required to have facilities in place and they are not maintained and available, they do not meet the requirement of having facilities in place. The "boiler plate" language that this "development may include other improvements deemed appropriate by the drafting team is too vague and essentially opens the scope to include anything the drafting team wants to do with the standard. This is not appropriate. The scope should be specific and the drafting team should only focus on those specifics.
Response: The list of standards included in the scope of this SAR has been reduced to eliminate standards that will already be addressed by the IROL SDT and to eliminate the list of proposed certification standards. The SAR was revised to omit the paragraph that referenced facilities. Note that there is a new performance objective in the revised SAR that indicates the resultant standards will have requirements to address the RC's facility capabilities. The intent of the <i>original</i> SAR was to give the Standard Drafting Team enough latitude to address requirements that fall within a list of performance requirements. Looking to the future, the Standard Drafting Team cannot expand on the scope of its SAR but may develop a set of requirements that is smaller than the scope of the SAR. Based on stakeholder comments, the scope has been revised and is more clearly and more narrowly defined. The drafting team revised the SAR to omit the 'boiler plate' language.			
American Transmission Co.		☒	ATC agrees with the spirit of the SAR but believes that more details should be provided. Identify which of the redundant requirements will be deleted. Lastly ATC does not understand how a SDT can tackle the ORG -020 – 027 when these standards have not been approved by the board. In other words how can the SDT move forward on the scope when eight of the standards are still in being worked on? To approve the scope of the SAR references to ORG-020 – 027 should be deleted and considered out of bounds for the SDT.
Response: The SAR drafting team will let the standard drafting team determine what requirements will be deleted. The list of standards included in the scope of this SAR has been reduced to eliminate standards that will already be addressed by the IROL SDT and to eliminate the list of proposed certification standards.			

Consideration of Comments on 1st Draft of the Reliability Coordination SAR

Question #2			
Commenter	Yes	No	Comment
Independent Electricity System Operator	☒	☒	We agree with the intent to fill in the gaps and eliminate duplications among standards, and applaud the SDT for taking on this huge and challenging task. We are concerned, however, that the scope itself is too wide but yet not wide enough. Some of the listed standards are still being commented on, for example: IROL-007 to IRO-010, while some others had been commented on but are now in a dormant state, for example: the organization certification standards. These standards are not yet approved, and hence are subject to change and become moving targets for this holistic review task. The scope description does not suggest an approach to deal with ongoing changes to the standards identified. We are concerned that the wide scope and the massive task may not ensure that a one time change will cover all affected standards - those approved and those under development. We suggest the SDT compare this approach to an alternative approach which is to revise a few standards at a time, on a priority basis and considering FERC's views on the status of the standards, thereby limiting the corresponding changes within a more manageable scope. Overtime, when all standards have gone through revisions, all corresponding changes will be duly made.
Response: The list of standards included in the scope of this SAR has been reduced to eliminate standards that will already be addressed by the IROL SDT and to eliminate the list of proposed certification standards. The list of standards included in the scope of this SAR has been reduced to eliminate standards that will already be addressed by the IROL SDT and to eliminate the list of proposed certification standards. The SAR was modified to state that the standard drafting team will work with stakeholders to: - Eliminate redundancy in the requirements. - Identify requirements that should be moved into other SARs - Eliminate requirements that do not support bulk power system reliability - Transfer requirements that need to be in place before an entity begins operation as an RC to certification. - Fill identified gaps in the requirements for Reliability Coordination The intent is not to develop a single standard from the list of standards. The SAR DT can recommend that the standards be revised in a specific sequence but the final determination of which standards are revised or developed first is a decision that belongs to the Standards Committee.			

Consideration of Comments on 1st Draft of the Reliability Coordination SAR

Question #2			
Commenter	Yes	No	Comment
The Standards Committee may assign more than one drafting team to develop the standards and when the SAR drafting team asks the Standards Committee for authorization to move the SAR forward to standard drafting, the drafting team may recommend that more than one SDT be assigned to draft the standards.			
WECC Reliability Coordination Comments Work Group	☒		We believe that the drafting needs to verify that requirements exempt the reliability coordinator real-time supervision, as well as the real-time operator from liability when making a good faith effort at preserving reliability.
Response: The drafting team removed the reference to liability from the SAR.			
Salt River Project	☒		
PSC of South Carolina	☒		

Consideration of Comments on 1st Draft of the Reliability Coordination SAR

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

Question #3			
Commenter	Yes	No	Comment
ITC Transmission			Uncertain to say what they would be at this point.
Hydro One Networks, Inc. Hydro Québec TransÉnergie	☒		This project involves the revision of 27 NERC Standards, not a small task by any measure. The extent of the proposed work and the necessary expertise is beyond what can be found in one single SAR team and drafting team. We respectfully submit that the project be divided into as many SARs and teams as necessary with the work directed and monitored by the Standards Committee.
Response: The list of standards included in the scope of this SAR has been reduced to eliminate standards that will already be addressed by the IROL SDT and to eliminate the list of proposed certification standards. The Standards Committee may assign more than one drafting team to develop the standards and when the SAR drafting team asks the Standards Committee for authorization to move the SAR forward to standard drafting, the drafting team may recommend that more than one SDT be assigned to draft the standards.			
Independent Electricity System Operator	☒		There are likely additional standard revisions beyond those identified, but we find it's almost impossible to pre-determine which other standards will be affected as a result of changes to those identified in this SAR. For example, changes currently proposed for IRO-007 to IRO-010 will precipitate corresponding changes to other affected standards, e.g. TOP-003, TOP-005, etc. However, we are unable to provide any specific list of standards that will require corresponding changes not knowing what changes will be made to the standards listed in the SAR. Given the above, it should not be taken for granted that the list is exhaustive in terms of revisions required.
Response: The intent of the <i>original</i> SAR was to give the Standard Drafting Team enough latitude to address requirements that fall within a list of performance requirements. Looking to the future, the Standard Drafting Team cannot expand on the scope of its SAR but may develop a set of requirements that is smaller than the scope of the SAR. Based on stakeholder comments, the SAR DT eliminated the paragraph that would have allowed the Standard Drafting Team to expand the scope of activities to address new issues that may come up after the SAR is finalized. If new ideas are identified during standard drafting, the standard drafting team will need to revise its SAR or develop a new SAR to address those additional ideas.			

Consideration of Comments on 1st Draft of the Reliability Coordination SAR

Question #3			
Commenter	Yes	No	Comment
WECC Reliability Coordination Comments Work Group	☒	☒	The WECC RCCWG believes that the FERC Staff Report suggestion that COM-001 "generation owners missing" should not translate to addition of generation owners in the applicability. "Generator Operator" is an applicable entity, but not "Generator Owner". The WECC RCCWG believes the Reliability Coordination SAR should address those V0 comments on requirements, when those specific are no longer part of the standard referenced in the V0 comments identified in Attachment 1 of the SAR if those comments were not previously addressed. One example: posted "V0 Industry Comments" suggest inclusion of sabotage and security in R2 of COM-002. That comment is no longer applicable to COM-002 R2 - the standard requirements have changed. That said, the comment intent should not be lost
Response: The FERC comments are 'issues to consider' but are not directives for changes to the standards. The SAR was revised and any outdated V0 comments (or other organization or committee comments) comments have been removed.			
Midwest ISO Stakeholders Standards Collaboration Participants	☒	☒	Because of the overbroad nature of this SAR, the answer is likely yes. However, it is nearly impossible to determine all the additional required changes without missing important items. This SAR needs to be broken down to address individual standards.
Response: The list of standards included in the scope of this SAR has been reduced to eliminate standards that will already be addressed by the IROL SDT and to eliminate the list of proposed certification standards. The list of standards included in the scope of this SAR has been reduced to eliminate standards that will already be addressed by the IROL SDT and to eliminate the list of proposed certification standards. The SAR was modified to state that the standard drafting team will work with stakeholders to: - Eliminate redundancy in the requirements. - Identify requirements that should be moved into other SARs - Eliminate requirements that do not support bulk power system reliability - Transfer requirements that need to be in place before an entity begins operation as an RC to certification. - Fill identified gaps in the requirements for Reliability Coordination			
ISO/RTO Council ISO New England		☒	
American Transmission Co.		☒	

Consideration of Comments on 1st Draft of the Reliability Coordination SAR

Question #3			
Commenter	Yes	No	Comment
Salt River Project		☒	
PSC of South Carolina		☒	

Consideration of Comments for SAR to Modify Reliability Coordinator Standards

The SAR to Modify Reliability Coordinator standards requesters thank all commenters who submitted comments on Draft 1 of the SAR. This SAR was posted for a 30-day public comment period from March 19 through April 17, 2007. The requesters asked stakeholders to provide feedback on the SAR through a special SAR Comment Form. There were 19 sets of comments, including comments from 52 different people from more than 40 companies representing 8 of the 10 Industry Segments as shown in the table on the following pages.

Based on comments received, the drafting team made two changes to the SAR:

- Replaced references to the FERC NOPR with references to the FERC Order 693
- Added a bullet to the detailed description that says, "Improve clarity of, improve measureability of, and remove abiguity from the requirement" and revised the bullets in the brief description to match this language.

The drafting team is recommending that the Standards Committee authorize moving the SAR forward to the standard drafting stage of the standards process.

In this "Consideration of Comments" document stakeholder comments have been organized so that it is easier to see the responses associated with each question. All comments received on the standards can be viewed in their original format at:

http://www.nerc.com/~filez/standards/Reliability-Coordination_Project_2006-6.html

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Director of Standards, Gerry Adamski, at 609-452-8060 or at gerry.adamski@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.¹

¹ The appeals process is in the Reliability Standards Development Procedures:
<http://www.nerc.com/standards/newstandardsprocess.html>.

Consideration of Comments for SAR to Modify Reliability Coordinator Standards

The Industry Segments are:

- 1 — Transmission Owners
- 2 — RTOs, ISOs
- 3 — Load-serving Entities
- 4 — Transmission-dependent Utilities
- 5 — Electric Generators
- 6 — Electricity Brokers, Aggregators, and Marketers
- 7 — Large Electricity End Users
- 8 — Small Electricity End Users
- 9 — Federal, State, Provincial Regulatory or other Government Entities
- 10 — Regional Reliability Organizations, Regional Entities

Commenter		Organization	Industry Segment									
			1	2	3	4	5	6	7	8	9	10
1.	Anita Lee (G1)	AESO		✓								
2.	Ken Goldsmith (G4)	ALT										✓
3.	Jeff Hackman	Ameren Services		✓								
4.	Jason Shaver	American Transmission Co.	✓									
5.	Dave Rudolph (G4)	BEPC										✓
6.	Susan Renne	BPA	✓									
7.	Brent Kingsford (G1)	CAISO		✓								
8.	Greg Tillitson (G5)	CMRC										✓
9.	Ed Thompson (G2)	ConEd	✓									
10.	CJ Ingersoll	Constellation			✓							
11.	Ed Davis	Entergy Services, Inc.	✓									
12.	Steve Myers (G1)	ERCOT		✓								
13.	David Folk	FirstEnergy Corp.	✓		✓		✓	✓				
14.	Joe Knight (G4)	GRE										✓
15.	David Kiguel (G2)	Hydro One Networks	✓									
16.	Roger Champagne (I) (G2)	Hydro-Québec TransÉnergie	✓									
17.	Ron Falsetti (I) (G1) (G2)	IESO		✓								
18.	Matt Goldbert (G1)	ISO-NE		✓								
19.	Kathleen Goodman (I) (G2)	ISO-NE		✓								
20.	William Shemley (G2)	ISO-NE		✓								
21.	Brian F. Thumm	ITC Transco	✓									
22.	Jim Cyrulewski (G3)	JDRJC Associates								✓		
23.	Michael Gammon	Kansas City Power & Light	✓									
24.	Eric Ruskamp (G4)	LES										✓
25.	Donald Nelson (G2)	MA Dept. of Tel. and Energy									✓	
26.	Robert CoisH (I) (G4)	Manitoba Hydro	✓		✓		✓	✓				
27.	William Phillips (G1)	MISO		✓								
28.	Terry Bilke (G3) (G4)	MISO		✓								

Consideration of Comments for SAR to Modify Reliability Coordinator Standards

Commenter			Organization		Industry Segment									
					1	2	3	4	5	6	7	8	9	10
29.	Carol Gerou (G4)		MP											✓
30.	Mike Brytowski (G4)		MRO											✓
31.	Randy Macdonald (G2)		NBSO			✓								
32.	Herb Schrayshuen(G2)		NGRID		✓									
33.	Michael Schiavone (G2)		NGRID		✓									
34.	Michael Rinalli (G2)		NGRID		✓									
35.	Guy V. Zito(G2)		NPCC											✓
36.	Al Boesch (G4)		NPPC											✓
37.	Murale Gopinathan (G2)		NU		✓									
38.	Mike Calimano (I) (G1)		NYISO			✓								
39.	Greg Campoli (G2)		NYISO			✓								
40.	Ralph Rufrano (G2)		NYPA		✓									
41.	Al Adamson (G2)		NYSRC											✓
42.	Todd Gosnell (G4)		OPPD											✓
43.	Alicia Daugherty (G1)		PJM			✓								
44.	Frank McElvain (G5)		RDRRC											✓
45.	Charles Yeung (G1)		SPP			✓								
46.	Mike Gentry (I) G5)		SRP		✓									
47.	Jim Haigh (G4)		WAPA											✓
48.	Nancy Bellows (G5)		WECC											✓
49.	Neal Balu (G4)		WPSR											✓
50.	Robert Johnson (G5)		Xcel – PSC											✓
51.	David Lemmons (G3)		Xcel Energy							✓				✓
52.	Pam Oreschnik (G4)		XEL											✓

I – Indicates that individual comments were submitted in addition to comments submitted as part of a group

G1 – IRC Standards Review Committee

G2 – NPCC CP9 Reliability Standards Working Group (NPCC CP9)

G3 – Midwest Standards Collaboration Group

G4 – MRO Members

G5 – WECC Reliability Coordination Comments Work Group

Index to Questions, Comments, and Responses

1. The drafting team reduced the scope of this SAR to eliminate review of standards that are still under development, including IRO-007-1 through IRO-010-1, and ORG-027-1. Do you agree with this modification? If not, please explain in the comment area. 5
2. The drafting team modified the SAR to be more exacting in describing the scope of changes proposed for the set of standards. The revised SAR clarifies that the Standard Drafting Team will work with stakeholders to determine what to do with each of the existing requirements: 8
3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project? 12
4. Several stakeholders indicated that the drafting team should remove the language in the original SAR that would have allowed the standard drafting team to add requirements to the standards if those additions were supported by stakeholders. The drafting team modified the SAR in support of those comments. The SAR drafting team thinks that additional SARs can be developed in the future to address any gaps in this set of requirements. Any new SARs generated by this effort would follow the normal standards development process. Do you support this approach? 14
5. If you have any other comments on this SAR that you have not already submitted above, please provide them here. 18

Consideration of Comments for SAR to Modify Reliability Coordinator Standards

1. The drafting team reduced the scope of this SAR to eliminate review of standards that are still under development, including IRO-007-1 through IRO-010-1, and ORG-027-1. Do you agree with this modification? If not, please explain in the comment area.

Summary Consideration: Most stakeholders agreed with the modifications made to reduce the scope of this SAR.

Question #1			
Commenter	Yes	No	Comment
Entergy		☒	We agree with the reduction of standards to be included in this body of work. However, we suggest PRC-001 should also be eliminated from this SAR. The title of the SAR is Reliability Coordination, but the purpose is to ensure requirements applicable to the Reliability Coordinator are clear, etc., etc. The second part of the Purpose is to ensure that "this set of requirements" is sufficient... , referring back to the first part of the sentence. PRC-001 does not apply to the Reliability Coordinators and is out of place in this SAR. PRC-001 should not be included in this SAR nor the resulting standard development work under this SAR. First, PRC-001 does not apply to Reliability Coordinators and there is already a significantly large amount of work related to Reliability Coordinators under this SAR. Second, the SDT's attention should not be redirected to system protection coordination among BAs, TOPs, and GOPs. We disagree if the intent of the Requestor is to make PRC-001 applicable to Reliability Coordinators under this SAR; If that is the intent we suggest it be done in a separate SAR activity.
Response: Requirement 2.2 in PRC-001 states: If a protective relay or equipment failure reduces system reliability, the Transmission Operator shall notify its Reliability Coordinator and affected Transmission Operators and Balancing Authorities. The Transmission Operator shall take corrective action as soon as possible. This is 'incomplete' because there is no requirement for the RC to use that information. The intent in including PRC-001 in this SAR was to 'complete' this requirement. As envisioned, the new requirement may go in one of the existing RC standards, or may go into a new standard – but because it is something for the RC to do, it seems appropriate to include the consideration of this requirement as part of the RC SAR.			
FirstEnergy		☒	While IRO-007-1 through IRO-010-1 are currently open for a 30-day comment period until 4/20/07, this standards work plan effort should leave no stone unturned in developing quality standards. Consequently, IRO-007-1 through IRO-010-1 may contain requirements that are valuable and easily consolidated with the standards under review

Consideration of Comments for SAR to Modify Reliability Coordinator Standards

Question #1			
Commenter	Yes	No	Comment
			by this SAR. In addition, they may also contain duplicative requirements that could be consolidated as part of the review process of this SAR.
Response: The Implementation Plan posted with IRO-007 through IRO-010 already calls for modification to some of the standards included in this SAR. However, the changes identified with the implementation plan for IRO-007 through IRO-011 are limited to those changes resulting from adoption of the proposed standards. If changes are needed to IRO-007 through IRO-010, they can be addressed with a new SAR.			
Constellation	☒		CECD feels that given the number of standards that IRO-007-1 and IRO-010-1 may impact [IRO-002-1 R2, IRO-002-1 R6, IRO-003-2, IRO-004-1 R4 and R5, IRO-005-2 R1, TOP-003-0 R1.2, TOP-005-1 R1] CECD disagrees with removing them from consideration. We do agree with the decision to exclude ORG-027-1.
Response: Please review the Implementation Plan posted with IRO-007 through IRO-010. The proposed changes to the list of standards you identified are limited to those changes resulting from adoption of the proposed standards. . If changes are needed to IRO-007 through IRO-010, they can be addressed with a new SAR.			
MRO	☒		We agree with excluding standards still under development.
Response: Thank you for your support – most commenters agreed with omitting all standards still under development.			
Ameren Services	☒		
ATC LLC	☒		
BPA	☒		
Hydro-Québec TransÉnergie	☒		
IESO	☒		
IRC SRC	☒		
ISO-NE	☒		
ITC Transco	☒		
KCPL	☒		
Manitoba Hydro	☒		
Midwest SCG	☒		
NPCC CP9 RSWG	☒		
NYISO	☒		

Consideration of Comments for SAR to Modify Reliability Coordinator Standards

Question #1			
Commenter	Yes	No	Comment
SRP	☒		
WECC RCCWG	☒		

Consideration of Comments for SAR to Modify Reliability Coordinator Standards

2. The drafting team modified the SAR to be more exacting in describing the scope of changes proposed for the set of standards. The revised SAR clarifies that the Standard Drafting Team will work with stakeholders to determine what to do with each of the existing requirements:
- Modify the requirement to improve its quality
 - Move the requirement (into another SAR or Standard or to the certification process or standards)
 - Eliminate the requirement (either because it is redundant or because it doesn't support Bulk Electric System reliability).

Do you agree with this approach to reviewing the requirements? If not, please explain in the comment area.

Summary Consideration: Most stakeholders agreed with this approach to reviewing the requirements in the standards associated with this SAR.

Question #2			
Commenter	Yes	No	Comment
SRP		☒	The FERC NOPR and FERC Staff comments under Standard PRC-001-0, System Protection Coordination, do not apply to Reliability Coordination. In fact, the current Standard, PRC-001-1, does not apply to Reliability Coordinators. This Standard should be removed from the scope of this SAR.
Response: The FERC NOPR has now been replaced with FERC Order 693 and includes the following language regarding PRC-001-1: 1449. The Commission approves Reliability Standard PRC-001-1 as mandatory and enforceable. In addition, the Commission directs the ERO to develop modifications to PRC-001-1 through the Reliability Standards development process that: (1) correct the references for Requirements and (2) include a requirement that upon the detection of failures in relays or protection system elements on the Bulk-Power System that threaten reliable operation, relevant transmission operators must be informed promptly, but within a specified period of time that is developed in the Reliability Standards development process, whereas generator operators must also promptly inform their transmission operators and (3) clarifies that, after being informed of failures in relays or protection system elements that threaten reliability of the Bulk-Power System, transmission operators must carry out corrective control actions, i.e., return a system to a stable state that respects system requirements as soon as possible and no longer than 30 minutes after they receive notice of the failure. The existing PRC-001-1 Requirement 2.2 states: If a protective relay or equipment failure reduces system reliability, the Transmission Operator shall notify its Reliability Coordinator and affected Transmission Operators and Balancing Authorities. The Transmission Operator shall take corrective action as soon as possible.			

Consideration of Comments for SAR to Modify Reliability Coordinator Standards

Question #2			
Commenter	Yes	No	Comment
This is 'incomplete' because there is no requirement for the RC to use that information. The intent in including PRC-001 in this SAR was to 'complete' this requirement. As envisioned, the new requirement may go in one of the existing RC standards, or may go into a new standard – but because it is something for the RC to do, it seems appropriate to include the consideration of this requirement as part of the RC SAR.			
Ameren Services Midwest SCG	☒	☒	We agree with improving the quality of the requirements, removing redundancies and those things that do not contribute to reliability. It isn't clear what stakeholders will be involved to improve these standards. Is it the ballot body as a whole or some other forum? Since there is no drafting team roster, we are not sure who is working on this project and who are the stakeholders suggesting the changes to requirements.
Response: The Reliability Standards Development Procedure will be used to collect stakeholder feedback. If the Standards Committee (SC) accepts this SAR, then the SC can either appoint the existing drafting team to work with stakeholders to make revisions to the standards, or the SC can have the standards staff send a notice to all members of the RBB as well as all entities who have indicated they want to receive email notices of standards actions to let everyone know that the SC is seeking volunteers to work on a new drafting team. In either case, the drafting team will 'propose' revisions and post those for comment. NERC's standards staff will send an email notice to all members of the RBB as well as all entities who have indicated they want to receive email notices of standards actions – the notice will tell people that some proposed revisions have been posted for comment and will seek feedback on the proposed revisions through a comment form – the same process as used to collect feedback on this SAR. The drafting team will use the responses to the questions on the comment form to determine which changes are supported by stakeholders, and will continue to make modifications until the drafting team feels that they have a set of proposed changes that meets the consensus of the stakeholders who participated in the comment periods. The drafting team that is working on the IROL standards submitted this Reliability Coordination SAR – the SC did not assign a separate drafting team to address the SAR comments. The roster for this team is posted on the related files page of the IROL standards. Here is a link to the roster: ftp://www.nerc.com/pub/sys/all_updl/standards/dt/GroupRoster_IROLSDT.pdf			
MRO	☒	☒	We agree with improving the quality of the requirements, removing redundancies and those things that do not contribute to reliability. We do not see a listing of the drafting team members and it is unclear what stakeholders will be involved to improve these standards.
Response: The Reliability Standards Development Procedure will be used to collect stakeholder feedback. If the Standards Committee (SC) accepts this SAR, then the SC can either appoint the existing drafting team to work with stakeholders to make revisions to the standards, or the SC can have the standards staff send a notice to all members of the RBB as well as all entities who have indicated they want to receive email notices of standards actions to let everyone know that the SC is seeking volunteers to work on a new drafting team. In either case, the drafting team will 'propose' revisions and post those			

Consideration of Comments for SAR to Modify Reliability Coordinator Standards

Question #2			
Commenter	Yes	No	Comment
for comment. NERC's standards staff will send an email notice to all members of the RBB as well as all entities who have indicated they want to receive email notices of standards actions – the notice will tell people that some proposed revisions have been posted for comment and will seek feedback on the proposed revisions through a comment form – the same process as used to collect feedback on this SAR. The drafting team will use the responses to the questions on the comment form to determine which changes are supported by stakeholders, and will continue to make modifications until the drafting team feels that they have a set of proposed changes that meets the consensus of the stakeholders who participated in the comment periods. The drafting team that is working on the IROL standards submitted this Reliability Coordination SAR – the SC did not assign a separate drafting team to address the SAR comments. The roster for this team is posted on the related files page of the IROL standards. Here is a link to the roster: ftp://www.nerc.com/pub/sys/all_updl/standards/dt/GroupRoster_IROLSDT.pdf			
FirstEnergy	☒		Rather than using the word quality to describe the outcome, the first bullet point above should say, "Modify the requirement to improve clarity and measureability while removing ambiguity." This way the drafting team could use a check list against each requirement to test whether it is clear, measureable, and unambiguous.
Response: The drafting team has adopted this suggestion and modified the SAR so that the revised bullet now says: - Modify the requirement to improve its clarity and measureability while removing ambiguity			
Manitoba Hydro	☒		However, this is a large scope (a large amount of work) for the standard drafting team. Wherever possible, it is recommended that the drafting team list and explain the criteria it is using so that it may be easier to achieve stakeholder consensus where many related changes are made. With such a large scope the drafting team should consider carefully how the changes are balloted so ballots don't fail because stakeholders object to a minor subset of issues in a particular ballot.
Response: Agreed.			
WECC RCCWG	☒		The WECC RCCWG agrees with the overall approach. That said, there is currently another SAR in process that addresses communications protocols and paths. The referenced SAR, "Operating Personnel Communications Protocols" is also meant to address FERC comments relative to communications protocols. Having two separate SARs that address the same comment seems redundant.
Response: There are a couple of standards that are in more than one 'project' in the Reliability Standards Work Plan 2007-2009. The coordinators working with the drafting teams for these projects are aware of this duplication and will 'hand off' requirements between one another to ensure that each requirement is addressed and that only one drafting team works on modifying each requirement.			
ATC LLC	☒		
BPA	☒		

Consideration of Comments for SAR to Modify Reliability Coordinator Standards

Question #2			
Commenter	Yes	No	Comment
Constellation	☒		
Entergy	☒		
Hydro-Québec TransÉnergie	☒		
IESO	☒		
IRC SRC	☒		
ISO-NE	☒		
ITC Transco	☒		
KCPL	☒		
NPCC CP9 RSWG	☒		
NYISO	☒		

Consideration of Comments for SAR to Modify Reliability Coordinator Standards

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

Summary Consideration: The drafting team made the following modifications to the SAR based on stakeholder suggestions for additional revisions:

- Replaced references to the FERC NOPR with references to the FERC Order 693
- Added a bullet to the detailed description that says, "Improve clarity of, improve measureability of, and remove ambiguity from the requirement"

Question #3			
Commenter	Yes	No	Comment
MRO	☒		The FERC NOPR should not be used to change the standards. Items in the final order should be considered. Several of V0 comments items are not clear. It would help if these fill comments were posted somewhere for reference. We disagree with the assignment of Violation Severity Levels (VSL). VSLs should not be skewed to inflate the sanctions associated with a requirement. The drafting team should assess the likely bounds of performance and the VSLs should be divided into four relatively equal portions. The proposed breakdown in the SAR is not part of the Sanctions Guidelines and has not be vetted in the industry.
Response: Agreed. The drafting team has modified the SAR to replace the references to the NOPR with references to FERC Order 693. The Version 0 comments are posted on the Approved Standards web page – here is the link to that set of comments: ftp://www.nerc.com/pub/sys/all_updl/standards/rs/Standards_V0_Industry_Comments_20060105.pdf The proposed breakdown in VSLs was not included in the Sanctions Guidelines – but it was supported by both the Standards Committee and the Compliance and Certification Committee on December 14, 2006. The Standards Committee supported having drafting teams use the breakdown that appears in the SAR – and that breakdown was included in the Reliability Standards Development Work Plan 2007-2009.			
Ameren Services Midwest SCG	☒		The FERC NOPR should not be used to change the standards. Items in the final order should be given due consideration. Several of V0 comments items are not clear. They are primarily bullet notes with no context. Is there additional information about these comments somewhere?
Response: Agreed. The drafting team has modified the SAR to replace the references to the NOPR with references to FERC Order 693.			

Consideration of Comments for SAR to Modify Reliability Coordinator Standards

Question #3			
Commenter	Yes	No	Comment
The Version 0 comments are posted on the Approved Standards web page – here is the link to that set of comments: ftp://www.nerc.com/pub/sys/all_updl/standards/rs/Standards_V0_Industry_Comments_20060105.pdf			
ATC LLC	☒		The SAR needs to be further refined to identify those specific requirements that will be: 1) Reviewed as being duplicative 2) Considered being relocated 3) Considered being eliminated
Response: As envisioned, the standard drafting team will work with stakeholders (using the comment process) to propose and obtain stakeholder feedback on whether each requirement should be retired, moved, enhanced, etc.			
FirstEnergy	☒		Under the detailed description in the second paragraph, the SAR should be modified to include a line item to include "Improve clarity of, improve measureability of, and remove ambiguity from the requirements."
Response: The drafting team adopted your suggestion and added the proposed bullet to the detailed description of the SAR.			
BPA	☒		No comments at this time. We will comment when the standards are up for comment.
Constellation	☒		
Entergy		☒	
Hydro-Québec TransÉnergie		☒	
IESO		☒	
IRC SRC		☒	
ISO-NE		☒	
ITC Transco		☒	
KCPL		☒	
Manitoba Hydro		☒	
NPCC CP9 RSWG		☒	
NYISO		☒	
SRP		☒	
WECC RCCWG		☒	

Consideration of Comments for SAR to Modify Reliability Coordinator Standards

4. Several stakeholders indicated that the drafting team should remove the language in the original SAR that would have allowed the standard drafting team to add requirements to the standards if those additions were supported by stakeholders. The drafting team modified the SAR in support of those comments. The SAR drafting team thinks that additional SARs can be developed in the future to address any gaps in this set of requirements. Any new SARs generated by this effort would follow the normal standards development process. Do you support this approach?

Summary Consideration: Stakeholders who responded to this question overwhelmingly indicated support for having firm boundaries on what could be changed with the associated standards by removing the open-ended language from the original SAR.

Question #4			
Commenter	Yes	No	Comment
BPA		☒	
FirstEnergy	☒		This effort should leave no stone unturned in developing quality standards within the expertise and domain of this effort. Therefore, every effort must be made to ensure this round of work plan related standard revisions is as complete and all encompassing as is humanly possible to ensure to the extent possible that this standards process reaches a point that these standards are complete, accurate and only minor revisions are required to maintain them going forward. Tying the hands of the drafting team as suggested by "Several stakeholders" will only prolong the industry's work to achieve good, high quality requirements and standards. In addition, we should be using our resources as efficiently as possible. Allowing some latitude to the drafting teams to find and fix issues with standards that are related to the standards within their area of expertise and charge is a good thing to do at this point in the standards evolution process and conducive to the efficient use of resources. As a practical matter this process may never end, but it should reach a point that is much more manageable sooner rather than later.
Response: Stakeholders overwhelmingly indicated support for having firm boundaries on what could be changed with the associated standards.			
ATC LLC	☒		The SAR identified standards IRO-014 and IRO-015 on its first page but does not address these standards in Attachment 1. The SAR needs to be updated to either acknowledge that these two standards will not be changed or identify what needs to be corrected. Attachment 1: COM-001-0 NERC has a current effort to address communication facilities in standard EOP-008. This

Consideration of Comments for SAR to Modify Reliability Coordinator Standards

Question #4			
Commenter	Yes	No	Comment
			group needs to be aware of that effort and should insure that any change to COM-001 does not counter that effort of EOP-008. How will this effort differ from the other NERC effort? COM-002-1 NERC has a current effort to address communication protocol in emergencies with "Operating Personnel Communications Protocols." Similar to our previous comment this group needs to be aware of that effort and should insure that any change to COM-002 does not counter that groups efforts. How will this effort differ from the other NERC effort? IRO-001-0 Please provide additional information on the following bullet point: "Reflect the process set forth in the NERC Rules of Procedures" What specific sections of NERC Rules of Procedure will be reflected in IRO-001-0? IRO-005-1 The first bullet point does not seem to fall within the goal of this SAR. "Propose that the ERO conduct a survey of IROL practices and experiences." This effort does not need to go through NERC Reliability Standards Development Process to be performed. NERC could take up this effort at any time and it will slow down this process if it is going to be included in this SAR. PER-004-0 NERC has another group that is looking into to these concerns. How will this effort differ from that effort?
Response: The two coordinate operations standards highlighted (IRO-014 and IRO-015), did not have any suggestions from FERC for improvements, and they were not part of Version 0 so there were no suggestions for improvements to these standards from the Version 0 process. COM-001 and COM-002 both contain requirements that are assigned to several different functions – and both include a mix of 'preparedness' requirements as well as some 'real-time' notification requirements as well as some requirements that may end up being converted into a new standard for 'communications protocols'. The intent in including the standards in multiple projects was to ensure that each requirement was fully addressed and ended up where it belonged. The coordinators			

Consideration of Comments for SAR to Modify Reliability Coordinator Standards

Question #4			
Commenter	Yes	No	Comment
supporting these projects are aware of this duplication and are working to ensure that there is a 'hand off' of requirements between teams to eliminate gaps and duplication. IRO-001 In Order 693, FERC explains what it meant by the bullet, 'Reflect the process set forth in the NERC Rules of Procedure': 896. In the NOPR, the Commission proposed to approve the Reliability Standard as mandatory and enforceable. In addition, as a separate action under section 215(d)(5), the NOPR proposed to direct the ERO to develop modifications to Requirement R1 to substitute "Regional Entity" for "regional reliability organization" and reflect NERC's Rules of Procedure for registering, certifying and verifying entities, including reliability coordinators. IRO-005-1 The bullet point you've highlighted may or may not be addressed by the drafting team. As envisioned, the results of a survey may prove useful in determining a need for additional modifications to the standards. Note that FERC Order 693 has replaced the NOPR and the SAR has been updated to reflect this. The survey is still identified in Order 693 – and FERC clarified that the intent of the survey is to determine if additional modifications to IRO-005 are necessary. PER-004 includes a mix of preparation and real-time requirements. The intent in placing the standard in more than one project is to ensure that each requirement is reviewed by an appropriate team, and that all requirements that are needed end up in an appropriate standard.			
Ameren Services	☒		
Constellation	☒		
Entergy	☒		
Hydro-Québec TransÉnergie	☒		
IESO	☒		
IRC SRC	☒		
ISO-NE	☒		
ITC Transco	☒		
KCPL	☒		
Manitoba Hydro	☒		

Consideration of Comments for SAR to Modify Reliability Coordinator Standards

Question #4			
Commenter	Yes	No	Comment
Midwest SCG	☒		
MRO	☒		
NPCC CP9 RSWG	☒		
NYISO	☒		
WECC RCCWG	☒		

Consideration of Comments for SAR to Modify Reliability Coordinator Standards

5. If you have any other comments on this SAR that you have not already submitted above, please provide them here.

Summary Consideration: The drafting team did not make any conforming changes to the SAR based on comments provided in response to question 5.

Question #5			
Commenter	Yes	No	Comment
Ameren Services			We disagree with the assignment of Violation Severity Levels (VSL). The drafting team should assess the likely bounds of performance and the VSLs should be divided into four relatively equal portions. Yes/No requirements should not arbitrarily be counted as Severe violations. The proposed VSL breakdown in the SAR is not part of the Sanctions Guidelines and the proposed process has not been vetted in the industry. To the extent that requirements are modified or moved, care should be taken to make sure that the two-way exchange of information between RC and TOP and RC and BA should be preserved.
Response: Violation Severity Levels identify how badly you missed the intent of a requirement – not all requirements lend themselves to 4 different VSLs. The guidelines for determining a VSL are just 'guidelines' – however these guidelines were endorsed by the SC and the CCC and the SDT would need a strong reason for not using these guidelines.			
Midwest SCG			We disagree with the assignment of Violation Severity Levels (VSL). The drafting team should assess the likely bounds of performance and the VSLs should be divided into four relatively equal portions. Yes/No requirements should not arbitrarily be counted as Severe violations. The proposed VSL breakdown in the SAR is not part of the Sanctions Guidelines and the proposed process has not been vetted in the industry.
Response: Violation Severity Levels identify how badly you missed the intent of a requirement – not all requirements lend themselves to 4 different VSLs. The guidelines for determining a VSL are just 'guidelines' – however these guidelines were endorsed by the SC and the CCC and the SDT would need a strong reason for not using these guidelines.			
BPA		☒	No comments at this time. We will comment when the standards are up for comment.
Response:			
WECC RCCWG			The WECC RCCWG believes that revision to each existing Standard, as a result of this SAR, should be individually balloted, instead of grouped together in one ballot on the entire group of changes.
Response: The SDT appointed to work on the standards will identify how to ballot the standards modified as part of this set of standards.			

Consideration of Comments on Set of Reliability Coordination Standards (Project 2006-06)

The Reliability Coordination Standards Drafting Team (RC SDT) thanks all commenters who submitted comments on the set of Reliability Coordination Standards. These standards were posted for a 45-day public comment period from August 5, 2008 through September 16, 2008. Stakeholders were asked to provide feedback on the standards through a special electronic standard comment form. There were 29 sets of comments, including comments from more than 70 different people from approximately 50 companies representing 8 of the 10 Industry Segments as shown in the table on the following pages.

http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html

The following standards remain within the scope of this project:

- COM-001-2 — Communications
- COM-002-3 — Communication and Coordination
- IRO-001-2 — Reliability Coordination — Responsibilities and Authorities
- IRO-002-2 — Reliability Coordination — Facilities
- IRO-005-1 — Reliability Coordination — Current Day Operations
- IRO-014-2 — Coordination among Reliability Coordinators
- IRO-015-1 — Notifications and Information Exchange between Reliability Coordinators
- IRO-016-1 — Coordination of Real-time Activities between Reliability Coordinators

The RC SDT has revised some of the requirements, measures, violation risk factors and violation severity levels for COM-001, COM-002, and IRO-001, and IRO-014 based on the comments received. A summary of the drafting team's consideration of comments follows:

Requirements, Measures and VSLs in COM-001-2

Requirements: The RC SDT received several comments regarding the intent of the term "telecommunications facilities". For COM-001-2, the RC SDT envisions telecommunications to be voice or message communication between operating personnel. The standard has been renamed "Communications" and the term "telecommunications facilities" was replaced with "interpersonal communications capabilities" throughout the standard to better reflect the intent of the RC SDT.

We also received comments regarding the applicability of the standard that suggested adding the other entities listed in IRO-001 (Transmission Service Provider, Load-serving Entity and Purchasing-Selling Entity). The RC SDT contends that, in order to receive and carry out directives, an entity must be able to communicate with the Reliability Coordinator ...either directly or through other entities (e.g. – a Distribution Provider may receive a directive from the Transmission Operator who received it from the Reliability Coordinator). We have not expanded the applicability as suggested as we feel that this expands the standard beyond the reliability intent. The RC SDT contends that the addition of the Transmission Service Provider, Load-Serving Entity and Purchasing Selling Entity to COM-001 adds no reliability benefit as the interactions with these entities are commercial in nature. It is not necessary nor is it practical, for reliability purposes, for every entity to have normal and back-up interpersonal communications capabilities with every other entity. The SDT did, however add the Transmission Service Provider, Load-serving Entity and Purchasing-Selling Entity to the list of entities in R3 that must use English Language for inter-entity communications.

| Other commenters had concerns with regard to R2 and the intent with regard to length of outages. The requirement was revised as:

R2. Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure (30 minutes or longer) of ~~its their~~ normal ~~interpersonal communications capabilities-telecommunications facilities, and verify the alternate means of telecommunications are functional.~~

The informational (last) sentence of R3 was removed per stakeholder suggestions:

R3. Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Purchasing-Selling Entity, and Distribution Provider shall use English as the language for all inter-entity Bulk Electric System reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. ~~Transmission Operators and Balancing Authorities may use an alternate language for internal operations.~~

Measures: Commenters suggested general as well as specific revisions to the measures. One general comment suggested making the language consistent among the measures regarding evidence. M1-M3 were revised to include the phrase “shall have and provide upon request evidence that ...”.

Several commenters suggested revisions to M3. The RC SDT revised M3 based on the comments received suggesting that the applicability be expanded and added the Generator Operator, Distribution Provider, Transmission Service Provider, Purchasing-selling Entity, and Load-serving Entity to the measure. Several entities commented that M3 did not match R3 which included an explanatory sentence that allowed an entity to use a language other than English for its internal communications. The informational second sentence was removed from Requirement R3, thus eliminating the “disconnect” between the requirement and the measure. All measures were revised as necessary to reflect revisions to requirements.

VSLs: The RC SDT made revisions to the VSL’s based on the comments received and also to reflect revisions to the associated requirements. The SDT received comments that the VSLs for R1 and R2 were based on multiple violations rather than a single violation and revised the VSLs to reflect a single violation, which is one of FERC’s guidelines for VSLs.

Requirements, Measures and VSLs in COM-002-3

The work of the IROL SDT resulted in the retirement of R1 from the standard. The RC SDT received comments recommending expanding the applicability of the standard and separating Requirement R1 into two distinct requirements. The applicability was expanded to include Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity. The requirements were revised to:

R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a directive associated with real-time operational emergency conditions shall require the recipient of the directive to repeat the intent of the directive back; and shall acknowledge the response as correct or repeat the original statement to resolve any misunderstandings. *[Violation Risk Factor: High][Time Horizon: Real-Time]*

R2. Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a directive issued per Requirement R1 shall repeat the intent of the directive back to the issuer of the directive. *[Violation Risk Factor: High][Time Horizon: Real-Time]*

The purpose statement was also revised to reflect the revisions to the standard: “To ensure communications by operating personnel are effective.”

The RC SDT received comments recommending expanding the applicability of the standard and separating Requirement R1 into two distinct requirements. The applicability was expanded to include Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission

Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity. The measures were revised to:

- M1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a directive associated with real-time operational emergency conditions shall have evidence such as voice recordings or transcripts of voice recordings to show that it required the recipient of the directive to repeat the intent of the directive back; and acknowledged the response as correct or repeated the original statement to resolve any misunderstandings.
- M2. Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a directive issued per Requirement R1 shall have evidence such as voice recordings or transcripts of voice recordings to show that it repeated the intent of the directive back to the issuer of the directive.

VSLs: The RC SDT received comments recommending revisions to the VSLs based on revisions to the requirements and measures. The RC SDT did this and created new VSLs for new Requirement R2.

Requirements, Measures and VSLs in IRO-001-2

The RC SDT has received a notable number of comments suggesting edits to the proposed requirements and measures for the draft standard, particularly regarding the phrase “without intentional delay.” The comments do not oppose the objective of the phrase, but often point out the issues of measuring intent and measuring delay time.

To maintain the intent while improving the measurability of the requirement, the SDT proposes to modify the standard as follows: delete the phrase ‘without intentional delay’ and leave the obligation of response and timing an unstated requirement of R1 “The RC shall act or direct actions...”

An RC that requires a given action in a given time will be expected to inform the impacted entities of those actions and time requirements. This would obviate the need for providing a measure for “intent”, but still maintain the reliability intent of the original requirement.

The VSLs were revised to reflect revisions to the requirements as well as the comments of stakeholders. Several comments suggested that there was no fundamental difference between the RC “acting” or “directing actions”. The RC SDT agreed and removed the High VSL for R1 and revised the Severe VSL accordingly. Other commenters suggested removing the High VSL from R2 as the VSL contradicted the requirement. The RC SDT agreed and removed the VSL.

Requirements, Measures and VSLs in IRO-002-2

Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired IRO-002-2 Requirement R1. The team also received concern about eliminating the requirement to monitor frequency. While the Standard Drafting Team (SDT) recognizes the concern raised, the SDT is even more concerned with the subjectivity that any attempt to measure “Monitoring” can provide. It is the SDT’s contention that adherence to reliability standards that require the said monitoring cannot be demonstrated unless the entity is closely monitoring the system parameters. Furthermore, the SDT contends that any requirements that describe the monitoring facilities needed to fulfill fundamental duties should be embedded in entity certification requirements. With IRO-014 and IRO-001 R1 in place, the actual act of monitoring is a secondary task that is inherent in responding to situations or events that could have an adverse impact on reliability. The team declined to delete R2 (Reliability Coordinator veto over analysis tool outages) as it was a specific recommendation from the 2003 Blackout report. This requirement was revised and moved into IRO-001-2 as R6.

Retirement of IRO-005-1

Several commenters had concerns around removing the requirement to monitor frequency (IRO-005-1 R8). The intent of this monitoring activity was incorporated into IRO-002-2, R1. Other commenters had concerns with the removal of other monitoring requirements in the standard. While the Standard Drafting Team (SDT) recognizes the concern raised, the SDT is even more concerned with the subjectivity

associated with any attempt to measure “Monitoring.” It is the SDT’s contention that adherence to reliability standards that require the said monitoring cannot be demonstrated unless the entity is closely monitoring the system parameters. Furthermore, the SDT contends that any requirements that describe the monitoring facilities needed to fulfill fundamental duties should be embedded in entity certification process requirements. With IRO-014 and IRO-001 R1 in place, the actual act of monitoring is a secondary task that is inherent in responding to situations or events that could have an adverse impact on reliability.

Requirements, Measures and VSLs in IRO-014-2

Several commenters expressed concerns with the term “impacted” and suggested replacing this with “other”. The RC SDT believes “impacted” directly relates to the purpose statement. The original wording of “one or more other” is vague and difficult to measure. Using the word “other” presents a similar situation. The RC SDT chose to use the word “impacted” to tighten the requirement and remove ambiguity. The RC SDT does not intend for non-contiguous Reliability Coordinators to have “Reliability Coordinator Agreements”, but to have Procedures, Processes, or Plans with impacted Reliability Coordinators. Other commenters suggested striking the term “as a minimum” in R1 and the RC SDT agrees and has modified R1 accordingly.

Some commenters did not agree with the wording of the two new requirements in IRO-014 that were formerly in IRO-016. The SDT modified and subdivided the requirements into four requirements (R5 – R8) shown below:

- R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify impacted Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]
- R6. Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]
- R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]
- R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan, [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

Several commenters suggested that the High and Severe VSLs for R2 contradicted the requirement. The RC SDT agreed and removed the “nots” from the VSLs. Several commenters had suggested revisions for the VSLs for R6, which was imported from IRO-016. VSLs were changed to support the revised requirements.

IRO-015-2

Stakeholders agree with the proposal to move the requirements into IRO-014-2 and retire IRO-015 as a separate standard.

IRO-016-1

Stakeholders agree with the concept of moving the requirements of IRO-016-1 into IRO-014-2. Some commenters did not agree with the wording of the new requirements in IRO-014 that were formerly in IRO-016. The RC SDT made some revisions to the requirements listed in IRO-014-2. There are now 4 requirements are listed above in IRO-014-2 summary.

Implementation Plan - Proposed Effective Dates

The RC SDT received comments that COM-001-2, R5 should have an effective date immediately upon regulatory approval. The RC SDT agrees and will request an effective date that is the first possible effective date – the first day of the first calendar quarter following applicable regulatory approval – or in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter following Board of Trustees adoption.

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Gerry Adamski, at 609-452-8060 or at gerry.adamski@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.¹

¹ The appeals process is in the Reliability Standards Development Procedures:
<http://www.nerc.com/standards/newstandardsprocess.html>.

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18.	Do you agree with the revisions to IRO-016-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.	132
19.	If you have any other comments, not expressed in questions above, on this set of revisions, please provide your comments here.....	136

Comments for Set of Reliability Coordination Standards (Project 2006-06)

The Industry Segments are:

- 1 — Transmission Owners
- 2 — RTOs, ISOs
- 3 — Load-serving Entities
- 4 — Transmission-dependent Utilities
- 5 — Electric Generators
- 6 — Electricity Brokers, Aggregators, and Marketers
- 7 — Large Electricity End Users
- 8 — Small Electricity End Users
- 9 — Federal, State, Provincial Regulatory or other Government Entities
- 10 — Regional Reliability Organizations, Regional Entities

Commenter		Organization		Industry Segment									
				1	2	3	4	5	6	7	8	9	10
1.	Kris Manchur	Manitoba Hydro		x		x		x	x				
2.	Guy Zito	NPCC											x
Additional Member	Additional Organization	Region	Segment Selection										
1.	Roger Champagne	Hydro One TransEnergie	NPCC	2									
2.	Lee Pedowicz	NPCC	NPCC	10									
3.	Gerry Dunbar	NPCC	NPCC	10									
3.	Jeffrey V Hackman	Ameren		x		x		x	x				
4.	Dan Rochester	Independent Electricity System Operator - Ontario			x								
5.	Linda Perez (WECC)	Reliability Coordinator Comment Working Group											x
6.	Fred Young	Northern California Power Agency					x						
7.	Denise Roeder	ElectriCities of North Carolina, Inc.				x	x		x				
8.	Karl Bryan	US Army Corps of Engineers, Northwestern Division						x					
9.	Annette Bannon	PPL Supply Group						x	x				
Additional Member	Additional Organization	Region	Segment Selection										

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Commenter		Organization			Industry Segment									
					1	2	3	4	5	6	7	8	9	10
1.	Mark Heimbach	PPL EnergyPlus	RFC	6										
2.			MRO	6										
3.			NPCC	6										
4.			SERC	6										
5.			SPP	6										
6.	John Cummings	PPL EnergyPlus	WECC	6										
7.	Jon Williamson	PPL EnergyPlus	WECC	6										
8.	Tom Lehman	PPL Montana	WECC	5, 6										
9.	Joe Kisela	PPL Generation	RFC	5										
10.			NPCC	5										
11.	David Gladey	PPL Susquehanna	RFC	5										
10.	John Blazekovich (Commonwealth Edison)	#1 Standards Interface Subcommittee/Compliance Elements Drafting												
11.	Terry Bilke (MRO)	MRO NERC SDTandards Review Subcommittee				x								
Additional Member		Additional Organization		Region	Segment Selection									
1.	Neal Balu	WPS	MRO		3, 4, 5, 6									
2.	Carol Gerou	MP	MRO		1, 3, 5, 6									
3.	Jim Haigh	WAPA	MRO		1, 6									
4.	Charles Lawrence	ATC	MRO		1									
5.	Ken Goldsmith	ALTW	MRO		4									
6.	Tom Mielnik	MEC	MRO		1, 3, 5, 6									
7.	Pam Sordet	XCEL	MRO		1, 3, 5, 6									
8.	Dave Rudolph	BEPC	MRO		1, 3, 5, 6									
9.	Eric Rudolph	LES	MRO		1, 3, 5, 6									
10.	Joseph Knight	GRE	MRO		1, 3, 5, 6									
11.	Joe DePoorter	MGE	MRO		3, 4, 5, 6									
12.	Maire Knox	MISO	MRO		2									
13.	Michael Brytowski	MRO	MRO		10									

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Commenter		Organization		Industry Segment									
				1	2	3	4	5	6	7	8	9	10
14.	Larry Brusseau	MRO	MRO	10									
12.	Jim Busbin	Southern Company Transmission		x									
Additional Member	Additional Organization	Region	Segment Selection										
1.	Raymond Vice	Southern Company Services, Inc.	SERC	1									
2.	Mike Hardy	Southern Company Services, Inc.	SERC	1									
3.	Chris Wilson	Southern Company Services, Inc.	SERC	1									
4.	Terry Coggins	Southern Company Services, Inc.	SERC	1									
5.	Dean Ulch	Southern Company Services, Inc.	SERC	1									
6.	J. T. Wood	Southern Company Services, Inc.	SERC	1									
7.	Roman Carter	Southern Company Services, Inc.	SERC	1									
8.	Marc Butts	Southern Company Services, Inc.	SERC	1									
13.	Kathleen Goodman	ISO New England Inc.			x								
14.	Edward Davis	Entergy Services, Inc		x									
15.	Danny Dees	MEAG Power		x		x		x					
16.	Mike Gentry	Salt River Project		x		x		x	x				
17.	Jim Griffith (Southern Company)	SERC OC Standards Review Group		x		x		x					
Additional Member	Additional Organization	Region	Segment Selection										
1.	Alan Jones	Alcoa	SERC	1, 3, 5									
2.	Al McMeekin	SCE&G	SERC	1, 3, 5									
3.	Brett Koelsch	Progress Energy	SERC	1, 3, 5									
4.	Raymond Vice	Southern Co.	SERC	1, 3, 5									
5.	Danny Dees	MEAG	SERC	1, 3, 5									
6.	Raleigh Nobles	Ga System Operations Corp	SERC	1, 3, 5									
7.	Greg Stone	Duke Energy	SERC	1, 3, 5									
8.	Tim Hattaway	PowerSouth	SERC	1, 3, 4, 5									
9.	Jack Kerr	Dominion VP	SERC	1, 3, 5									
10.	Richard McCall	NCEMC	SERC	3, 4									
11.	Jim Case	Entergy	SERC	1, 3, 5									
12.	Joel Wise	TVA	SERC	1, 3, 5, 9									

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Commenter		Organization		Industry Segment									
				1	2	3	4	5	6	7	8	9	10
13.	John Rembold	SIPC	SERC	1, 3, 5									
14.	Lawrence Rodriquez	Entegra Power	SERC	3, 4, 5, 6									
15.	Mike Bryson	PJM	SERC	2									
18.	Jay Seitz	US Bureau of Reclamation						x					
19.	Patrick Brown	PJM Interconnection			x								
Additional Member		Additional Organization	Region	Segment Selection									
1.	William Harm	PJM Interconnection	RFC	2									
2.	Leanne Harrison	PJM Interconnection	RFC	2									
20.	John Blazekovich (Commonwealth Edison)	#2 Standards Interface Subcommittee/Compliance Elements Development Resource Pool											
21.	Timothy C. (TC) Thomas	Progress Energy Carolinas			x		x		x	x			
22.	Sam Ciccone	FirstEnergy			x		x	x	x	x			
Additional Member		Additional Organization	Region	Segment Selection									
1.	Dave Folk	FE	RFC	1, 3, 4, 5, 6									
2.	Doug Hohlbaugh	FE	RFC	1, 3, 4, 5, 6									
3.	Steve Lux	FE	RFC	1, 3, 4, 5, 6									
23.	Denise Koehn	Bonneville Power Administration			x		x		x	x			
Additional Member		Additional Organization	Region	Segment Selection									
1.	Rich Ellison	Transmission Dispatch		WECC									
2.	Jeffrey Cook	Transmission Communications & Grid Modeling		WECC		1							
3.	Robin Chung	Generation Support		WECC		3, 5, 6							
24.	Greg Rowland	Duke Energy			x		x		x	x			
25.	Thad Ness	AEP			x		x		x	x			
26.	Chris de Graffenried	Consolidated Edison Co. of NY, Inc.			x		x			x			
27.	Kevin Koloini	Buckeye Power, Inc.					x	x	x				
28.	Jason Shaver	American Transmission Company			x								
29.	Charles Yeung (SPP)	ISO/RTO Council Standards Review Subcommittee											x

1. Do you agree with the revisions to the Requirements in COM-001-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Summary Consideration: The RC SDT received several comments regarding the intent of the term “telecommunications facilities”. For COM-001-2, the RC SDT envisions telecommunications to be voice or message communication between operating personnel. The standard has been renamed “Communications” and the term “telecommunications facilities” was replaced with “interpersonal communications capabilities” throughout the standard to better reflect the intent of the RC SDT. Based on stakeholder comments, R1 was changed as follows:

R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall operationally test, on a quarterly basis ~~at a minimum,~~ alternative interpersonal telecommunications facilities capabilities used for communicating real-time operating information. to ensure the availability of their use when normal telecommunications facilities fail. If the test is unsuccessful, the entity shall develop a mitigation plan to restore its interpersonal communications capabilities.

We also received comments regarding the applicability of the standard that suggested adding other entities listed in IRO-001. The RC SDT contends that, in order to receive and carry out directives, an entity must be able to communicate with the RC...either directly or through other entities (e.g. – a Distribution Provider may receive the directive from the Transmission Operator who received it from the Reliability Coordinator). We have not expanded the applicability of R1 to include the TSP, LSE and PSE as suggested as we feel that this expands the standard beyond the reliability intent. It is not necessary nor is it practical, for reliability purposes, for every entity to have normal and back-up interpersonal communications capabilities with every other entity. The TSP, LSE and PSE were, however, added to R3 to add these entities to the list of entities that must use the English language when exchanging inter-entity information.

Other commenters had concerns with regard to R2 and the intent with regard to length of outages. The requirement was revised as follows:

R2. Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of the a failure (30 minutes or longer) of its normal interpersonal telecommunications facilities capabilities. ~~-, and shall verify that alternate means of telecommunications are functional.~~

The TSP, LSE and PSE were added to the list of responsible entities and the informational (last) sentence of R3 was removed per stakeholder suggestions:

R3. Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, ~~Transmission Service Provider, Load-Serving Entity, Purchasing-Selling Entity,~~ and Distribution Provider shall use English as the

language for all inter-entity Bulk Electric System (BES) reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected BES. ~~Transmission Operators and Balancing Authorities may use an alternate language for internal operations.~~

Organization	Question 1:	Question 1 Comments:
AEP	No	A precise definition of telecommunications facilities needs to be established in this standard. R2 needs to be clarified regarding impacted utilities. FERC Order 693 suggests that this standard should apply Distribution Providers (DP) along with Generation Operators (GOP). AEP acknowledges that there needs to be some level of coordination and communication between DPs and other function model entities; however, the requirements, as applied to the DP, for telecommunications with the TOP and BA might not address the current communication paths adequately. Today, the DP usually does not communicate with the RTO (performing the BA and/or TOP function), but the DP could either communicate directly or through a joint action agency to the IOU that may serve as the TO (or maybe the TOP). As this draft is written the DPs would be required to have telecommunication facilities with the RTO in this scenario. There will likely be many exceptions to the rule that the requirements and measures create when applied to the DP. We ask that the drafting team consider the applicability, some of the current channels of communications, and options for addressing the FERC comments without creating telecommunication paths that do not make practical sense.
Response: The RC SDT thanks you for your comment. COM-001-2 has been renamed "Communications". The RC SDT envisions COM-001-2 as referring to voice or text communications only. We have revised the term "telecommunications facilities" to "interpersonal communications capabilities" to better reflect the intent. In R2, the phrase, "impacted entities" refers to any entity with whom the TC, TOP or BA has lost interpersonal communications capabilities. The requirements were written to address the differences in any entity's facility needs allowing for adequate flexibility to incorporate cost effective solutions as well as accommodate future technologies (FERC Order 693 directives).		
ElectriCities of North Carolina, Inc.	No	We are a joint action agency registered on behalf of our member municipalities, who are all TDUs, neither own nor operate any Bulk Electric System facilities, and perform no real-time operations or operations planning for the BES. There are currently other standards that already apply to us that require us to have processes and means to communicate with our RC, BA, TOP, etc. The proposed modifications to this standard would now make our members subject to this standard as well, based

Organization	Question 1:	Question 1 Comments:
		on the DP registration designation. Given that, we believe there needs to be additional clarification of specifically what type of "telecommunications facilities" are required to be considered compliant with this standard. Maybe in the past when this standard applied to TOPs, BAs, and RCs, it was intuitive what type of telecommunications facilities they needed to communicate with each other. However, when you bring in small DPs, it doesn't seem so clear. Obviously we already communicate with our TOP and BA, and have done so for years. As written, the standard is ambiguous in terms of what more, if anything, we would have to put in place to satisfy this standard.
Response: The RC SDT thanks you for your comment. COM-001-2 has been renamed "Communications". The RC SDT envisions COM-001-2 as referring to voice or text communications only. We have revised the term "telecommunications facilities" to "interpersonal communications capabilities" to better reflect the intent. The purpose statement is revised as: To ensure that operating entities have adequate interpersonal communication capabilities. The requirement R4 was written to meet a FERC directive with respect to COM-001. The requirement states: Each Distribution Provider and Generation Operator shall demonstrate the existence of its interpersonal communications capabilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information. Compliance with NERC requirements can be achieved through agreements with other entities to meet the intent of the requirement. The RC SDT can not address compliance issues, as this is the scope of NERC Compliance.		
US Army Corps of Engineers, Northwestern Division	No	R3 needs to have the last sentence revised to allow the Generator Operator and Distribution Provider to use an alternate language for internal operations.
Response: The RC SDT thanks you for your comment. The requirement and measure were revised to delete the last sentence as it was not a requirement, but only information.		
US Bureau of Reclamation	No	Purpose Distribution Providers and Generator Operators were added to the applicability; the Purpose should be revised to reflect that.
Response: The RC SDT thanks you for your comment. The Purpose Statement was revised to: To ensure that operating entities have adequate interpersonal communication capabilities.		

Organization	Question 1:	Question 1 Comments:
CU of Springfield	No	City Utilities of Springfield, Missouri (CU) supports the effort of the drafting team to add Distribution Providers and Generator Operators to the "Applicability" section, the change in language regarding testing of alternate telecommunication facilities and the future effort to move COM-001-2 R3 to the new COM-003-1 standard. However, it is still necessary to define all parties that are responsible for having "adequate and reliable telecommunication facilities" and to require them to have both primary and backup telecommunication facilities. Since this standard is designed to address telecommunication facilities, any redundancy that exists should be removed from other standards instead. The proposal from the drafting team to remove all of the language from COM-001-1 R1 will create a gap in responsibility, since none of the standards mentioned in the Implementation Plan specifically require a RC, BA or TOP to have these facilities. It is the opinion of CU that you have defined the parties that need to communicate "Interconnection and operating information" in IRO-001-2, where a BA, TOP, GOP, TSP, LSE, DP and PSE receive and comply with directives from the RC. Therefore to maintain consistency are not all of these entities expected to have "adequate and reliable" telecommunication facilities? CU suggests that COM-001-2 R4 be moved to R1 and standard language changed to say: Purpose: Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Distribution Provider, Load Serving Entity and Purchasing Selling Entity needs adequate and reliable telecommunications facilities internally and with others in the Reliability Coordinator's area, for the exchange of Interconnection and operating information necessary to maintain reliability. R1. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Distribution Provider, Load Serving Entity and Purchasing Selling Entity shall have primary and backup telecommunications facilities for the exchange of Interconnection and operating information. R2. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Distribution Provider, Load Serving Entity and Purchasing Selling Entity shall operationally test, on a quarterly basis at a minimum, alternative telecommunications facilities to ensure the availability of their use when normal telecommunications facilities fail. R3. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Distribution Provider, Load Serving Entity and Purchasing Selling

Organization	Question 1:	Question 1 Comments:
		Entity shall notify impacted entities of the failure of its normal telecommunications facilities, and shall verify that alternate means of telecommunications are functional. R4. Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Distribution Provider, Load Serving Entity and Purchasing Selling Entity shall use English as the language for all inter-entity Bulk Electric System (BES) reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected BES. Transmission Operators and Balancing Authorities may use an alternate language for internal operations. The end result will be a standard that requires all applicable entities to: A. Have primary and backup telecommunication facilities. B. Test the telecommunication facilities. C. Utilize the telecommunication facilities.
Response: The RC SDT thanks you for your comment. Applicability: You are correct with regards to IRO-001 and the entities involved in carrying out directives. The RC SDT contends that, in order to receive and carry out directives, an entity must be able to communicate with the RC...either directly or through other entities (e.g. – a Distribution Provider may receive the directive from the Transmission Operator who received it from the Reliability Coordinator). The RC SDT has changed the name of this standard to “Communications and revised the Purpose Statement to: To ensure that operating entities have adequate interpersonal communication capabilities. We have replaced the term “Telecommunications Facilities” with “interpersonal communications capabilities” to better reflect the intent of the standard. We have not expanded the applicability of R1 or R2 as you suggest as we feel that this expands the standard beyond the reliability intent. It is not necessary nor is it practical, for reliability purposes, for every entity to have normal and back-up interpersonal communications capabilities with every other entity. The SDT did, however, expand the applicability for the requirement to use English language to include the TSP, LSE and PSE in support of your suggestion.		
Northern California Power Agency	No	R3 should include in the last sentence that the Generator Operator and Distribution Provider may use alternate language for internal operations.
Response: The RC SDT thanks you for your comment. The requirement and measure were revised to delete the last sentence since it was informational only and not a requirement.		

Organization	Question 1:	Question 1 Comments:
MRO NERC SDTandards Review Subcommittee	No	The new R2 requirement is too verbose. We suggest that you strike the final clause: "and shall verify that alternate means of telecommunications are functional." It is obviated by the requirement to notify impacted parties. The responsible entity is already implicitly required to verify its alternate means of communication is functional since it is required to notify its impacted parties of the failure of its normal telecommunications. It can't notify its impacted parties if the alternate communications means are not functional. This clause is similar to the old requirement one that the drafting team appropriately struck. We tend to agree that striking R1 makes sense due to the drafting team's reasoning. However, we are not clear why the new R4 is necessary then. If the drafting team does not believe R1 is necessary shouldn't they respond to the FERC directive with the same reason why R4 is not really necessary? The VRF for new requirement 1 should be lower. It does not fit the definition of a medium VRF. A medium VRF requires that a violation of the requirement directly affect the state or capability or the ability to effectively monitor and control. Failure to test does not result in directly affecting the state or capability or the ability to effectively monitor and control. At a minimum, a failure of the alternative communication systems and primary communication systems must occur first. The failure to perform a single test in a given quarter does not mean that primary and alternative communication systems will fail. Thus, testing is really an administrative issue and should thus be a lower VRF. In the Data Retention section, Distribution Provider and Generation Operators should be added. Currently, there are no data retention requirements listed for them. Suggest modifying the language regarding data retention for compliance violations to: "... is found in violation of a requirement, it shall keep information related to the violation until it the Compliance Enforcement Authority finds it compliant."
Response: The RC SDT thanks you for your comments. R2: The RC SDT deleted the final clause as you suggest. R4: This was added because of the FERC directive: Include generator operators and distribution provider as applicable entities and include requirements for their telecommunications. VRF: We concur and have modified the VRF.		

Organization	Question 1:	Question 1 Comments:
Data Retention: We have revised the Data Retention to section to comport with your comment.		
Southern Company Transmission	No	1.1 - In R1, we suggest that "operationally test by way of operator action" should be defined to remove any confusion regarding what the term requires. The word "ensure" needs to be changed to "assure" to more accurately convey the intent of the requirement. We also suggest changing the word "facilities" to "capabilities". 1.2 - R2 is overly broad and should include a reasonable time frame for notification. For example, as currently written, a telecom outage of only one minute for which a notification is not made would be a severe violation. The VSL should be consistent with the language of the requirement. A very short, insignificant telecom outage with no notification could result in a severe violation as the requirement is presently written and VSL's applied. 1.3 - R1, R2 and R3 should be expanded to include the list of entities the RC needs to talk with as included in the Applicability section of IRO-001-2 (RC, TO, BA, GO, DP, TSP, LSE, PSE). These entities should also be included in the purpose statement and R4 and M4 can then be eliminated. 1.4 - In R3, we suggest that the last sentence of R3 should be changed to "entities may use an alternative language for internal operations" rather than allowing only TOs and BAs to have this option.
Response: The RC SDT thanks you for your comment. 1.1: The RC SDT removed the word "operationally" from the requirement. The requirement was revised to remove the "assurance" part as it does not add to the requirement. We have changed to term "telecommunications facilities" to "interpersonal communication capabilities" to better reflect the intent of the standard. 1.2: We have revised the requirement to place time bounds on outages that require notification. The new R2 is: Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure (30 minutes or longer) of its normal interpersonal communications capabilities. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i> 1.3: The RC SDT contends that the addition of the TSP, LSE and PSE to R1 and R2 of COM-001 expands the scope beyond the reliability intent, but has added the TSP, LSE and PSE to the list of entities that must use the English language in R3. 1.4: We have removed the informational (last) sentence as it is not a requirement. Others can use an alternate language, but the entities must agree to do so. This is in the first sentence of the requirement which states "Unless agreed to otherwise..." R3 was revised so that the last		

Organization	Question 1:	Question 1 Comments:
sentence, which was explanatory and did not include any required performance, was deleted.		
Progress Energy Carolinas	No	R1 - The proposed requirement R1 as stated is too broad in reference to "telecommunications facilities". It is unclear as to whether it is intending to specify facilities and equipment which provide VOICE/VERBAL communications, or ELECTRONIC MESSAGING notifications systems, or DATA EXCHANGE links or all of these. Please clarify either within the requirement or within the Glossary of Terms which accompany the full standards set. R2 - The proposed requirement R2 as stated is too broad in reference to "telecommunications facilities". It is unclear as to whether it is intending to specify facilities and equipment which provide VOICE/VERBAL communications, or ELECTRONIC MESSAGING notifications systems, or DATA EXCHANGE links or all of these. Please clarify either within the requirement or within the Glossary of Terms which accompany the full standards set. R4 - The proposed requirement R4 as stated is too broad in reference to "telecommunications facilities". It is unclear as to whether it is intending to specify facilities and equipment which provide VOICE/VERBAL communications, or ELECTRONIC MESSAGING notifications systems, or DATA EXCHANGE links or all of these. Please clarify either within the requirement or within the Glossary of Terms which accompany the full standards set.
Response: The RC SDT thanks you for your comment. COM-001-2 has been renamed "Communications". The RC SDT envisions COM-001-2 as referring to voice or message communications only. We have revised the term "telecommunications facilities" to "interpersonal communications capabilities" throughout the standard to better reflect the intent.		
NPCC	No	There is inconsistency between R3 and M3. In R3, there is a provision for agreement between entities (RC, TOP, BA, GOP, DP) to use a language other than English in their communications. In M3, that option is not presented. M3 should reflect what is written in R3.
Response: The RC SDT thanks you for your comment. The provision that you mention was removed from the requirement since it is not a requirement, but an informational statement. The English language Requirement begins with the phrase "Unless agreed to otherwise...". This allows for the use of other languages where agreed to.		
ISO New England Inc.	No	ISO New England does not support the removal of Requirement 1. Also, we believe Requirement 3 is written such that it may pose an unnecessary requirement on the

Organization	Question 1:	Question 1 Comments:
		Hydro Quebec area given the terminology "inter-entity" and support further clarification.
Response: The RC SDT thanks you for your comment. The majority of commenters agreed with the removal of R1. The last sentence of the requirement 3 was deleted as it was an informational statement only. The English language Requirement begins with the phrase "Unless agreed to otherwise..." This allows for the use of other languages where agreed to.		
FirstEnergy	No	Purpose - The purpose does not include the GOP and DP entities. It may be better if the purpose was written more generally as "To ensure adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information necessary to maintain BES reliability". R1 - This requirement makes no distinction between data and voice communications facilities and assumes a designated primary and backup facility configuration such that the backup communications systems are not used regularly. This may be an accurate assumption for data communications; however voice communications may be different. Today many organizations use voice communications systems that allow the system to choose the communication path each time a call is placed. This design ensures that all communications paths are tested regularly in day-to-day use. However, the design of these systems makes it difficult, if not impossible, to substantiate that a functional test of the circuitry has been performed. This requirement should be broken into two requirements. The first should cover data circuitry and the second should cover voice circuitry. This will allow the drafting team to address the inherent differences in these two methods of communications. Lastly, the requirements need to be much more specific concerning the criticality of the facilities to be tested to improve the measurability of the standard. The drafting team dropped the phrase "for the exchange of Interconnection and operating data" from the standard requirement. This deletion appears to open the application of this standard to virtually every communication path used by an RC, BA, TOP whether or not it is used for communicating real-time operating information or not. We do not believe this was the intention of the drafting team and suggest this phrase be reinserted or another one added that limits applicability to only those communication paths that support the real-time reliability of the bulk electric system. R2 - It is not clear who the "impacted entities" would be in this requirement. The SDT should consider specifying these entities. R3 - The last sentence of this requirement should be deleted. It is not a requirement, it does not add clarity, and the first sentence is very specific as to the communications covered by the requirement. R4 - This requirement makes no distinction between data and voice communications facilities and

Organization	Question 1:	Question 1 Comments:
		assumes a designated primary and backup facility configuration such that the backup communications systems are not used regularly. This may be an accurate assumption for data communications; however voice communications may be different. Today many organizations use voice communications systems that allow the system to choose the communication path each time a call is placed. This design ensures that all communications paths are tested regularly in day-to-day use. However, the design of these systems makes it difficult, if not impossible, to substantiate that a functional test of the circuitry has been performed. This requirement should be broken into two requirements. The first should cover data circuitry and the second should cover voice circuitry. This will allow the drafting team to address the inherent differences in these two methods of communication.
Response: The RC SDT thanks you for your comment. Purpose: To better reflect the intent of the standard, we have modified the Purpose Statement to: To ensure that operating entities have adequate interpersonal communication capabilities. R1: The standard has been revised to remove the term “telecommunications facilities” and replace it with “interpersonal communications capabilities”. This reflects the intent of the standard, which is to have voice and message communication capabilities. R1 has been revised as: Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall test, on a quarterly basis, alternative interpersonal communications capabilities used for communicating real-time operating information. If the test is unsuccessful, the entity shall develop a mitigation plan to restore its interpersonal communications capabilities. <i>[Violation Risk Factor: Lower][Time Horizon: Real-time Operations]</i> R2: The term “impacted entities” indicates those entities with which you have lost interpersonal communications capabilities. R2 has been revised to: Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure (30 minutes or longer) of its normal interpersonal communications capabilities. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i> R3: We concur and have deleted the sentence. R4: COM-001-2 only covers voice and message communications and R4 has no provision for primary / alternate capabilities.		
Duke Energy	No	Purpose - The purpose statement does not read very well. It either needs another sentence or changes to the current sentence. The purpose of the standard is to assure proper communications, not to suggest entities need proper communications as currently written. Suggest changing to, “To

Organization	Question 1:	Question 1 Comments:
		assure each Reliability Coordinator, Transmission Operator and Balancing Authority develops and maintains”. Requirement R1 - What is the definition of "alternative telecommunications facilities"? Is there another requirement somewhere to have alternative telecommunications facilities — or is this a new requirement being introduced by this standard? What is the relationship, if any, between "alternative telecommunications facilities" and EOP-008-1? What is the requirement for maintaining and testing "alternative telecommunications facilities"; what does “operationally test” mean Just because an alternative facility works when it is tested does not mean it will work during an actual failure of the primary system. Furthermore, what do we do if the “test” fails — are we still compliant? The word “ensure” needs to be changed to “assure”. Requirement R2 - What does "impacted entity" mean? Requirement R3 - Why can't others use alternate language — this limits alternate language to just TOPs and BAs internal operations. TOs, GOPs, and others may want to use alternate language internally. Need to define language to be used with and between other relationships — BA to PSE, as an example. Is this a reliability issue or a certification issue? Simply state that: “Entities may use alternative language for internal operations”. This will allow any entity to use alternative language for internal operations. The inclusion of TSPs, LSEs, and PSEs in IRO-001-2 indicates the need to include these functions in the COM-001-2 applicability and requirements concerning the use of English as the approved language. Requirement R4 - Remove R4 and add DP and GO, as well as all of the other entities listed in IRO-001-2, to R1 thru R3.
		Response: The RC SDT thanks you for your comment. Purpose: To better reflect the intent of the standard, we have modified the Purpose Statement to: To ensure that operating entities have adequate interpersonal communication capabilities. R1: “Alternative telecommunications facilities” was used in place of “redundant”. Many entities have multiple “primary facilities” which could be construed as redundant. The use of “alternative” is intended to indicate at least one primary and one other facility. R2: The term “impacted entities” indicates those entities with which you have lost communications capabilities. Based on other’s comments, R2 has been revised to: Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of

Organization	Question 1:	Question 1 Comments:
		a failure (30 minutes or longer) of its normal interpersonal communications capabilities. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i> R3: The second sentence was removed as it was a statement and not a requirement. Others can use an alternate language, but the entities must agree to do so. This is in the first sentence of the requirement which states "Unless agreed to otherwise..." R4: The DP and GOP were added to this standard per a FERC directive (paragraph 509 of Order 693). Putting these entities in R1-R3 would add requirements not envisioned by the directive and provide no additional reliability benefit. The RC SDT contends that the addition of the TSP, LSE and PSE (from IRO-001) to COM-001 R1 and R2 expands the scope beyond the reliability intent, but has added the TSP, LSE and PSE to the list of entities that must use the English language in R3.
ISO/RTO Council Standards Review Subcommittee	Yes and No	We suggest that a definition of telecommunications be written by the drafting team because it is not clear what all telecommunications is intended to be included. Does this requirement apply to data, voice, rtus, networks, etc? For requirement R2, we suggest that you strike the final clause: "and shall verify that alternate means of telecommunications are functional." It is obviated by the requirement to notify impacted parties. The responsible entity is already implicitly required to verify its alternate means of communication is functional since it is required to notify its impacted parties of the failure of its normal telecommunications. It can't notify its impacted parties if the alternate communications means are not functional. The VRF for new requirement 1 should be lower. It does not fit the definition of a medium VRF. A medium VRF requires that a violation of the requirement directly affect the state or capability or the ability to effectively monitor and control. Failure to test does not result in directly affecting the state or capability or the ability to effectively monitor and control. At a minimum, a failure of the alternative communication systems and primary communication systems must occur first. The failure to perform a single test in a given quarter does not mean that primary and alternative communication systems will fail. Thus, testing is really an administrative issue and should thus be a lower VRF. In the Data Retention section, Distribution Provider and Generation Operators should be added. Currently, there are no data retention requirements listed for them. Suggest modifying the language regarding data retention for compliance violations to: "...is found in violation of a requirement, it shall keep information related to the violation until it the Compliance Enforcement Authority finds it compliant."

Organization	Question 1:	Question 1 Comments:
Response: The RC SDT thanks you for your comment. The intent of this standard is reflected in the revised purpose statement: To ensure that operating entities have adequate interpersonal communication capabilities. COM-001-2 only deals with voice or message communications. We have renamed the standard to “Communications” and replaced the term “telecommunications facilities” with “interpersonal communications capabilities” throughout the standard. R2: We have revised R2 as you suggest. R2 has been revised to: Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure (30 minutes or longer) of its normal interpersonal communications capabilities. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i> VRF: We concur and have modified the VRF. Data Retention: We have revised the Data Retention as you suggested.		
SERC OC Standards Review Group	Yes and No	1.1 - In R1, we suggest that "operationally test" should be defined to remove any confusion regarding what the term requires. The word "ensure" needs to be changed to "assure" to more accurately convey the intent of the requirement. We also suggest changing the word "facilities" to "capabilities". 1.2 - R2 is overly broad and should include a reasonable time frame for notification. For example, as currently written, a telecom outage of only one minute for which a notification is not made would be a severe violation. 1.3 - R1, R2 and R3 should be expanded to include the list of entities the RC needs to talk with as included in the Applicability section of IRO-001-2 (RC, TO, BA, GO, DP, TSP, LSE, PSE). These entities should also be included in the purpose statement and R4 and M4 can then be eliminated. 1.4 - In R3, we suggest that the last sentence of R3 should be changed to "entities may use an alternative language for internal operations" rather than allowing only TOs and BAs to have this option.
Response: The RC SDT thanks you for your comment. 1.1: The RC SDT removed the word “operationally” from the requirement. The requirement was revised remove the “assurance” part as it does not add to the requirement. We have changed to term “facilities” to “capabilities” as you suggest.		

Organization	Question 1:	Question 1 Comments:
		1.2: We have revised the requirement to place time bounds on outages that require notification. The new R2 is: Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure (30 minutes or longer) of its normal interpersonal communications capabilities. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i> 1.3: The RC SDT contends that the addition of the TSP, LSE and PSE to COM-001 expands the scope beyond the reliability intent, but has added the TSP, LSE and PSE to the list of entities that must use the English language in R3. 1.4: We have removed the informational (last) sentence as it is not a requirement. Others can use an alternate language, but the entities must agree to do so. This is in the first sentence of the requirement which states "Unless agreed to otherwise..."
Buckeye Power, Inc.	Yes and No	What constitutes "telecommunications facilities"?
		Response: The RC SDT thanks you for your comment. COM-001-2 deals with voice or message communications only and has been renamed "Communications. We have replaced the phrase "telecommunications facilities" with "interpersonal communications capabilities" throughout the standard to better reflect the intent. The purpose statement has been revised to To ensure that operating entities have adequate interpersonal communication capabilities.
American Transmission Company	Yes and No	If some language is clarified, we support the revisions. R2 states that "Each TO shall notify impacted entities of the failure of its normal telecommunications facilities". If a phone line goes down and an alternate phone line is used, it is an excessive requirement to notify the impacted entities when there is no impact upon communication or the BES. The wording should be clear that notification is only required if an alternate means of communication is necessary. A defined timeframe for notification should be added to the requirement. It is possible that the loss of telecommunication faculties can occur without the loss of a control center. So, the redundancy with EOP-008 to R4 should be clarified.
		Response: The RC SDT thanks you for your comment. The RC SDT believes that entities should contact others when their normal communication capability is lost. For example, the normal phone line could be cut and someone trying to contact that entity may only get a busy signal and have no idea that alternate communications is necessary. We have revised the requirement to place time bounds on outages that require notification as you suggest. The new R2 is: Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of

Organization	Question 1:	Question 1 Comments:
a failure (30 minutes or longer) of its normal interpersonal communications capabilities. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i> Based on these revisions, we do not believe further clarification with regards to EOP-008 is necessary.		
PJM Interconnection	Yes	We agree with the revisions, but recommend adding applicability to Distribution Providers and Generator Operators for data retention requirements.
Response: The RC SDT thanks you for your comment. The data retention requirements have been revised as you suggested.		
Entergy Services, Inc	Yes	The drafting team should consider expanding the second sentence of R3 to apply to internal communications of any affected entity not just BAs and TOPs.
Response: The RC SDT thanks you for your comment. We concur with your sentiment and the second sentence has been removed as it was not a requirement, but an informational statement. Use of an alternate language by any entity is allowed under the requirement which begins with the phrase: "Unless agreed to otherwise..." The requirement has been revised to: R3. Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Purchasing-Selling Entity, and Distribution Provider shall use English as the language for all inter-entity Bulk Electric System (BES) reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected BES. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i>		
Salt River Project	Yes	
Manitoba Hydro	Yes	
Ameren	Yes	
Independent Electricity System Operator - Ontario	Yes	
Reliability Coordinator	Yes	

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 1:	Question 1 Comments:
Comment Working Group		
PPL Supply Group	Yes	
Bonneville Power Administration	Yes	

2. Do you agree with the revisions to the Measures in COM-001-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Summary Consideration: Commenters suggested general as well as specific revisions to the measures. One general comment suggested making the language consistent among the measures regarding evidence. M1-M3 were revised to include the phrase “shall have and provide upon request evidence that ...”.

The revisions to M1 are shown below:

- M1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have and provide upon request, evidence that could include, but is not limited to dated test records, operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, it ~~operationally~~ tested, on a quarterly basis ~~at a minimum,~~ alternative interpersonal telecommunications facilities capabilities used for communicating real-time operating information. ~~to ensure the availability of their use when normal telecommunications facilities fail.~~ If the test was unsuccessful, the entity shall have and provide upon request evidence that it developed a mitigation plan to restore the interpersonal communications capabilities.

Several commenters suggested revisions to M3. The RC SDT revised M3 based on the comments received suggesting that the applicability be expanded to include Generator Operators, Transmission Service Providers, Load-Serving Entities, Purchasing-Selling Entities, and Distribution Providers. Several entities commented that M3 did not match R3 which included an explanatory sentence that allowed an entity to use a language other than English for its internal communications. The informational second sentence was removed from Requirement R3, thus eliminating the “disconnect” between the requirement and the measure.

The revisions to M3 are shown below:

- M3. ~~The Each~~ Reliability Coordinator, Transmission Operator or Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Purchasing-Selling Entity, and Distribution Provider shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, that will be used to determine that personnel used English as the language for all inter-entity BES reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected BES. If a language other than English is used, each party shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, of agreement to use the alternate language.

M4 was revised based on stakeholder comments as follows:

M4. Each Distribution Provider and Generation Operator shall demonstrate the existence of ~~has its tele~~ interpersonal communications ~~facilities~~ capabilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information.

All measures were revised as necessary to reflect revisions to requirements.

Organization	Question 2:	Question 2 Comments:
NPCC	No	There is inconsistency between R3 and M3. In R3, there is a provision for agreement between entities (RC, TOP, BA, GOP, DP) to use a language other than English in their communications. In M3, that option is not presented. M3 should reflect what is written in R3.
Response: The RC SDT thanks you for your comment. The informational second sentence was removed from the requirement so there is no longer a disconnect between the requirement and the measure.		
CU of Springfield	No	CU suggests that COM-001-2 M4 be moved to M1 and language in the measures changed to: M1. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Distribution Provider, Load Serving Entity and Purchasing Selling Entity shall have evidence of primary and backup telecommunication facilities. M2. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Distribution Provider, Load Serving Entity and Purchasing Selling Entity shall provide evidence that it operationally tested, on a quarterly basis at a minimum, alternative telecommunications facilities to ensure the availability of their use when normal telecommunications facilities fail. M3. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Distribution Provider, Load Serving Entity and Purchasing Selling Entity shall provide evidence that it notified impacted entities of failure of their normal telecommunications facilities, and verified the alternate means of telecommunications were functional. M4. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Distribution Provider, Load Serving Entity and Purchasing Selling Entity shall have and provide upon request evidence that could include, but is not limited to operator

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 2:	Question 2 Comments:
		logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, that will be used to determine that personnel used English as the language for all inter-entity BES reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected BES.
Response: The RC SDT thanks you for your comment. We have revised the requirements for COM-001 based on the comments received from all stakeholders. We also revised the measures to reflect the new verbiage of the requirements. We have replaced the term "Telecommunications Facilities" with "interpersonal communications capabilities" to better reflect the intent of the standard. The RC SDT contends that the addition of the TSP, LSE and PSE to COM-001 to R1 and R2 expands the scope beyond the reliability intent, but has added the TSP, LSE and PSE to the list of entities that must use the English language in R3. It is not necessary nor is it practical, for reliability purposes, for every entity to have normal and back-up interpersonal communications capabilities with every other entity.		
Independent Electricity System Operator - Ontario	No	M3: The evidence to show that concurrence is in place to allow communication using a language other than English is missing. The Measure as written merely asks for evidence that communication in a different language has occurred.
Response: The RC SDT thanks you for your comment. The informational second sentence was removed from the requirement so there is no longer a requirement for evidence regarding this.		
Reliability Coordinator Comment Working Group	No	On Measure 3 need to remove the word "all" in reference to voice logs. Measure needs to include evidence of concurrence for using a language other than English
Response: The RC SDT thanks you for your comment. The informational second sentence was removed from the requirement so there is no longer a requirement for evidence regarding this.		
Northern California Power Agency	No	M3 should include Generator Operator and Distribution Provider in the applicability.
Response: The RC SDT thanks you for your comment. The measure has been revised to include the Generator Operator and Distribution Provider.		

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Organization	Question 2:	Question 2 Comments:
ElectriCities of North Carolina, Inc.	No	See comments on Question 1
Response: Please see response to question 1.		
US Army Corps of Engineers, Northwestern Division	No	M3 needs to include the GO and DP in its requirement for inter-utility communications in English.
Response: The RC SDT thanks you for your comment. The measure has been revised to include the Generator Operator and Distribution Provider.		
MRO NERC SDTandards Review Subcommittee	No	M4 does not appear to be worded as a measurement. If R4 is kept, we suggest the following modification: "The Distribution Provider and Generation Operator shall demonstrate the existence of its telecommunication systems identified in R4."
Response: The RC SDT thanks you for your comment. We have revised M4 per your suggestion.		
Southern Company Transmission	No	2.1 - A general comment regards the production of evidence - such language should be standardized as "have and provide upon request" and the authorized requestors identified. This comment should apply to all standards. 2.2 - M2 is overly broad and should include a reasonable time frame for notification. For example, as currently written, a telecom outage of only one minute for which a notification is not made would be a severe violation. 2.3 - The Drafting Team should coordinate the data retention time frame with the requirement measures for R1. DPs and GOs should also be included in the measures requirements.
Response: The RC SDT thanks you for your comment. 2.1 - The measures for this standard have all been revised per your comment. 2.2 – The requirement for this measure has been modified to reflect time frames for notification as well as a length of time applicable to the outage. The measure has been revised accordingly.		

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 2:	Question 2 Comments:
2.3 - The Data Retention section for this standard has been revised to comport with NERC Compliance guidelines. DP and GOP have been added to the measure.		
ISO New England Inc.	No	See answer to #1.
Response: Please see response to question 1.		
Salt River Project	No	M3 should include providing evidence of concurrence to use a language other than English. This will better align the measure with the VSL language.
Response: The RC SDT thanks you for your comment. We have revised the measure by adding the following sentence: If a language other than English is used, both parties shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, of agreement to use the alternate language.		
SERC OC Standards Review Group	Yes and No	2.1 - A general comment regards the production of evidence - such language should be standardized as "have and provide upon request" and the authorized requestors identified. This comment should apply to all standards. 2.2 - M2 is overly broad and should include a reasonable time frame for notification. For example, as currently written, a telecom outage of only one minute for which a notification is not made would be a severe violation. 2.3 - The Drafting Team should coordinate the data retention time frame with the requirement measures for R1. DPs and GOs should also be included in the measures requirements
Response: The RC SDT thanks you for your comment. 2.1 - The measures for this standard have all been revised per your comment. 2.2 – The requirement for this measure has been modified to reflect time frames for notification as well as a length of time applicable to the outage. The measure has been revised accordingly. 2.3 - The Data Retention section for this standard has been revised to comport with NERC Compliance guidelines. DP and GOP have been added to the measure.		

Organization	Question 2:	Question 2 Comments:
Progress Energy Carolinas	No	M1 - The proposed measure M1 as stated is too broad in reference to "telecommunications facilities". It is unclear as to whether it is intending to specify facilities and equipment which provide VOICE/VERBAL communications, or ELECTRONIC MESSAGING notifications systems, or DATA EXCHANGE links or all of these. Please clarify either within the requirement or within the Glossary of Terms which accompany the full standards set. M2 - The proposed measure M2 as stated is too broad in reference to "telecommunications facilities". It is unclear as to whether it is intending to specify facilities and equipment which provide VOICE/VERBAL communications, or ELECTRONIC MESSAGING notifications systems, or DATA EXCHANGE links or all of these. Please clarify either within the requirement or within the Glossary of Terms which accompany the full standards set. M4 - The proposed measure M4 as stated is too broad in reference to "telecommunications facilities". It is unclear as to whether it is intending to specify facilities and equipment which provide VOICE/VERBAL communications, or ELECTRONIC MESSAGING notifications systems, or DATA EXCHANGE links or all of these. Please clarify either within the requirement or within the Glossary of Terms which accompany the full standards set.
Response: The RC SDT thanks you for your comment. COM-001-2 has been renamed "Communications". The RC SDT envisions COM-001-2 as referring to voice or text communications only. We have revised the term "telecommunications facilities" to "interpersonal communications capabilities" to better reflect the intent.		
FirstEnergy	No	The measures should be modified per our suggested modifications in question 1.
Response: The RC SDT thanks you for your comment. The measures were revised based on the revisions to requirements that resulted from stakeholder comments.		
Duke Energy	No	General comments - Not using consistent language regarding "provide evidence" and "shall have and provide upon request evidence". Also need to add corresponding requirement number after each measure. Measure M1 - Just because an alternate facility works when it is tested does not mean it will work during an actual failure of the primary system. - what do we do if the "test" fails — are we complaint? Clarify that the requirement and measure is to "test" not "to test successfully". We may test and find that something does not work as expected.

Organization	Question 2:	Question 2 Comments:
Response: The RC SDT thanks you for your comment. We have modified the “evidence” language for consistency. Each measure corresponds to the measure with the same number. There is a one-to-one relationship between requirements and measures – however the SDT did add the requirement numbers to ensure this is clear to all stakeholders. M1: We have added the following sentence to R1 and M1. R1: If the test is unsuccessful, the entity shall develop a mitigation plan to restore its interpersonal communications capabilities. M1: If the test was unsuccessful, the entity shall have and provide upon request evidence that it developed a mitigation plan to restore the interpersonal communications capabilities.		
AEP	No	M2 needs to be clarified regarding impacted functions.
Response: The RC SDT thanks you for your comment. The requirement, as written, has sufficient clarity regarding the impacted entities.		
American Transmission Company	No	M2 should be changed to reflect the comments noted in Question 1 for R2.
Response: The RC SDT thanks you for your comment. The RC SDT believes that entities should contact others when their normal communication capability is lost. For example, the normal phone line could be cut and someone trying to contact that entity may only get a busy signal and have no idea that alternate communications is necessary. We have revised the requirement to place time bounds on outages that require notification. The new R2 is: Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure (30 minutes or longer) of its normal interpersonal communications capabilities. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i> The measure reflects the new requirement.		
ISO/RTO Council Standards Review Subcommittee	Yes and No	M3: The evidence to show that concurrence is in place to allow communication using a language other than English is missing. The Measure as written merely asks for evidence that communication in a different language has occurred.
Response: The RC SDT thanks you for your comment. The measure has been revised as: M1: The Reliability Coordinator, Transmission Operator or Balancing Authority shall have and provide upon request evidence that could include,		

Organization	Question 2:	Question 2 Comments:
but is not limited to dated test records, operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, that will be used to determine that personnel used English as the language for all inter-entity Bulk Electric System reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. If a language other than English is used, both parties shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, of agreement to use the alternate language.		
PJM Interconnection	Yes	M4 should be revised to reflect that each Distribution Provider and Generation Operator has evidence demonstrating the functionality of telecommunications facilities with the TOP and BA for the exchange of interconnection and operating information.
Response: The RC SDT thanks you for your comment. The measure was modified as: Each Distribution Provider and Generation Operator shall demonstrate the existence of its interpersonal communications capabilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information.		
Buckeye Power, Inc.	Yes and No	Abstain
US Bureau of Reclamation	Yes	
Bonneville Power Administration	Yes	
Manitoba Hydro	Yes	
Ameren	Yes	
PPL Supply Group	Yes	
Entergy Services, Inc	Yes	

3. Do you agree with the Violation Severity Levels proposed in COM-001-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Summary Consideration: The RC SDT made revisions to the VSLs based on the comments received and also to reflect revisions to the associated requirements. We received comments that the VSLs for R1 and R2 were based on multiple violations, which do not support FERC's Guideline 4 for VSLs - Guideline 4 requires that a VSL should be based on a single violation. We agreed and revised the VSLs to reflect a single violation.

Organization	Question 3:	Question 3 Comments:
Independent Electricity System Operator - Ontario	No	R1: Suggest to revise the conditions for all levels to read "failed to operationally test the alternative communication facilities within the last???" R2: The second part under Severe is not needed since failing to notify any impacted entities would imply no communication to the affected entities anyway. If verification of the functionality of the alternate means of telecommunications is also critical even without communicating to the affect entities, then the second condition should be an "OR". R3: Failure to having concurrence to use a language other than English for communications between and among operating personnel responsible for real-time operations by itself does not constitute a violate of any requirements; it is the absence of such a concurrence AND having used a language other than English that would constitute a violation. Suggest to revise this condition.
Response: The RC SDT thanks you for your comment. We have revised the VSLs per your suggestions and comments from other stakeholders, and revisions made to the wording of the associated requirement. We have revised the VSLs per your suggestions and the revisions made to the associated requirement We have revised the VSLs per your suggestions.		
CU of Springfield	No	Revise to reflect proposed changes above
Response: The RC SDT thanks you for your comment. The Requirement, Measures and VSLs have been revised per your and other		

Organization	Question 3:	Question 3 Comments:
stakeholders' comments.		
ElectriCities of North Carolina, Inc.	No	Depends of what is meant by "telecommunications facilities"
Response: The RC SDT thanks you for your comment. We have clarified the requirements and measures to use the term "interpersonal communications capabilities" rather than "telecommunications facilities".		
MRO NERC SDTandards Review Subcommittee	No	The VSLs as defined for Requirement 1 appear to violate Guideline 4 that the Commission established in their "Order on Violation Severity Levels Proposed by the Electric Reliability Organization". Guideline 4 requires that a VSL should be based on a single violation. The VSLs as defined accumulate the number of consecutive quarters. This would imply that a single violation could last more than a year and that the compliance auditor could not determine sanctions until the entity becomes compliant or year has passed. A single violation appears to be the failure to test in a single quarter. This requirement is binary in nature in that it is either met or it isn't. We suggest that only a lower VSL should be defined as: "The RC, TOP, or BA failed to test the backup telecommunication facilities for a single calendar quarter." The Lower VSL for R2 is not possible. The act of notifying all impacted entities of the failure of their primary telecommunication system requires the use of the alternative telecommunications systems which is a form of verifying that the alternative telecommunications facilities are functional. The drafting team should consider applying the numeric performance category of the VSL Development Guideline Criteria for R2.
Response: The RC SDT thanks you for your comment. R1: We have revised the VSLs per the guideline and the revised requirement. R2: We have revised the requirement to have time constraints for the length of an outage as well as a timeframe for notification. The VSL has been revised to reflect the revised requirement.		
PJM Interconnection	No	Recommend the following VSLs for R1: Proposed Lower VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on at least one occasion.

Organization	Question 3:	Question 3 Comments:
		Proposed Moderate VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on two separate occasions. Proposed High VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on three separate occasions. Proposed Severe VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on more than three separate occasions. Recommend the following VSLs for R2: Proposed Lower VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on at least one occasion. Proposed Moderate VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on two separate occasions. Proposed High VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on three separate occasions. Proposed Severe VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on more than three separate occasions. Recommend the following VSLs for R4: Proposed High VSL: The Responsible Entity failed to establish telecommunications with either their Balancing Authority or Transmission Operator for the exchange of Interconnection and operating information. Proposed Severe VSL: The Responsible Entity failed to establish telecommunications with their Balancing Authority and Transmission Operator for the exchange of Interconnection and operating information.
		Response: The RC SDT thanks you for your comment.

Organization	Question 3:	Question 3 Comments:
R1: The proposed VSLs reflect multiple violations of the requirement. Each VSL must be written for a single violation (failure to test quarterly). R2: The proposed VSLs reflect multiple violations of the requirement and are a duplication of the VSLs proposed for R1, not for R2. R4: We have revised the VSLs per your suggestion.		
FirstEnergy	No	The VSL should be modified per our suggested modifications in question 1.R1 VSL - The statement in the VSL that the responsible entity did not "operationally test" is too broad. It should be more specific with the language used in the requirement.
Response: The RC SDT thanks you for your comment. The requirement, measure and VSLs have been revised per stakeholder comments and the phrase, "operationally test" is no longer used in the standard.		
Duke Energy	No	VSL for Requirement R1 - The VSL for R1 seems to imply that an operational test needs to have been performed in the last 90 days — this is read in conjunction with the data retention requirements. Need to clarify in the requirement how ?quarter basis? is defined - is it the calendar quarter, or a rolling 90 days? In addition, the VSLs for Requirement R1 appear to violate NERC guidelines, since the Moderate, High and Severe VSLs are based upon cumulative violations of the Lower VSL.
Response: The RC SDT thanks you for your comment. The data retention was changed from three months to three years. The VSLs were revised to reflect the guidelines as you suggested. There are now 2 VSLs.		
ISO/RTO Council Standards Review Subcommittee	No	The VSLs as defined for Requirement 1 appear to violate Guideline 4 that the Commission established in their "Order on Violation Severity Levels Proposed by the Electric Reliability Organization". Guideline 4 requires that a VSL should be based on a single violation. The VSLs as defined accumulate the number of consecutive quarters. This would imply that a single violation could last more than a year and that the compliance auditor could not determine sanctions until the entity becomes compliant or year has passed. A single violation appears to be the failure to test in a single quarter. This requirement is binary in nature in that it is either met or it isn't. We suggest that only a lower VSL should be defined as: "The RC, TOP, or BA failed to test the backup telecommunication facilities for a single calendar quarter." The Lower VSL for R2 is not possible. The act of notifying all impacted entities of the failure of their primary telecommunication system requires the use of the alternative telecommunications systems which is a form of verifying that the alternative telecommunications facilities are functional. The

Organization	Question 3:	Question 3 Comments:
		drafting team should consider applying the numeric performance category of the VSL Development Guideline Criteria for R2. (i) R1: Suggest to revise the conditions for all levels to read "...failed to operationally test the alternative communication facilities within the last....." (ii) R2: The second part under Severe is not needed since failing to notify any impacted entities would imply no communication to the affected entities anyway. If verification of the functionality of the alternate means of telecommunications is also critical even without communicating to the affect entities, then the second condition should be an "OR". (iii) R3: Failure to having concurrence to use a language other than English for communications between and among operating personnel responsible for real-time operations by itself does not constitute a violate of any requirements; it is the absence of such a concurrence AND having used a language other than English that would constitute a violation. Suggest to revise this condition.
Response: The RC SDT thanks you for your comment. R1: We have revised the requirement to have a provision to test as well as a provision to develop a mitigation plan when a test fails. The VSLs reflect the revised requirement. R2: (i) We have revised the requirement to have a provision to test as well as a provision to develop a mitigation plan when a test fails. The VSLs reflect the revised requirement. The second part of the VSL was removed. The VSL was revised to: The responsible entity failed to provide evidence of concurrence to use a language other than English for communications between and among operating personnel responsible for the real-time generation control or operation of the interconnected Bulk Electric System when a language other than English was used.		
SERC OC Standards Review Group	Yes and No	3.1 - The expanded list of entities recommended in comment 1.3 and 1.4 need to be included the VSLs

Organization	Question 3:	Question 3 Comments:
Response: The RC SDT thanks you for your comment. Please see response to comment 1.3 and 1.4.		
Buckeye Power, Inc.	Yes and No	abstain
Southern Company Transmission	Yes	3.1 - The expanded list of entities recommended in comment 1.3 and 1.4 need to be included the VSLs 3.2 - The Severe VSL for R2 should be corrected. Add the word 'to' as follows: "...and failed to verify the..."
Response: The RC SDT thanks you for your comment. 3.1 - Please see response to comment 1.3 and 1.4. 3.2 - The VSLs were revised based on revisions to the requirement.		
American Transmission Company	Yes	Based upon revisions to Question 1.
Response: The RC SDT thanks you for your comment. The VSLs were revised to reflect changes to the requirements.		
Bonneville Power Administration	Yes	
AEP	Yes	
Manitoba Hydro	Yes	
NPCC	Yes	
Ameren	Yes	
Reliability	Yes	

Organization	Question 3:	Question 3 Comments:
Coordinator Comment Working Group		
Northern California Power Agency	Yes	
Entergy Services, Inc	Yes	
Salt River Project	Yes	
US Bureau of Reclamation	Yes	

4. Do you agree with the revisions to the Requirements in COM-002-3 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Summary Consideration: The work of the IROL SDT resulted in the retirement of R1 from the standard. The RC SDT received comments recommending expanding the applicability of the standard and separating Requirement R2 (now R1) into two distinct requirements. The applicability was expanded to include Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity. The requirements were revised to:

- R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a verbal directive associated with real-time operational emergency conditions shall ~~issue directives in a clear, concise, and definitive manner; shall ensure~~ require the recipient of the verbal directive to repeat the intent of the directive back ~~information back correctly~~; and shall acknowledge the response as correct or repeat the original statement to resolve any misunderstandings.
- R2. Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a directive issued per Requirement R1 shall repeat the intent of the directive back to the issuer of the directive

The purpose statement was also revised to reflect the revisions to the standard:

~~To ensure Balancing Authorities, Transmission Operators, and Generator Operators have adequate communications and that these communications capabilities are staffed and available for addressing a real time emergency condition.~~ To ensure emergency communications ~~by~~ between operating personnel are effective.

Organization	Question 4:	Question 4 Comments:
Southern Company Transmission	No	4.1 - We agree with the recommendation to retire COM-002-3 when COM-003-1 is approved; however we suggest the following changes should be made for the interim applicability of COM-002-3: 4.2 - The Purpose statement should be revised to re-align with the revisions in the Standard. 4.3 - The applicability of COM-002-3 should be consistent with the applicability of IRO-001-2. 4.4 - The words "clear, concise, and definitive manner" in R1 are ambiguous and impossible to

Organization	Question 4:	Question 4 Comments:
		measure. We suggest they be replaced with "the RC shall direct". 4.5 - An additional requirement, R2, should be added that requires the Operator to repeat the information back correctly (i.e., separate this requirement from R1). 4.6 - Grammatical changes are suggested. The revised requirement reads as follows: " To ensure Balancing Authorities, Transmission Operators, and Generator Operators have adequate communications; to ensure that these communication capabilities are staffed and available for addressing a real-time emergency condition; and to ensure effective communications by operating personnel." 4.7 - At the Data Retention section, the reference to 'Requirement 3, Measure 3' should be consistent with the modified standard. The revised standard only has one requirement. 4.8 - The use of calendar days in the Data Retention section is inconsistent with related standards where 'months' are used.
Response: The RC SDT thanks you for your comments. 4.2 - We have revised the purpose statement to: To ensure emergency communications between operating personnel are effective. 4.3 – We have changed the applicability of COM-002 to match that of IRO-001. 4.4 and 4.5 - We have separated the requirement into two requirements to ensure that the requirements are measurable and distinct. We concur with your comments and have revised the requirements to: R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a verbal directive associated with real-time operational emergency conditions shall require the recipient of the verbal directive to repeat the intent of the directive back; and shall acknowledge the response as correct or repeat the original statement to resolve any misunderstandings. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i> R2. Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a verbal directive issued per Requirement R1, shall repeat the intent of the directive back to the issuer of the directive. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i> 4.6 - We have revised the purpose statement to: To ensure emergency communications between operating personnel are effective.		

Organization	Question 4:	Question 4 Comments:
4.7 and 4.8 – We have updated the data retention section with the latest compliance template information.		
ISO New England Inc.	No	ISO New England believes it is inefficient to have a (temporary) Standard with only one Requirement and recommend including this Requirement in COM-001, with COM-001 renamed to "Communications."
Response: The RC SDT thanks you for your comments. Based on other stakeholder feedback, we have added applicable entities and another requirement for those entities. This standard will be retired upon adoption of COM-003-1.		
US Bureau of Reclamation	No	Purpose: Since Generator Operators were deleted from the applicability; the Purpose should be revised to reflect that and include Reliability Coordinators. The language is somewhat redundant, recommend it be simplified to "To ensure Balancing Authorities, Reliability Coordinators, and Transmission Operators communicate in an effective manner."
Response The RC SDT thanks you for your comments. Several entities were added to the applicability and the purpose statement was revised to: To ensure emergency communications between operating personnel are effective.		
FirstEnergy	No	Purpose - The GOP is still shown in the purpose statement although it was removed from the applicability. Also, it may be better if the purpose was written more generally as "To ensure adequate communications capabilities for addressing real-time emergency conditions and ensure communications by operating personnel are effective to maintain BES reliability". Applicability - In the SDT's document "Scope of Work Assigned to the Reliability Coordination Standard Drafting Team", the team decided to not include the FERC directive to include the DP in the applicability with the following reasoning "The proposed revisions do not include the DP entity because they are not applicable." We would like clarification on this. R1 - It does not appear that the implementation plan addresses the FERC direction to consider comments from Santa Clara, FirstEnergy, and Six Cities per 693 par. 539 regarding staffing requirements. Santa Clara asks that these requirements apply "only to operating staff available on site at all times or includes repair personnel who are available only on an on-call basis". FirstEnergy asks that the "term [staffed] should not require a physical presence at all facilities at all times because some units, such as peaking units, are not staffed 24 hours a day". FirstEnergy also suggest "because nuclear units are already subject to communications requirements in their operating

Organization	Question 4:	Question 4 Comments:
		procedures, their compliance with NRC operating procedures should be deemed in compliance with the NERC Reliability Standards". Six Cities "states that, to avoid unnecessary staffing burdens, particularly for smaller entities, the Commission should direct NERC to clarify COM-002-2 by providing that identification of an emergency contact person on call to respond to real-time emergency conditions will constitute adequate compliance". R1 - Just as an FYI, with regard to the proposed replacement requirement statement in the implementation plan: "TOP-005-1, R1 and R3 require adequate telecommunications for BAs and TOPs to provide each other with operating data as well as providing data to the RC", per recently stakeholder approved ballots, R1 of TOP-005-1 has been retired and now covered in new standard IRO-010-1.R1.1 - The existing requirement includes "through predetermined communication paths of any condition that could threaten the reliability of its area or when firm load shedding is anticipated". The proposed replacement requirements do not address the need for "predetermined communication paths".
Response: The RC SDT thanks you for your comments. Purpose: Several entities were added to the applicability and the purpose statement was revised to: To ensure emergency communications between operating personnel are effective. Applicability: The applicability was expanded to include Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity. R1: The RC SDT considered these comments when developing the proposed COM-001-2 specification requirements. We have revised the requirement to indicate that directives being issued relate to real-time operating emergencies. We do not feel that this would place an undue burden on any entity with respect to staffing as the requirement makes no mention of staffing. R1 FYI: Thank you for the FYI.		
Duke Energy	No	Requirement R1 - As defined by Merriam Webster, the use of the word "ensure" implies virtual guarantee <the government has ensured the safety of the refugees>; while the use of the alternative word "assure" implies the removal of doubt and suspense from a person's mind. We suggest that "assure" is more appropriate than "ensure" in this context in the standards. The use of words like "clear, concise, and definitive manner" is subject to interpretation. This same language is used in the VSLs. Depending on the interpretation of this phrase, an entity could be found to be in a "Severe" violation level. The issuer of the directive should not be subject to non-compliance if the recipient of

Organization	Question 4:	Question 4 Comments:
		the directive refuses to repeat back. Need to add a requirement, measure, and VSL that clarifies that the recipient of a directive is obliged to perform their portion of a repeat-back. The inclusion of TSPs, LSEs, and PSEs in IRO-001-2 indicates the need to include these functions in the COM-002-3 requirement concerning repeat-backs. What is a "directive"? The regional compliance processes are having difficulty in auditing this existing standard due to lack of clarity of what constitutes a directive. "Directive" should be defined as being associated with real-time operational emergency conditions, and not ordinary day-to-day communications. Otherwise a VRF of High is not warranted.
Response: The RC SDT thanks you for your comments. We concur with your comments and have revised the requirements to: R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a verbal directive associated with real-time operational emergency conditions shall require the recipient of the verbal directive to repeat the intent of the directive back; and shall acknowledge the response as correct or repeat the original statement to resolve any misunderstandings. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i> R2. Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a verbal directive issued per Requirement R1, shall repeat the intent of the directive back to the issuer of the directive. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i>		
Northern California Power Agency	Yes and No	Remove Generator Operator from the Purpose Statement. The re-written standard no longer applies to GOP
Response: The RC SDT thanks you for your comments. The applicability was expanded to include Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity. We have revised the purpose statement to: "To ensure emergency communications between operating personnel are effective[ML1]."		
SERC OC Standards Review Group	Yes and No	4.1 - We agree with the recommendation to retire COM-002-3 when COM-003-1 is approved; however we suggest the following changes should be made for the interim applicability of COM-002-3: 4.2 - The Purpose statement should be revised to re-align with the revisions in the Standard. 4.3 - The applicability of COM-002-3 should be consistent with the applicability of IRO-001-2. 4.4 - The words "clear, concise, and definitive manner" in R1 are ambiguous and impossible to

Organization	Question 4:	Question 4 Comments:
		measure. We suggest they be replaced with "the RC shall direct". 4.5 - An additional requirement, R2, should be added that requires the Operator to repeat the information back correctly (i.e., separate this requirement from R1).
Response: The RC SDT thanks you for your comments. 4.2 - We have revised the purpose statement to: To ensure emergency communications between operating personnel are effective. 4.3 – We have changed the applicability of COM-002 to match that of IRO-001. 4.4 and 4.5 - We have separated the requirement into two requirements to ensure that the requirements are measurable and distinct. We concur with your comments and have revised the requirements to: R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a verbal directive associated with real-time operational emergency conditions shall require the recipient of the verbal directive to repeat the intent of the directive back; and shall acknowledge the response as correct or repeat the original statement to resolve any misunderstandings. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i> R2. Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a verbal directive issued per Requirement R1, shall repeat the intent of the directive back to the issuer of the directive. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i>		
Buckeye Power, Inc.	Yes and No	Abstain
PJM Interconnection	Yes	We note that this requirement really is "3-part communication" and will be moved to the new communications standard, COM-003-1.
Response: The RC SDT thanks you for your comments. As envisioned, the 3-part communication requirements in this standard are temporary – they will be retired when COM-003-1 becomes effective.		
CU of Springfield	Yes	CU supports moving R1 to COM-003 and retiring COM-002.
Response: The RC SDT thanks you for your comment. As envisioned, the 3-part communication requirements in this standard are temporary – they will be retired when COM-003-1 becomes effective.		

Organization	Question 4:	Question 4 Comments:
PPL Supply Group	Yes	PPL agrees with the changes to COM-002-3. However, for clarity PPL suggests that Generator Operator should be removed from the purpose statement of this standard.
Response: The RC SDT thanks you for your comments. The applicability was expanded to include Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity. We have revised the purpose statement to: To ensure emergency communications between operating personnel are effective.		
Manitoba Hydro	Yes	
Bonneville Power Administration	Yes	
AEP	Yes	
American Transmission Company	Yes	
ISO/RTO Council Standards Review Subcommittee	Yes	
NPCC	Yes	
Ameren	Yes	
Independent Electricity System Operator - Ontario	Yes	

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 4:	Question 4 Comments:
Reliability Coordinator Comment Working Group	Yes	
MRO NERC SDStandards Review Subcommittee	Yes	
Entergy Services, Inc	Yes	
Salt River Project	Yes	

5. Do you agree with the revisions to the Measures in COM-002-3 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Summary Consideration: The RC SDT received comments recommending expanding the applicability of the standard and separating Requirement R1 into two distinct requirements. The applicability was expanded to include Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity. The requirements and measures were revised to:

R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a verbal directive associated with real-time operational emergency conditions shall ~~issue directives in a clear, concise, and definitive manner; shall ensure~~ require the recipient of the verbal directive to repeat the information intent of the directive back correctly; and shall acknowledge the response as correct or repeat the original statement to resolve any misunderstandings. *[Violation Risk Factor: High][Time Horizon: Real-Time]*

R2. Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a verbal directive issued per Requirement R1, shall repeat the intent of the directive back to the issuer of the directive. [Violation Risk Factor: High][Time Horizon: Real-Time]

M1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a verbal directive associated with real-time operational emergency conditions shall have evidence such as voice recordings or transcripts of voice recordings to show that it ~~required issued directives in a clear, concise, and definitive manner; ensured~~ the recipient of the verbal directive to repeated the information intent of the directive back correctly; and acknowledged the response as correct or repeated the original statement to resolve any misunderstandings.

M2. Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a verbal directive issued per Requirement R1 shall have evidence such as voice recordings or transcripts of voice recordings to show that it repeated the intent of the directive back to the issuer of the directive.

Organization	Question 5:	Question 5 Comments:
Southern Company	No	5.1 - The measures need to be revised to match the new requirements.

Organization	Question 5:	Question 5 Comments:
Transmission		
Response: The RC SDT thanks you for your comment. The measures have been revised to reflect revisions to the requirements.		
SERC OC Standards Review Group	No	5.1 - The measures need to be revised to match the new requirements.
Response: The RC SDT thanks you for your comment. The measures have been revised to reflect revisions to the requirements.		
ISO New England Inc.	No	See response to Q#4
Response: The RC SDT thanks you for your comment. Please see response to Q4.		
FirstEnergy	No	The measures should be modified if our comments in question 4 result in changes to the proposed requirements.
Response: The RC SDT thanks you for your comment. The measures have been revised to reflect revisions to the requirements.		
Duke Energy	No	The use of words like “clear, concise, and definitive manner” is subject to interpretation. The issuer of the directive should not be subject to non-compliance if the recipient of the directive refuses to repeat back. Need to add a requirement, measure, and VSL that clarifies that the recipient of a directive is obliged to perform their portion of a repeat-back.
Response: The RC SDT thanks you for your comments. We concur with you comments – the phrase, “clear, concise, and definitive” was removed from the standard and the requirement was subdivided so that there is a separate requirement that obligates the recipients to repeat the intent of the directive. Measures and VSLs were revised to reflect the modifications to the requirements. The new measures are: Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a verbal directive associated with real-time operational emergency conditions shall have evidence such as voice recordings or transcripts of voice recordings to show that it required the recipient of the verbal directive to repeat the intent of the directive back; and acknowledged the response as correct or repeated the original statement to resolve any misunderstandings. Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving		

Organization	Question 5:	Question 5 Comments:
Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a verbal directive issued per Requirement R1 shall have evidence such as voice recordings or transcripts of voice recordings		
American Transmission Company	Yes and No	As long as the measurement of compliance does not include proving the negative, that no directives were issued.
Response: The RC SDT thanks you for your comment.		
Buckeye Power, Inc.	Yes and No	Abstain
CU of Springfield	Yes	CU supports moving M1 to COM-003 and retiring COM-002.
Response: The RC SDT thanks you for your comment.		
Manitoba Hydro	Yes	
NPCC	Yes	
Ameren	Yes	
Independent Electricity System Operator - Ontario	Yes	
Reliability Coordinator Comment Working Group	Yes	
Northern California Power Agency	Yes	

Organization	Question 5:	Question 5 Comments:
MRO NERC SDStandards Review Subcommittee	Yes	
Salt River Project	Yes	
US Bureau of Reclamation	Yes	
PJM Interconnection	Yes	
Bonneville Power Administration	Yes	
AEP	Yes	
ISO/RTO Council Standards Review Subcommittee	Yes	

6. Do you agree with the Violation Severity Levels proposed in COM-002-3 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Summary Consideration: The RC SDT received comments recommending revisions to the VSLs based on revisions to the requirements and measures. The RC SDT did this and created new VSLs for new Requirement R2. The revised VSLs are:

Requirement	Lower	Moderate	High	Severe
R1	N/A	The responsible entity ~~provided a clear~~ issued a verbal directive ~~in a clear, concise and definitive manner~~ associated with real-time operating emergency conditions and required the recipient to repeat the ~~directive~~ intent of the directive, but did not acknowledge the recipient was correct in the repeated directive <u>OR failed to repeat the intent of the original statement to resolve any misunderstandings.</u>	The responsible entity ~~provided a clear~~ issued a verbal directive associated with real-time operating emergency conditions ~~in a clear, concise and definitive manner~~ , but did not require the recipient to repeat the intent of the directive.	<u>The responsible entity issued a verbal directive associated with real-time operating emergency conditions and required the recipient to repeat the intent of the directive, but did not acknowledge the recipient was correct in the repeated directive AND failed to repeat the intent of the original statement to resolve any misunderstandings..</u> ~~The responsible entity failed to provide a clear directive in a clear, concise and definitive manner when required.~~
<u>R2</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>The responsible entity that is the recipient of a verbal directive issued per Requirement R1 failed to repeat the intent of the directive back to the issuer of the directive.</u>

Organization	Question 6:	Question 6 Comments:
Southern Company Transmission	No	6.1 - The severity levels need to be revised to match the new requirements.
Response: The RC SDT thanks you for your comment. The VSLs were revised based on revisions to the requirements.		
SERC OC Standards Review Group	No	6.1 - The severity levels need to be revised to match the new requirements
Response: The RC SDT thanks you for your comment. The VSLs were revised based on revisions to the requirements.		
PJM Interconnection	No	The word "clear" is redundantly used in the High and Severe columns. Recommend that "Moderate" should read: "The Responsible Entity provided a directive in a clear, concise and definitive manner, but did not require the recipient to repeat the directive back to the originator." Recommend that "High" should read: "The Responsible Entity failed to issue a directive in a clear, concise and definitive manner while ensuring the recipient of the directive repeated the information back correctly with acknowledgment by the originator that the response was correct." Recommend that "Severe" should read: "The Responsible Entity failed on more than one occasion to issue a directive in a clear, concise and definitive manner while ensuring the recipient of the directive repeated the information back correctly with acknowledgment by the originator that the response was correct."
Response: The RC SDT thanks you for your comment. We have removed the language "clear, concise and definitive manner" from the requirements, measures and VSLs. Based on the requirements, the VSLs were revised as shown above in the Summary Consideration section. We do not agree with your suggestion on the Severe VSL regarding the number of occasions. The requirement is a stand alone which requires the entity to perform it each time.		
FirstEnergy	No	The VSL should be modified if our comments in question 4 result in changes to the proposed requirements.

Organization	Question 6:	Question 6 Comments:
Response: The RC SDT thanks you for your comment. The VSLs were revised based on revisions to the requirements.		
Duke Energy	No	The use of words like “clear, concise, and definitive manner” is subject to interpretation. The issuer of the directive should not be subject to non-compliance if the recipient of the directive refuses to repeat back. Need to add a requirement, measure, and VSL that clarifies that the recipient of a directive is obliged to perform their portion of a repeat-back.
Response: The RC SDT thanks you for your comment. We concur with your comments. The words “clear, concise, and definitive manner” have been removed from the requirement, measure and VSLs. A separate requirement has been added per your suggestion.		
American Transmission Company	No	R1-High VSL-If the directive was followed and there was no threat to the BES, then a lack of repetition of the directive does not constitute a "high" VSL. Suggest that this be a low or moderate VSL.
Response: The RC SDT thanks you for your comment. We have revised the requirements, measures and VSLs to reflect that these directives are those that are issued for real-time operating emergency conditions.		
Buckeye Power, Inc.	Yes and No	abstain
Manitoba Hydro	Yes	
NPCC	Yes	
CU of Springfield	Yes	
Ameren	Yes	
Independent Electricity System Operator - Ontario	Yes	
Reliability Coordinator	Yes	

Organization	Question 6:	Question 6 Comments:
Comment Working Group		
Northern California Power Agency	Yes	
MRO NERC SDStandards Review Subcommittee	Yes	
Entergy Services, Inc	Yes	
Salt River Project	Yes	
US Bureau of Reclamation	Yes	
Bonneville Power Administration	Yes	
AEP	Yes	
ISO/RTO Council Standards Review Subcommittee	Yes	

7. Do you agree with the revisions to the Requirements in IRO-001-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Summary Consideration: The RC SDT has received a notable number of comments suggesting edits to the proposed requirements and measures for the draft standard, particularly regarding the phrase “without intentional delay.” The comments do not oppose the objective of the phrase, but often point out the issues of measuring intent and measuring time delay.

To maintain the intent while improving the measurability of the requirement, the SDT proposes to modify the standard as follows: delete the phrase ‘without intentional delay’ and leave the obligation of response and timing an unstated requirement of R1 “The RC shall act or direct actions...”

R2 was modified as shown below – note that the phrase, “without intentional delay” was removed from all requirements, measures and VSLs:

R2. Each Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers, and Purchasing-Selling Entities shall ~~act without intentional delay to~~ comply with its Reliability Coordinator's directives unless such actions would violate safety, equipment, or regulatory or statutory requirements.

An RC that requires a given action in a given time will be expected to inform the impacted entities of those actions and time requirements. This revision would obviate the need for providing a measure for “intent”, while still maintaining the reliability intent of the original requirement.

The SDT proposes to re-post the standard to obtain stakeholder feedback on the suggested revisions

Organization	Question 7:	Question 7 Comments:
Manitoba Hydro	No	I do not agree with the way IRO-001-2 R1 is written. In the present form the requirement may infer that directing action is not an action. It may also infer that the RC is only required to do "act "or "direct actions" but not both. The way it is written also leads to problems with the VSLs. Perhaps R1 can be edited along the lines of: R1. The Reliability Coordinator shall act to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts. When required, the actions initiated by the Reliability Coordinator will include, but is not limited to, directing the actions to be taken by Transmission

Organization	Question 7:	Question 7 Comments:
		Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area. I agree with the other Requirements in IRO-001-2 with the exception of the "High" Violation Risk Factor assigned to IRO-001-2 requirement R5. This should be a "Medium" VRF at the most. If the emergency has been mitigated, and the entities are not aware, they will still be operating to restrictions, which means the grid is operating well within limits. Not notifying the entities that the problem has been mitigated may have some financial implications but it should not place the grid at risk.
Response: The RC SDT thanks you for your comment. The recommended language change is what the requirement means. The SDT did not modify the original language as they say the same thing. The RC SDT agrees and modified the VRF for R5 to medium.		
Independent Electricity System Operator - Ontario	No	R2: the phrase "act without intentional delay" is not necessary since the urgency of taking any actions as directed by the RC's are generally understood to be conveyed in the RC's directives. R3: Given R2 requires the responsible entities to comply with the RC directives, the part that says "immediately confirm the ability to comply with the directive or" is not needed. R3 should simply require the responsible entities to notify the RC upon recognition of the inability to perform the directive. The VRF for R5 should not be High. Failure to notify others when potential threats to system reliability have been mitigated does not constitute a high risk to the interconnected system. We suggest it be reduced to a Medium (i.e., that it affects control of the BES).
Response: The RC SDT thanks you for your comment. The RC SDT agrees to remove this phrase. The majority of commenters found this to be unnecessary. Agreed, the RC SDT modified R3 to remove "immediately confirm the ability to comply with the directive or" The RC SDT agrees and modified the VRF for R5 to medium.		
MRO NERC SDTandards Review	No	New requirement R2 should omit act without intentional delay. The desired outcome is for the responsible entity to comply with the RC directive. Adding act without intentional delay only confuses

Organization	Question 7:	Question 7 Comments:
Subcommittee		the situation and adds questions. What is an intentional delay? The word act implies that the requirement is met simply if the responsible entity attempted to meet the directive but was unable to do so. That is already considered in with the clause that begins "unless such actions would violate ...". Thus, the word act is not necessary. The word immediately should be removed from the new R3. This attempts to time frame the response of the responsible entity and remove the judgment from the compliance auditor. We agree with the concept of doing this but in reality it only confuses the issue and the compliance auditor will likely apply his judgment regarding what immediate is anyway. Additionally, the requirement attempts to separate the act of confirming that the responsible entity can take the action from notifying the RC that the entity can't take the action. This is not logical. What RC is going to request a responsible entity to take action that would violate safety, equipment, statutory, or regulatory requirements? The RC should already be aware of those requirements and likely won't direct actions that violate them. Thus, the likely scenario is that the responsible entity will attempt to take action and discover that equipment is not function properly and thus notify the RC. We suggest striking the "shall immediately confirm the ability to comply with the directive or" from the requirement. This part of the requirement is not needed because the responsible entity is already obligated to follow the RCs directive (see order 693.) Thus, the assumption is that the order will be followed unless it can't be followed because it will violated safety, equipment, statutory, or regulatory requirements. Requirements R4 and R5 are unnecessary. New R1 requires the RC to direct actions to be taken by the TOP, BA, GOP, TSP, LSE, DP and PSE to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts. The RC can't direct these actions without notifying all impacted TOPs and BAs. They would also have to notify them when actions are no longer necessary.
Response: The RC SDT thanks you for your comment. The RC SDT agrees to remove this phrase. The majority of commenters found this to be unnecessary. The RC SDT agrees. We have modified R3 to remove "immediately" and "confirm the ability to comply with the directive or". The RC SDT does not agree with regard to R4 and R5, as some impacted entities may not need to take action or be issued directives but would benefit from the situational awareness associated with knowing the status of operating issues.		
Southern Company	No	7.1 - Applicability 4.2 - Transmission Operator should be plural.

Organization	Question 7:	Question 7 Comments:
Transmission		7.2 - The revised definition of "Adverse Reliability Impacts" (R1) should be included at the top of Standard IRO-001-2, per Glossary of Terms Used in Standards: All defined terms used in reliability standards shall be defined in the glossary. Definitions may be approved as part of a standard action or as a separate action. All definitions must be approved in accordance with the standards process. 7.3 - In R2 insert the word "its" before Reliability Coordinator. 7.4 - In R3, replace "immediately" with "without intentional delay", replace "ability" with "intent", replace "or" with "and" and replace "the" with "its" before Reliability Coordinator.
Response: The RC SDT thanks you for your comment. 7.1 agreed, The RC SDT modified the applicability section. 7.2 The revision to the definition will be placed in the correct location on the next posting and will be balloted along with the standard revisions. 7.3 The RC SDT agrees and modified R2, the expectation is the entity's RC will issue the directives, not a different RC. 7.4 R3 has been modified and changed "the" with "its" before RC. Note that based on comments from other stakeholders, the phrase, "immediately confirm the ability to comply" has been omitted from the revised requirement.		
ISO New England Inc.	Yes and No	We believe the word "threat" should be replaced with "events" in Requirements 4 and 5.
Response: The RC SDT thanks you for your comment. The RC SDT chose the term "threat with Adverse Reliability Impacts" to convey the concept that action may be taken to prevent an event when an RC identified a potential threat. This will help better ensure reliability by mitigating threats rather than waiting for an event to occur.		
Entergy Services, Inc	No	PER-003 R1 does not specifically address delegated functions; therefore, this requirement is not redundant with IRO-001 R6 without changes to PER-003 to specifically deal with employees performing delegated functions.
Response: The RC SDT thanks you for your comment. The RC SDT references the NERC ROP in the Implementation plan which address your delegation concern. - Per NERC ROP appendix 5, Organization Registration and Certification Manual v3.3 Sec IV and V: The applicant retains the responsibility for all delegated tasks. The applicant shall identify to the review team all tasks that have been delegated		

Organization	Question 7:	Question 7 Comments:
to another entity prior to the on-site visit. The review team shall conduct at least one on-site visit to the applicant's facilities. This may also apply to the facilities of entities responsible for delegated tasks. During the visit, the review team will: a. Review with the applicant the data collected through the questionnaires; b. Interview the operations and management personnel; c. Inspect the facilities and equipment; d. Request a demonstration of all tools identified in the certification standard; e. Review all necessary documents and data including all agreements, processes, and procedures identified in the certification standard; f. Review certification documents and projected system operator work schedules; and g. Review any additional documentation that is needed to support the completed questionnaire or inquiries arising during the site-visit.		
MEAG Power	No	Directives that are mandatory under R2 of IRO-001-2 should have boundaries consistent with the proper role of an RC. For example, if an RC directs an LSE with a 15% planning reserve margin to execute purchase power agreements until its reserve margin is at least 20% and the LSE refuses, then the LSE may have violated this standard. Other examples of improper RC directives are directives to increase coal inventories, buy firm fuel transportation rights, reconductor transmission lines, purchase spare equipment, etc. Granted entities may be able to conjure up a regulatory or statutory basis for refusing many improper RC directives but in some instances there may be no permissible grounds to refuse. The appropriate solution is to modify the standard to ensure that improper directives are never mandatory in the first place. Specifically, NERC is urged to state that RC directives are mandatory only if they pertain to specific categories such as: switching orders to reconfigure the BES, orders to postpone scheduled outages of BES equipment, orders to change generator output, orders to curtail transactions or orders to curtail load.
Response: The RC SDT thanks you for your comment. It is envisioned by the RC SDT that such RC directives consist of real-time and same-day operating actions that prevent or mitigate events that may or will cause Adverse Reliability impacts.		
FirstEnergy	No	R3 - should be a sub requirement of R2. These two requirements are sequential in nature and should be measured at the same time. The VRFs and Time Horizons are the same for both requirements lending to their combination into a requirement with a sub requirement. In the VSL for R2, an entity is being penalized with a high severity level for not completely following an RC directive even though it violated safety, equipment, statutory, or regulatory requirements. Measuring R2 and R3 at the same

Organization	Question 7:	Question 7 Comments:
		time allows for the process to complete prior to the measurement taking place. R3 - The "or" between "Distribution Provider" and "Purchasing-Selling Entity" should be replaced with an "and". R4 - Should be revised by adding the phrase "of the expected or actual threat" to the end of the requirement to add clarity. Existing R7 requirement - This requirement is proposed for retirement because it is redundant with IRO-014-1 R1. However, it is not clear how the existing requirement to "have clear, comprehensive coordination agreements with adjacent RCs to ensure that SOL or IROL violation mitigation requiring actions in adjacent RC areas are coordinated" is covered in IRO-014-1 R1. IRO-014-1 R1 requires agreements for coordination of actions between RCs to support Interconnection reliability, but it does not specifically require "clear" and "comprehensive" agreements to mitigate SOL or IROL violations. IRO-014-1 only vaguely covers the existing requirement R7 of IRO-001-1.
Response: The RC SDT thanks you for your comment. The intent of the drafting team is to have distinct requirements that are measured independently. Having one as a subrequirement will not allow that to occur. The RC SDT revised the "or" to an "and". R4, The recommended language change is what the requirement means. The RC SDT did not modify the original language as they say the same thing. R7, The industry comments do not support being more specific in IRO-014-1 R1 in order to retire IRO-001-1 R7.		
SERC OC Standards Review Group	Yes and No	7.1 - Applicability 4.2 - Transmission Operator should be plural. 7.2 - The revised definition of "Adverse Reliability Impacts" (R1) should be included at the top of Standard IRO-001-2, per Glossary of Terms Used in Standards: All defined terms used in reliability standards shall be defined in the glossary. Definitions may be approved as part of a standard action or as a separate action. All definitions must be approved in accordance with the standards process. 7.3 - In R2 insert the word "its" before Reliability Coordinator 7.4 - In R3, replace "immediately" with "without intentional delay", replace "ability" with "intent", replace "or" with "and" and replace "the" with "its" before Reliability Coordinator.

Organization	Question 7:	Question 7 Comments:
Response: The RC SDT thanks you for your comment. 7.1 The RC SDT agrees and will modify the applicability section. 7.2 The revision to the definition will be placed in the correct location on the next posting and will be balloted along with the standard revisions. 7.3 Agreed, The RC SDT modified R2, the expectation is the entities RC will issue the directives, not a different RC. 7.4 R3 has been modified and changed “the” with “its” before RC. Note that based on comments from other stakeholders, the phrase, “immediately confirm the ability to comply” has been omitted from the revised requirement.		
US Bureau of Reclamation	No	R4. and R5. Both of these Requirements use the phrase “without intentional delay” to describe the urgency of the notification to impacted entities. In both requirements we recommend the language be changed from “notify, without intentional delay” to “immediately notify”.
Response: The RC SDT thanks you for your comment. We have removed the phrase from the requirements.		
American Transmission Company	No	R2 refers to “intentional delay”. The determination of intent should be left to the VSL portion of the standard, not the requirement portion.
Response: The RC SDT thanks you for your comment. The RC SDT has removed “without intentional delay” from the proposed requirement.		
Consolidated Edison Co. of NY, Inc.	Yes and No	Wording in question: R.2/M.2 Each Load-Serving Entity, or Purchasing-Selling Entity shall have evidence that it acted without intentional delay to comply with the Reliability Coordinator's directives.R.3/M.3 Each — Load-Serving Entity, or Purchasing-Selling Entity shall have evidence that it confirmed its ability to comply with the Reliability Coordinator's directives. [1] Question: Is this wording absolutely necessary? And then, is it sufficient, if needed? Comment: First, we would question whether there is a specific need to include this wording. Is the IRO-001 Reliability Standard sufficient without it? [2] Question: Is this wording unambiguous? Comment: The wording seems somewhat vague and ambiguous. Analysis: The wording appears to establish performance standards (“without intentional delay”, “shall immediately confirm”) and evidentiary requirements (“evidence that it acted” or “evidence that it confirmed”), but without using pre-existing defined terms, establishing new defined

Organization	Question 7:	Question 7 Comments:
		terms, or defining these terms as used in context. [3] Intentional vs. Unintentional, Valid Intentional vs. Inappropriate Intentional? How does one differentiate between intentional and unintentional delay? When is and how much delay is valid or inappropriate? Isn't some intentional delay necessary to ensure that the other parts of the requirement being are met, e.g., — unless such actions would violate safety, equipment, or regulatory or statutory requirements?? Mightn't some acceptable amount of valid intentional delay be necessary to insure that any such RC directive and entity action would not in fact violate these safety, equipment, or regulatory or statutory requirements? [4] What is the timeliness standard? How are the terms “without delay” and “immediately conform” defined? What standard commercial measures would apply, e.g., “reasonably efforts” vs. “best efforts”? Are these terms measured in units of time (seconds or minutes) or in units of performance quality? Does a poorly considered “immediate” reply meet the standard, while a well considered reply, which is intentionally delayed, yet still appropriate, fail to meet this standard? Is that the best outcome? [5] What is this Evidentiary Standard? Is the sought-after “evidence” sufficiently well defined, e.g., phone logs, computer e-mail, control center computer logs, hand-written operator journals, etc.? What form of evidence is necessary and sufficient to demonstrate that the entity met this evidentiary standard? How is failure to meet this uncertain standard measured, judged and penalized?
Response: The RC SDT thanks you for your comment. The RC SDT has removed the phrases “immediately” and “without intentional delay” from the proposed requirements.		
Duke Energy	No	Requirement R1 - What happens if the RC failed to recognize that such an event was happening as opposed to failed to take action? Is this intended to cover both scenarios? The term “Adverse Reliability Impacts” is being changed and is listed in the associated Implementation Plan. The revision development of this definition needs to go thru Due Process. The inclusion of TSPs, LSEs, and PSEs here indicates the need to include these functions in the COM-001-2 requirements concerning the use of English as the approved language. In addition, this also indicates the need for all of these listed entities to be included in COM-002-3 requirements concerning repeat-backs. The RC, TOP, and BA should not be placed in a possible non-complaint state because the counter party refuses a repeat-back AND these requirements are not applicable to the counter party.

Organization	Question 7:	Question 7 Comments:
		Requirement R2 - The language in the Moderate VSL of R2 recognizes another potential reason for delay in execution of a directive. Requirement 2 of the Standards needs to be modified to also recognize this potential. Requirements R2 and R3 - Clarify that entities are obligated to take action and confirm directives only from their Reliability Coordinators, not from any Reliability Coordinator. Requirements R2, R3, R4, R5 - Inconsistent use of "timing" words in the standards — "without intentional delay" and "immediately". Suggest deleting these words due to the difficulty of determining compliance. Requirement R4 - The term "Adverse Reliability Impacts?" is being changed and is listed in the associated Implementation Plan. The revision of this definition needs to go through Due Process. Requirement R5 - The VRF should be "Lower" instead of "High" since the notification is that the threat has been mitigated. Also, the term "Adverse Reliability Impacts" is being changed and is listed in the associated Implementation Plan. The revision of this definition needs to go through Due Process.
Response: The RC SDT thanks you for your comment. R1 Both scenarios are envisioned by the requirement. The proposed revision to the definition will be balloted along with the standard revision. & R4, &R5. The TSPs, LSEs, and PSEs have been added to COM-001 and COM-002 as you suggest. R2, already included in R2 "unless such actions would violate safety, equipment, or regulatory or statutory requirements." R2, R3, The RC SDT modified R2, R3 to identify "its" RC. The phrases "immediately" and "without intentional delay" have been removed from the standard. R4 The revision to the definition will be placed in the correct location on the next posting and will be balloted along with the standard revisions. R5, The RC SDT modified the VRF for R5 to medium based on other industry comments.		
Buckeye Power, Inc.	Yes and No	abstain
ISO/RTO Council Standards Review Subcommittee	Yes and No	New requirement R2 should omit act without intentional delay. Use of intentional implies willful disregard for compliance for the requirement. Intention should not be addressed as part of the compliance with the requirement but rather through the enforcement process once the compliance auditor has identified a violation.

Organization	Question 7:	Question 7 Comments:
		The word immediately should be removed from the new R3. This attempts to time frame the response of the responsible entity and remove the judgment from the compliance auditor. We agree with the concept of doing this but in reality it only confuses the issue and the compliance auditor will likely apply his judgment regarding what immediate is anyway. Additionally, the requirement attempts to separate the act of confirming that the responsible entity can take the action from notifying the RC that the entity can't take the action. This is not logical. What RC is going to request a responsible entity to take action that would violate safety, equipment, statutory, or regulatory requirements? The RC should already be aware of those requirements and likely won't direct actions that violate them. Thus, the likely scenario is that the responsible entity will attempt to take action and discover that equipment is not functioning properly and thus notify the RC. We suggest striking the "shall immediately confirm the ability to comply with the directive or" from the requirement. This part of the requirement is not needed because the responsible entity is already obligated to follow the RCs directive (see order 693.) Thus, the assumption is that the order will be followed unless it can't be followed because it will violate safety, equipment, statutory, or regulatory requirements. Requirements R4 and R5 are unnecessary. New R1 requires the RC to direct actions to be taken by the TOP, BA, GOP, TSP, LSE, DP and PSE to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts. The RC can't direct these actions without notifying all impacted TOPs and BAs. They would also have to notify them when actions are no longer necessary. The VRF for R5 should not be High. Failure to notify others when potential threats to system reliability have been mitigated does not constitute a high risk to the interconnected system. We suggest it be reduced to a Medium (i.e., that it affects control of the BES).
Response: The RC SDT thanks you for your comment. The RC SDT has removed the phrases "immediately" and "without intentional delay" from the proposed requirements. The RC SDT modified R3 based on industry comments and the phrase, "shall immediately confirm the ability to comply with the directive or" was removed from the requirement. The RC SDT does not agree with regard to R4 and R5, as some impacted entities may not need to take action or be issued directives but would benefit from the situational awareness associated with knowing the status of operating issues. The RC SDT modified the VRF for R5 to medium based on industry comments.		
CU Springfield	Yes	CU supports the effort to consolidate redundant requirements in the standards.

Organization	Question 7:	Question 7 Comments:
Response: The RC SDT thanks you for your comment.		
PJM Interconnection	Yes	
Salt River Project	Yes	
NPCC	Yes	
Ameren	Yes	
Reliability Coordinator Comment Working Group	Yes	
Northern California Power Agency	Yes	
Bonneville Power Administration	Yes	
AEP	Yes	

8. Do you agree with the revisions to the Measures in IRO-001-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Summary Consideration:

The RC SDT has received a notable number of comments suggesting edits to the proposed requirements and measures for the draft standard, particularly regarding the phrase “without intentional delay.” The comments do not oppose the objective of the phrase, but often point out the issues of measuring intent and measuring time delay.

To maintain the intent while improving the measurability of the requirement, the SDT proposes to modify the standard as follows: delete the phrase ‘without intentional delay’ and leave the obligation of response and timing an unstated requirement of R1 “The RC shall act or direct actions...”

An RC that requires a given action in a given time will be expected to inform the impacted entities of those actions and time requirements. This revision would obviate the need for providing a measure for “intent”, while still maintaining the reliability intent of the original requirement.

The SDT proposes to re-post the standard to obtain stakeholder feedback on the suggested revisions.

Organization	Question 8:	Question 8 Comments:
CU of Springfield	No	M2 and M3 should include Distribution Provider as one of the entities to comply with directives from the Reliability Coordinator.
Response: The RC SDT thanks you for your comment. The SDT will correct the oversight.		
Independent Electricity System Operator - Ontario	No	Wording in some of the Measures needs to be revised to reflect changes to R2 and/or R3, if our proposed changes are accepted. Also, we suggest the Requirement numbers be referenced in the Measures.
Response: The RC SDT thanks you for your comment. The SDT has revised the R2 and R3 and the associated measures per stakeholder comments. We have also added the associated requirement number to each measure.		

Organization	Question 8:	Question 8 Comments:
Reliability Coordinator Comment Working Group	No	Measures do not align with VSLs (see question 9)
Response: The RC SDT thanks you for your comment. We will ensure that the VSLs and measures align.		
MRO NERC SDTandards Review Subcommittee	No	Some compliance auditors have been taking the need for evidence to the extreme. We have encountered actual situations where if a measure states evidence shall be provided for requirements that are event based, the compliance auditor expected evidence even if no event occurred. For example, some RCs rarely issue directives. As M1 is written, some compliance auditors would require the RC to provide evidence that no reliability directives were issued. This is not possible. We suggest modifying the measurement to: Each Reliability Coordinator shall have evidence that it acted, or issued directives, to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts within its Reliability Coordinator Area if needed. If there were no directives issues (assuming there are no complaints or evidence to the contrary of the need to issue a directive), no evidence is necessary."
Response: The RC SDT thanks you for your comment. The RC SDT agrees with the principle (i.e. should not have to prove a negative to an auditor). This issue should be addressed with NERC or Regional Compliance personnel. The RC SDT has the obligation to draft measures based on the requirements. The measure (M1) for R1 accomplishes that as written.		
Southern Company Transmission	No	8.1 - In M2 and M3, Add Distribution Provider. 8.2 - In M2 add "intentional" between "without" and "delay". 8.3 - In M3 replace "ability" with "intent", replace "or" with "and" and replace "the" with "its" before Reliability Coordinator's and Reliability Coordinator. 8.4 - In M5, change "has" to "had".
Response: The RC SDT thanks you for your comment. We have added DP to the measures M2 and M3. We have removed the phrases "immediately" and "without intentional delay" from the measures. The RC SDT has left the word "inability" in the measure to mirror the requirement. We have made the other revisions that you suggested.		

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 8:	Question 8 Comments:
MEAG Power	No	The M2 measure should not mandate compliance with RC directives that are improper as defined in my response to question 7.
Response: The RC SDT thanks you for your comment. It is envisioned by the RC SDT that RC directives consist of real-time and same-day operating actions that prevent or mitigate events that may or will cause Adverse Reliability impacts.		
SERC OC Standards Review Group	Yes and No	8.1 - In M2 and M3, Add Distribution Provider. 8.2 - In M2 add "intentional" between "without" and "delay". 8.3 - In M3 replace "ability" with "intent", replace "or" with "and" and replace "the" with "its" before Reliability Coordinator's and Reliability Coordinator. 8.4 - In M5, change "has" to "had".
Response: The RC SDT thanks you for your comment. We have added DP to the measures M2 and M3. We have removed the phrases "immediately" and "without intentional delay" from the measures. The RC SDT has left the word "inability" in the measure to mirror the requirement. We have made the other revisions that you suggested.		
US Bureau of Reclamation	No	M4. and M5. In both Measures, recommend "without intentional delay" be changed as described above for R4. and R5.
Response: The RC SDT thanks you for your comment. Based on stakeholder comments, we have removed "without intentional delay" from the requirement and measure.		
Progress Energy Carolinas		
FirstEnergy	No	M2 - The word "intentional" should be added between "without" and "delay".
Response: The RC SDT thanks you for your comment. Based on stakeholder comments, we have removed the phrase "without intentional delay" from the requirement and measure.		
Duke Energy	No	Measures M2, M4 and M5 use the terms "without delay" and "without intentional delay". Suggest deleting these words due to the difficulty of determining compliance. The term "Adverse Reliability

Organization	Question 8:	Question 8 Comments:
		Impacts" is being changed and is listed in the associated Implementation Plan. The revision of this definition needs to go through Due Process.
Response: The RC SDT thanks you for your comment. We have removed the phrases "immediately" and "without intentional delay" from the measures. The proposed definition has been added to the standard and will be posted with the proposed revisions to the standard.		
Consolidated Edison Co. of NY, Inc.	Yes and No	[Comments repeated for Measures] Wording in question:R.2/M.2 Each Load-Serving Entity, or Purchasing-Selling Entity shall have evidence that it acted without intentional delay to comply with the Reliability Coordinator's directives.R.3/M.3 Each Load-Serving Entity, or Purchasing-Selling Entity shall have evidence that it confirmed its ability to comply with the Reliability Coordinator's directives. [1] Question: Is this wording absolutely necessary? And then, is it sufficient, if needed? Comment: First, we would question whether there is a specific need to include this wording. Is the IRO-001 Reliability Standard sufficient without it? [2] Question: Is this wording unambiguous? Comment: The wording seems somewhat vague and ambiguous. Analysis: The wording appears to establish performance standards ("without intentional delay", "shall immediately confirm") and evidentiary requirements ("evidence that it acted" or "evidence that it confirmed"), but without using pre-existing defined terms, establishing new defined terms, or defining these terms as used in context. [3] Intentional vs. Unintentional, Valid Intentional vs. Inappropriate Intentional? How does one differentiate between intentional and unintentional delay? When is and how much delay is valid or inappropriate? Isn't some intentional delay necessary to ensure that the other parts of the requirement being are met, e.g., unless such actions would violate safety, equipment, or regulatory or statutory requirements?? Mightn't some acceptable amount of valid intentional delay be necessary to insure that any such RC directive and entity action would not in fact violate these safety, equipment, or regulatory or statutory requirements? [4] What is the timeliness standard? How are the terms "without delay" and "immediately conform" defined? What standard commercial measures would apply, e.g., "reasonably efforts" vs. "best efforts"? Are these terms measured in units of time (seconds or minutes) or in units of performance quality? Does a poorly considered "immediate" reply meet the standard, while a well considered reply, which is intentionally delayed, yet still appropriate, fail to meet this standard? Is that the best

Organization	Question 8:	Question 8 Comments:
		outcome? [5] What is this Evidentiary Standard? Is the sought-after “evidence” sufficiently well defined, e.g., phone logs, computer e-mail, control center computer logs, hand-written operator journals, etc.? What form of evidence is necessary and sufficient to demonstrate that the entity met this evidentiary standard? How is failure to meet this uncertain standard measured, judged and penalized?
Response: The RC SDT thanks you for your comment. We have removed the phrases “immediately” and “without intentional delay” from the measures.		
Buckeye Power, Inc.	Yes and No	abstain
American Transmission Company	Yes	If some language is changed, we support the revisions. R2 has language in it that should be added to M4 to be consistent. In M2, we propose adding language "unless such actions would violate safety, statutory or regulatory requirements."
Response: The RC SDT thanks you for your comment. The suggested change has been made.		
Manitoba Hydro	Yes	
NPCC	Yes	
Ameren	Yes	
Northern California Power Agency	Yes	
Entergy Services, Inc	Yes	
Salt River Project	Yes	

Organization	Question 8:	Question 8 Comments:
PJM Interconnection	Yes	
Bonneville Power Administration	Yes	
AEP	Yes	

9. Do you agree with the Violation Severity Levels proposed in IRO-001-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Summary Consideration: The VSLs were revised to reflect revisions to the requirements as well as the comments of stakeholders. Several comments suggested that there was no fundamental difference between the RC “acting” or “directing actions”. The RC SDT agreed and removed the High VSL for R1 and revised the Severe VSL accordingly. Other commenters suggested removing the High VSL from R2 as the VSL contradicted the requirement. The RC SDT agreed and removed the VSL. All of the revised VSLs are in the table below.

Requirement	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	N/A	N/A	N/A	The Reliability Coordinator failed to act or direct actions to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts
R2	N/A	N/A	N/A	The responsible entity failed to follow the Reliability Coordinator directive and it would not have violated the safety, equipment, statutory or regulatory requirements. ~~The responsible entity did not follow the Reliability Coordinators directive per requirement 2.~~
R3	N/A	N/A	N/A	The responsible entity failed to inform ~~the~~ its Reliability Coordinator upon recognition of ~~the~~ its inability to perform the directive.

Comments for Set of Reliability Coordination Standards (Project 2006-06)

R4	The Reliability Coordinator ~~who~~ identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area <u>and</u> failed to issue an alert to one, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.	The Reliability Coordinator ~~who~~ identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area <u>and</u> failed to issue an alert to two, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.	The Reliability Coordinator ~~who~~ identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area <u>and</u> failed to issue an alert to three or more, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.	The Reliability Coordinator ~~who~~ identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area <u>and</u> failed to issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.
R5	The Reliability Coordinator <u>issued an alert ~~failed to notify~~ entities of a transmission problem but failed</u> to notify one, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.	The Reliability Coordinator <u>issued an alert to notify entities of a transmission problem but</u> failed to notify two, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.	The Reliability Coordinator <u>issued an alert to notify entities of a transmission problem but</u> failed to notify three or more, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.	The Reliability Coordinator <u>issued an alert to notify entities of a transmission problem but</u> failed to notify all impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.
R6	N/A	N/A	N/A	The Reliability Coordinator failed to provide its ~~Operating~~ <u>operating Personnel</u> ~~personnel~~ with the authority to veto planned outages of its own analysis tools.

Organization	Question 9:	Question 9 Comments:
Manitoba Hydro	No	IRO-001-2 R1 VSLs: You can not split "shall act" and "or direct actions" into separate VSLs. They are one and same. If the RC directs action then they have acted. If the RC failed to direct action or have failed to other wise act then they have failed to act appropriately. Perhaps the VSLs can be drafted along the lines of the following: IRO-001-2 R1 High VSL... The Reliability Coordinator's action was incomplete in that it failed to demonstrate a specific action to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts. IRO-001-2 R1 Severe VSL... The Reliability Coordinator failed to act to prevent or mitigate the magnitude or duration of

Organization	Question 9:	Question 9 Comments:
		Adverse Reliability Impacts. IRO-001-2 R2 VSLs: (1) Entities may be justified in an intentional delay in responding to an RC directive. A justified intentional delay may due be equipment problems, a generators ramp rate or system voltage adjustments prior to large system reconfiguration or large transmission loading changes. (2) An entity cannot be faulted for not following an RC directive because to it would violate safety, equipment, regulatory or statutory requirements. Perhaps the VSLs can be drafted along the lines of the following: Moderate VSL... should be deleted. High VSL... The responsible entity followed the Reliability Coordinators directive but with an unjustified delay. Severe VSL... no edits required. IRO-001-2 R5 VSLs: Perhaps the VSLs can be drafted along the lines of the following to reflect to what degree the RC missed the mark: Lower VSL...The Reliability Coordinator failed to notify <25% of its impacted Transmission Operators and Balancing Authorities when the transmission system problem had been mitigated. Moderate VSL... The Reliability Coordinator failed to notify >24% but <50% of its impacted Transmission Operators and Balancing Authorities when the transmission system problem had been mitigated. High VSL...The Reliability Coordinator failed to notify >49% but <75% of its impacted Transmission Operators and Balancing Authorities when the transmission system problem had been mitigated. Severe VSL... The Reliability Coordinator failed to notify >74% of its impacted Transmission Operators and Balancing Authorities when the transmission system problem had been mitigated.
Response: The RC SDT thanks you for your comment. R1: The RC SDT agrees with you regarding "act" and direct actions. Based on your and other stakeholders' comments, we have removed the High VSL and revised the severe VSL. R2: 1. The SDT removed the "intentional delay" wording. 2. We concur with your statement. The RC SDT believes that the revised requirement is a binary and thus only requires one VSL. We have removed the High VSL and revised the severe VSL to: The responsible entity failed to follow the Reliability Coordinator directive and it would not have violated the safety, equipment, statutory or regulatory requirements. R5: The RC SDT developed a revised set of VSLs that are graded in a way that gives consideration to the number of impacted entities since some entities will have a very small number of entities to contact, and using percentages may not be effective.		
Independent Electricity System	No	R1: There should not be any distinction made between an RC acting and an RC directing others to act. Failure to mitigate adverse reliability impacts a severe violation of the requirement. We therefore suggest to revise the High and Severe levels as: High if the RC did not act or direct actions to prevent an Adverse Reliability Impact; Severe if the RC did not act or

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Organization	Question 9:	Question 9 Comments:
Operator - Ontario		direct actions to mitigate the magnitude or duration of an existing Adverse Reliability Impact. R2: The High VSL seems contradictory to the requirement, which already has provision of not fully complying with the RC directives due to safety, equipment, or regulatory or statutory requirements. R3: We have proposed some wording change to R3, which if adopted, would precipitate a need to revise the VSLs for R3 accordingly. (iv) R4 and R5: The VSLs for these two requirements could be graded by assessing the number and/or timing of notifying the affected entities.
Response: The RC SDT thanks you for your comment. The RC SDT agrees with you regarding "act" and "direct actions". Based on yours and other stakeholders' comments, we have removed the High VSL and revised the severe VSL. We agree and have removed the High VSL. R3. The requirement was revised and the Lower VSL removed. R4 and R5: We concur and have expanded the VSLs to include notification of a varying number of entities.		
Reliability Coordinator Comment Working Group	No	R1 talks about "shall act or direct actions to be taken". High VSL - failure to act. Severe VSL - failure to act and direct. Does "act" mean any action taken short of issuing a directive? Change Severe VSL to failure to act or direct and eliminate the High VSL all together. R2 delay in issuing a directive due to equipment problems should be included in the moderate VSL and the body of the requirement and in the measure. The High VSL should be removed because not following the directive for equipment failure is allowed per R2. R5 - Severe VSL should be changed to moderate VSL since the problem has been mitigated and the system is stable and it does not adversely impact reliability. M3 talks about the ability of reliability entities to meet a directive. What constitutes evidence that confirms you are able to immediately comply with the directive? If the entity agrees to the directive and then is unable to comply due to events outside of their control, such as a CT not starting, do they meet the measure? If the entity, based on the circumstances at the time of the directive, agrees to comply in good faith are they compliant? The Lower VSL should be made N/A because it is not practical for an entity to immediately confirm they are able to meet the directive in all cases.
Response: The RC SDT thanks you for your comment.		

Organization	Question 9:	Question 9 Comments:
R1 - The RC SDT agrees with you regarding "act" and "direct actions" and has removed the High VSL and revised the Severe VSL. R2 - Based on your and other stakeholders' comments, we have removed the High VSL and revised the severe VSL. R5: The VSL relates to how badly an entity missed the requirement, not the threat to reliability (this is the VRF). The requirement is to notify "all". The RC SDT has developed a revised set of graded VSLs for this requirement. M3. The requirement was revised to remove words such as "immediately" and intentional delay: R3. Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity shall inform its Reliability Coordinator upon recognition of its inability to perform a directive. The measure was revised to reflect the new requirement which addresses your concerns. The Lower VSL was revised to N/A.		
MRO NERC SDTandards Review Subcommittee	No	The R1 High and Severe VSL appear to differ only by the inclusion of directing actions in Severe. From a practical perspective, what is the difference between directing actions and acting? We don't believe there is any. The actions are the result of the RC authority whether the RC takes the actions themselves or directs someone else to. We suggest a better alternative for the VSL levels would be for the High level to reflect that the RC did not act or direct actions to prevent an Adverse Reliability Impact and Severe would be that the RC did not act or direct actions to mitigate the magnitude or duration of an existing Adverse Reliability Impact. The moderate VSL for R2 is not practical and too subjective. What constitutes a delay? What if the responsible entity takes five minutes to determine how to carry out the action or if their equipment currently is capable of carrying out the action? Is this a delay? We suggest striking this Moderate VSL. The High VSL does not agree with the requirement. It considers the inability to fully follow an RC directive due to a violation of the safety, equipment, statutory, or regulatory requirements a violation. This is in direct conflict with the requirement. We suggest that the High VSL should be struck. We suggest the Severe VSL should be that the responsible entity failed to follow the RC directive and it would not have violated the safety, equipment, statutory or regulatory requirements. Currently, the Severe category does not allow that the responsible entity may not be able to carry out the directive due to the violation of safety, equipment, statutory, or regulatory requirements. In question 7, we request that the drafting team strike part of requirement 3. The striking of that portion of requirement 3 obviates the lower VSL. In paragraph 27 of the ORDER ON VIOLATION SEVERITY LEVELS PROPOSED BY THE ELECTRIC RELIABILITY ORGANIZATION, the Commission expresses "that, as a general rule, gradated Violation Severity Levels, wherever possible, would be preferable to binary Violation Severity Levels". Given that it is possible to define gradated VSLs for R4 and R5, we suggest that the drafting team should consider applying the numeric performance category of the Violation Severity Levels Development Guidelines Criteria based on the number of impacted TOPs and BAs that were notified.
Response: The RC SDT thanks you for your comment.		

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Organization	Question 9:	Question 9 Comments:
R1: The RC SDT agrees with you regarding "act" and "direct actions". Based on your and other stakeholders' comments, we have removed the High VSL and revised the severe VSL to include failure to "act or direct actions". R2: We have removed the "intentional delay" verbiage and subsequently removed the Moderate VSL. We agree with you regarding the High VSL and have removed it from the table. The Severe VSL was revised per your suggestion. R3: The requirement was revised and the Lower VSL removed. R4 and R5: We concur and have expanded the VSLs to include notification of a varying number of entities.		
Southern Company Transmission	No	9.1 - R1 is a binary requirement and should have only a severe VSL. The RC either acts or he doesn't - If he fails to act, he fails to direct and mitigate the problem by default. 9.2 - R2 VSLs need to be rewritten to recognize that some directives may not be followed because of safety, regulatory or statutory requirements. 9.3 - Remove the Lower severity level in R3 to conform to changes in R3 and M3.
Response: The RC SDT thanks you for your comment. R1: The RC SDT agrees with you regarding "act" and "direct actions". Based on your and other stakeholders' comments, we have removed the High VSL and revised the severe VSL. This is now treated as a binary requirement with just one VSL. R2: We agree and have removed the High VSL and revised the severe VSL to: The responsible entity failed to follow the Reliability Coordinator directive and it would not have violated the safety, equipment, statutory or regulatory requirements. R3: The requirement was revised and the Lower VSL removed.		
Entergy Services, Inc	No	The VSL for R2 does not seem consistent with the language in the requirement. It is not clear why the entity should be subject to a high VSL if the entity did not comply with an RC directive due to safety or regulatory prohibition, and made the RC aware of same.
Response: The RC SDT thanks you for your comment. Please see Summary Consideration above. The High VSL for R2 was removed.		
Salt River Project	No	R1 states the RC must act OR direct. The R1 VSLs attempt to distinguish between act and direct. The requirement allows for either action. I suggest that the High VSL be removed and replaced by an N/A. The Severe VSL should be amended so that the words "act and direct" are replaced by the words "act OR direct" as is consistent with the requirement and the measure. R2: The moderate VSL introduces the phrase "equipment problems" for the first time in the Standard. "Equipment Problems" needs to be included in the Requirement, R2, and defined in the Measure for

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Organization	Question 9:	Question 9 Comments:
		R2.R5: The Severe VSL needs to be moved to the Moderate category. This condition does not constitute an Adverse Reliability Impact that severely threatens the BES.
Response: The RC SDT thanks you for your comment. R1: The RC SDT agrees with you regarding “act” and “direct actions”. Based on your and other stakeholders’ comments, we have removed the High VSL and revised the severe VSL to use the phrase, “act or direct.” R2. The moderate VSL was removed. R5: The VSL relates to how badly an entity missed the requirement, not the threat to reliability (this is the VRF). The requirement is to notify “all”. The RC SDT believes it has developed appropriate VSLs for this requirement.		
FirstEnergy	No	R2 VSL - The Severe VSL should include after the word directive: “that would not violate safety, equipment, statutory or regulatory requirements”.
Response: The RC SDT thanks you for your comment. We agree with your premise, but the suggested wording of the VSL appears cumbersome. The VSL has been revised to: The responsible entity did not follow the Reliability Coordinator’s directive per Requirement R2.		
Duke Energy	No	The language in R1 of the VSL is not consistent with the requirements and measures in the standard. The VSL needs to recognize that the RC may EITHER act or give direction to others to act. The term “Adverse Reliability Impacts” is being changed and is listed in the associated Implementation Plan. The revision of this definition needs to go through Due Process. The language in R2 of the VSL places an entity in Moderate or High violation level even if failure is “allowed” in the standard; i.e. failure to act is due to violation of safety, regulatory, statutory requirements. The language in R2 of the VSL recognizes another potential reason for delay in execution of a directive. Requirement R2 of the Standard needs to be modified to also recognize this potential.
Response: The RC SDT thanks you for your comment. R1: The RC SDT agrees with you regarding “act” and “direct actions”. Based on your and other stakeholders’ comments, we have removed the High VSL and revised the severe VSL to use the phrase, “act or direct.” The proposed revision to the term, “Adverse Reliability Impact” will be posted for stakeholder comment with the next version of the standard. R2. We agree and have removed the Moderate and High VSLs and revised the Severe VSL to :		

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Organization	Question 9:	Question 9 Comments:
The responsible entity failed to follow the Reliability Coordinator directive and it would not have violated the safety, equipment, statutory or regulatory requirements. The requirement already addresses equipment.		
American Transmission Company	No	VSLs for R2 and R3 are not appropriate. In order to assess a situation we may not be able to immediately inform the RC of our ability to comply with the directive. The high VSL for R2 currently states that if we do not follow the directive because of safety, statutory or regulatory requirements, it is a high VSL. An entity should not be penalized for not breaking the law.
Response: The RC SDT thanks you for your comment. R2: We agree and have removed the Moderate and high VSLs. R3. The requirement was revised to remove the “immediately” verbiage and the VSLs were revised accordingly – the Lower VSL was removed.		
ISO/RTO Council Standards Review Subcommittee	No	The R1 High and Severe VSL appear to differ only by the inclusion of directing actions in Severe. From a practical perspective, what is the difference between directing actions and acting? We don't believe there is any. The actions are the result of the RC authority whether the RC takes the actions themselves or directs someone else to. We suggest a better alternative for the VSL levels would be for the High level to reflect that the RC did not act or direct actions to prevent an Adverse Reliability Impact and Severe would be that the RC did not act or direct actions to mitigate the magnitude or duration of an existing Adverse Reliability Impact. The moderate VSL for R2 is not practical and too subjective. What constitutes a delay? What if the responsible entity takes five minutes to determine how to carry out the action or if their equipment currently is capable of carrying out the action? Is this a delay? We suggest striking this Moderate VSL. The High VSL does not agree with the requirement. It considers the inability to fully follow an RC directive due to a violation of the safety, equipment, statutory, or regulatory requirements a violation. This is in direct conflict with the requirement. We suggest that the High VSL should be struck. We suggest the Severe VSL should be that the responsible entity failed to follow the RC directive and it would not have violated the safety, equipment, statutory or regulatory requirements. Currently, the Severe category does not allow that the responsible entity may not be able to carry out the directive due to the violation of safety, equipment, statutory, or regulatory requirements. In question 7, we request that the drafting team strike part of requirement 3. The striking of that portion of requirement 3 obviates the lower VSL. In paragraph 27 of the ORDER ON VIOLATION SEVERITY LEVELS PROPOSED BY THE ELECTRIC RELIABILITY ORGANIZATION, the Commission expresses “that, as a general rule, gradated Violation Severity Levels, wherever possible, would be preferable to binary Violation Severity Levels”. Given that it is possible to define gradated VSLs for R4 and R5, we suggest that the drafting team should consider applying the numeric performance category of the Violation Severity Levels Development Guidelines Criteria based on the number of impacted TOPs and BAs that were notified.

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Organization	Question 9:	Question 9 Comments:
Response: The RC SDT thanks you for your comment. R1: The RC SDT agrees with you regarding “act” and “direct actions”. Based on your and other stakeholders’ comments, we have removed the High VSL and revised the severe VSL to use the phrase, “act or direct.” R2. We agree and have removed the Moderate and High VSLs and revised the Severe VSL to : The responsible entity failed to follow the Reliability Coordinator directive and it would not have violated the safety, equipment, statutory or regulatory requirements. R3. The requirement was revised and the Lower VSL removed. R4 and R5: We concur and have expanded the VSLs to include notification of a varying number of entities.		
SERC OC Standards Review Group	Yes and No	9.1 - R1 is a binary requirement and should have only a severe VSL. The RC either acts or he doesn't - If he fails to act, he fails to direct and mitigate the problem by default. 9.2 - R2 VSLs need to be rewritten to recognize that some directives may not be followed because of safety, regulatory or statutory requirements. 9.3 - Remove the Lower severity level in R3 to conform to changes in R3 and M3.
Response: The RC SDT thanks you for your comment. R1: The RC SDT agrees with you regarding “act” and “direct actions”. Based on your and other stakeholders’ comments, we have removed the High VSL and revised the severe VSL to use the phrase, “act or direct.” R2. We agree and have removed the High VSL and revised the Severe VSL to: The responsible entity failed to follow the Reliability Coordinator directive and it would not have violated the safety, equipment, statutory or regulatory requirements.. R3. The requirement was revised and the Lower VSL removed.		
Consolidated Edison Co. of NY, Inc.	Yes and No	Agreement uncertain, subject to further clarification of Requirements and Measures performance standards and definitions (see our comments on Requirements and Measures). Without clearer definitions, e.g., for "immediate," or any allowance for appropriate intentional delay, it is not entirely clear that the VSLs comport with the ultimate meaning, intent and needed wording to be incorporated into the Requirements and Measures. Why would failure to fully comply, when precluded by conditions specifically allowed in the standard, necessarily be a problem, so long as the RC received timely notice, however defined?
Response: The RC SDT thanks you for your comment. The SDT removed the word, “immediate” and the phrase, “without intentional delay” from the standard.		

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Organization	Question 9:	Question 9 Comments:
Buckeye Power, Inc.	Yes and No	abstain
Northern California Power Agency	Yes	
CU of Springfield	Yes	
NPCC	Yes	
Ameren	Yes	
US Bureau of Reclamation	Yes	
PJM Interconnection	Yes	
Bonneville Power Administration	Yes	
AEP	Yes	

10. Do you agree with the revisions to the Requirements in IRO-002-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Summary Consideration: The last proposed version of IRO-002-2 had two requirements – R1 required the Reliability Coordinator to request data from other entities; R2 required the Reliability Coordinator to provide its operating personnel with authority to veto planned outages of analysis tools.

Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees' approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired IRO-002 Requirement R1 and eliminated the need for the proposed R2.

The team received comments expressing concern about eliminating the requirement to monitor frequency which had been in an earlier approved version of IRO-002. While the Standard Drafting Team (SDT) recognizes the concern raised, the SDT is even more concerned with the subjectivity that any attempt to measure "Monitoring" can provide. It is the SDT's contention that adherence to reliability standards that require the said monitoring cannot be demonstrated unless the entity is closely monitoring the system parameters. Furthermore, the SDT contends that any requirements that describe the monitoring facilities needed to fulfill fundamental duties should be embedded in Certification Requirements. With IRO-014 and IRO-001 R1 in place, the actual act of monitoring is a secondary task that is inherent in responding to situations or events that could have an adverse impact on reliability. The team retained the remaining requirement (Reliability Coordinator's authority to veto analysis tool outages) as it was a specific recommendation from the 2003 Blackout report. This requirement was revised and moved into IRO-001-2, R6.

R6. Each Reliability Coordinator shall ~~have~~provide its operating personnel with the authority to veto planned outages to its own analysis tools, ~~including final approvals for planned maintenance.~~ [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]

Organization	Question 10:	Question 10 Comments:
Independent Electricity System Operator - Ontario	No	R1: There is a duplicating requirement in TOP-005 R1.1. Suggest to eliminate one of the two. We do not agree with eliminating all of R5 to R8. There is a fundamental need for RCs to

Organization	Question 10:	Question 10 Comments:
		monitor its area, and even some portion of its adjacent areas to be aware of situations that require preventive and mitigating actions. While arguments can be made that requiring RCs to prevent and mitigate adverse reliability impacts would imply monitoring, the latter is a fundamental duty of any RCs to ensure system reliability. If monitoring is not explicitly stated as a requirement, then the same argument may be extended to training and operational facilities. We do not agree with the drafting team's conclusion that it is not practical to measure real-time monitoring. Measuring can be illustrated, for example, by a compliance audit to review system logs and assess the extent to which an RC follows and assesses system conditions.
Response: R1: The RC SDT thanks you for your comment. Several NERC drafting teams are working on related standards. The RTO SDT just posted changes to TOP-005 that will retire that standard upon approval. Therefore, there will be no redundancy because TOP-005 R1.1 will be removed. Monitoring: While the Standard Drafting Team (SDT) recognizes the concern raised, the SDT is even more concerned with the subjectivity that any attempt to measure "Monitoring" can provide. It is the SDT's contention that adherence to reliability standards that require the said monitoring cannot be demonstrated unless the entity is closely monitoring the system parameters. Furthermore, the SDT contends that any requirements that describe the monitoring facilities needed to fulfill fundamental duties should be embedded in Certification Requirements. With IRO-014 and IRO-001 R1 in place, the actual act of monitoring is a secondary task that is inherent in responding to situations or events that could have an adverse impact on reliability.		
Reliability Coordinator Comment Working Group	No	For R1, this should be 2 separate requirements and measures. R1 should have a methodology for determining what data is needed and then a R2 should be a requirement to request this data from the reliability entities.
Response: The RC SDT appreciates your comments. Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired R1.		
MRO NERC SDStandards Review Subcommittee	No	New Requirement R1 is duplicate to the requirement TOP-005-1 R1.1. If the drafting team can't delete TOP-005-1 R1.1, they should notify other appropriate drafting teams of the need to remove the requirement. We do not agree with eliminating requirements R5, R6, R7, and R8 in their entirety. The requirements as they are written are problematic. However, we do believe that there is a need for a basic

Organization	Question 10:	Question 10 Comments:
		requirement to monitor the system. The requirements should be that the RC should compare actual system flows to SOLs and IROLs. While some will argue SOLs are not the responsibility of the RC, failure to monitor SOLs could cause the RC to miss unknown IROLs since an SOL can become an IROL. Several SOL violations in a given area also can be indicative of a broader system problem the RC should be addressing. We also do not agree with the drafting team's conclusion that it is not practical to measure real-time monitoring. It is very easy to measure. As an example, a compliance auditor could select a day and an SOL or IROL and ask for the system flows from that day or hour etc. This is generally easy for any RC to produce with today's data archiving software. We believe that there should be a requirement that the RC have a state estimator and real-time contingency analysis as well (RTCA). The drafting team needs to be careful in the construction of these requirements to make them practical and measurable. For instance, making the requirement to have a state estimator and RTCA is measurable in that the compliance auditor can verify their existence but this is not stringent enough because they may only run once a week. At the same time, if we create a requirement that SE and RTCA must run every 5 minutes, we could inadvertently create a requirement that any missing 5 minute run of RTCA and SE could be construed as a violation. There also needs to be a requirement that there is a real-time assessment of voltage as well. New Requirement R2 is no longer needed as a result of paragraph 112 in Order 693-A. Since the RC's "authority to issue directives arises out of the Commission's approval of Reliability Standards" the RC already has veto authority or will have once R1 IRO-001-2 is approved. This requirement obligates the RC to take actions or direct actions to prevent Adverse Reliability Impacts. Veto outages of equipment and analysis tools would fall into this category even if the RC couldn't say for certain that an Adverse Reliability Impact was going to occur but rather they are concerned one could occur due to heavy loads for example.
Response: The RC SDT appreciates your comments. The RTO SDT has recently posted the proposed retirement of TOP-005. This eliminates the redundancy with R1. The RC SDT appreciates your comments and recognizes that NERC standards historically have included requirements to ensure that each entity is acting responsibly in the portion of the Interconnect over which it has authority. The IRO-014, as proposed by this team, requires RCs to act in coordinated fashion to protect the Interconnection. With IRO-014 and IRO-001 R1 in place, the actual act of monitoring is a secondary task that is inherent in responding to situations or events that could have an adverse impact on reliability. The RC must respond to these situations proactively in order to prevent separation or cascading events. The RC SDT agrees philosophically with your comment regarding the redundancy of Requirement R2, however, this issue was enumerated in		

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Organization	Question 10:	Question 10 Comments:
the report on the 2003 Blackout as a key improvement. The team believes that, while this is redundant as you stated, it is too soon to remove it from standards. At some point in the future after the industry assimilates the set of changes currently proposed, this requirement could be proposed for deletion.		
Southern Company Transmission	No	10.1 - We propose that R1 and R2 should be moved to the RC Certification Procedure and this standard retired. If this standard is not retired then we recommend Comments 10.2 and 10.3.10.2 - At Requirement R2, the RC is given 'veto' authority. Is a standard an appropriate place to give this type of authority? 10.3 - The revised Purpose basically provides that the RC will have access to information and control of analysis tools. What is the correlation of information/control to veto authority/approval of planned maintenance?
Response: The RC SDT appreciates your comments. Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired R1. R2. This is a Blackout recommendation and therefore is appropriate within a standard. We revised the wording to indicate that the RC will provide its Operating Personnel the authority. This clarified the intent of the requirement. This requirement will also be moved into IRO-001-2, R6. 10.3 This standard will be retired making the purpose statement moot.		
ISO New England Inc.	Yes and No	Suggest changing with word "request" to "document" in Requirement 1.
Response: The RC SDT appreciates your comments. Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired R1.		
Entergy Services, Inc	No	IRO-002-1 R9, the deleted language of the second sentence is not adequately covered by the language in EOP-008-0 R1, unless those outages are tied to the loss of a control center. EOP-008-0 is in the process of being revised and this language could be included in the revision, but it isn't adequately addressed by the version 0 standard.

Organization	Question 10:	Question 10 Comments:
Response: The RC SDT appreciates your comments. The RC SDT took this comment into consideration when making revisions to this requirement as well as to COM-001-2 regarding specifications. The data specification required in IRO-010 should address mitigation plans for analysis tool outages and proposed COM-001 specifications should include mitigation plans for communications outages.		
US Bureau of Reclamation	No	R2. This requirement provides authority to the Reliability Coordinator to veto planned outages and approve planned maintenance to “analysis tools”. It is not clear in this standard what these “analysis tools” are. Per FERC Order 693, NERC was to identify a minimum set of analysis tools and the task was assigned to the Real-Time Tools Best Practices Task Force. Until the tools are identified, it is premature to insert a placeholder in a mandatory standard; this also applies to the violation severity levels table.
Response: The RC SDT appreciates your comments. The Reliability Coordinator has a set of tools in use to monitor and analyze its area as well as to provide a wide area view. These tools may include a SCADA system, state estimator and contingency analysis programs. It is the responsibility of the Reliability Coordinator to ensure that these tools are operational or that a plan or procedure is in place to mitigate their outages. The Real-time Tools Best Practices Task Force work has resulted in the inception of a new standard development project. It is scheduled to begin in 2009.		
FirstEnergy	No	R2 - As written, this requirement does not clearly define the scope of the authority of the Reliability Coordinator over analysis tools. Is it the intent of the drafting team to give the RC authority over analysis tools owned and operated by the RC. Is it the intent of the drafting team to give the RC authority over the analysis tools owned and operated by the BA, TOP, GOP, etc.? Are the tools intended to be the real-time (EMS) or the off-line engineering planning analysis tools or any analysis tool used in real-time. Does this include the analysis tools used by field personnel? This requirement should be revised to specify exactly the analysis tools under the authority of the Reliability Coordinator.
Response: The RC SDT thanks you for your comment. The intent of the requirement is to have veto authority over its own tools. The requirement is revised to: R2. Each Reliability Coordinator shall provide its Operating Personnel with the authority to veto planned outages to its own analysis tools. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] The intended tools are any tools that the Reliability Coordinator needs to perform its reliability functions.		

Organization	Question 10:	Question 10 Comments:
Duke Energy	No	Requirement R1 - This requirement is in the wrong standard — this is a Facilities standard. This requirement belongs in another standard. Question: Is there a requirement in another standard that compels the TOPS, BAs, etc to provide the requested data? Requirement R2 - Need to clarify whose analysis tools (I assume it is the RCs analysis tools, not the analysis tools of another entity) and planned maintenance to what — is it tools, facilities, transmission, generation, etc. Depending on the answer above, this requirement is in the wrong standard — this is a Facilities standard. This requirement belongs in another standard. Question: Where is the Requirement for the RC to have analysis tools? It appears that the Requirement the RC has analysis tools have been removed in the revisions to the standard.
Response: The RC SDT thanks you for your comment. Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired R1 and does compel entities to provide data to the Reliability Coordinator For R2, the intent of the requirement is to have veto authority over its own tools. The requirement is revised to: R2. Each Reliability Coordinator shall provide its Operating Personnel with the authority to veto planned outages to its own analysis tools. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] The intended tools are any tools that the Reliability Coordinator needs to perform its reliability functions.		
ISO/RTO Council Standards Review Subcommittee	No	New Requirement R2 is no longer needed as a result of paragraph 112 in Order 693-A. Since the RC's "authority to issue directives arises out of the Commission's approval of Reliability Standards" the RC already has veto authority or will have once R1 IRO-001-2 is approved. This requirement obligates the RC to take actions or direct actions to prevent Adverse Reliability Impacts. Veto outages of equipment and analysis tools would fall into this category even if the RC couldn't say for certain that an Adverse Reliability Impact was going to occur but rather they are concerned one could occur due to heavy loads for example.
Response: The RC SDT agrees philosophically with your comment regarding the redundancy of Requirement R2, however, this issue was enumerated in the report on the 2003 Blackout as a key improvement. The team believes that, while this is redundant as you stated, it is too soon to remove it from standards. At some point in the future after the industry assimilates the set of changes currently proposed, this requirement could be proposed for deletion.		
SERC OC	Yes and No	10.1 - We propose that R1 and R2 should be moved to the RC Certification Procedure and this

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Organization	Question 10:	Question 10 Comments:
Standards Review Group		standard retired.
Response: The RC SDT appreciates your comments. Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired R1. For R2, the intent of the requirement is to have veto authority over its own tools. The requirement is revised and moved into IRO-001-2, R6: R2. Each Reliability Coordinator shall provide its Operating Personnel with the authority to veto planned outages to its own analysis tools. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] This will retire IRO-002-1.		
Buckeye Power, Inc.	Yes and No	Abstain
PJM Interconnection	Yes	
Manitoba Hydro	Yes	
NPCC	Yes	
Ameren	Yes	
Northern California Power Agency	Yes	
Salt River Project	Yes	
Bonneville Power Administration	Yes	

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Organization	Question 10:	Question 10 Comments:
AEP	Yes	
American Transmission Company		Abstain.

11. Do you agree with the revisions to the Measures in IRO-002-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Summary Consideration: Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired R1 and M1.

For R2, the intent of the requirement is to have veto authority over its own tools. The requirement and measure have been revised based on stakeholder comment and moved into IRO-001-2 as Requirement R6. The revisions made are shown below:

R6. Each Reliability Coordinator shall ~~have~~ provide its operating personnel with the authority to veto planned outages to its own analysis tools ~~including final approvals for planned maintenance~~. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]

M6. Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a documented procedure or equivalent evidence that will be used to confirm that the Reliability Coordinator has provided its operating personnel with the authority to veto planned outages ~~to of its own~~ analysis tools ~~including final approvals for planned maintenance as specified in Requirement 2~~.

Organization	Question 11:	Question 11 Comments:
Independent Electricity System Operator - Ontario	No	M1: We suggest to change the word "letter" to "documented request" If our recommendations to retain some of R5 to R9, some measures will need to be provided.
Response: The RC SDT thanks you for your comments. Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired R1 and M1. As stated in our response to your comments in Question 10, we do not intend to retain R5 through R9.		
MRO NERC SDTandards Review	No	Measure 1 should not focus on a letter as evidence. A more appropriate measure would be a data specification document and actual verification that data has been received. The letter or equivalent is only needed if data has not been supplied. Demonstration of the actual receipt the data would be

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Organization	Question 11:	Question 11 Comments:
Subcommittee		easy. Requirement 2 is not needed and thus Measure 2 is not needed per paragraph 112 of Order 693-A. Additional measures are needed to address the proposed requirements in question 10.
Response: The RC SDT thanks you for your comments. Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired R1 and M1. The RC SDT did not agree to remove R2 in response to your comments in Question 10.		
Southern Company Transmission	No	11.1 - Moving R1 and R2 to the RC Certification Procedure will eliminate measurement requirements.
Response: The RC SDT thanks you for your comments. See our response to your comments in Question 10.		
Salt River Project	No	R1: The Requirement and VSLs mention that the RC will determine it's data needs. Yet the Measure for R1 does not mention this, it only mentions the RC requesting the data from it's member entities. This Measure needs to include a measure for how the RC determines it's data needs.
Response: The RC SDT appreciates your comments. Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired R1 and M1.		
US Bureau of Reclamation	No	M2 again "analysis tools" have not been identified.
Response: The RC SDT appreciates your comments. See our response to your comments on Question 10.		
FirstEnergy	No	The measures should be modified per our suggested modifications in question 10.
Response: The RC SDT thanks you for your comments. The requirements were not modified. See our response to your comments on Question 10.		
Duke Energy	No	See response to Question #12 above. If the requirements are moved to another standard, the measures aren't needed here.

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Organization	Question 11:	Question 11 Comments:
Response: The RC SDT thanks you for your comments. We believe that "#12" in this comment was a typo and that you intended it to read "Q10". See our response to your comments on Question 10.		
ISO/RTO Council Standards Review Subcommittee	No	Measure 1 should not focus on a letter as evidence. A more appropriate measure would be a data specification document and actual verification that data has been received. The letter or equivalent is only needed if data has not been supplied. Demonstration of the actual receipt the data would be easy.
Response: The RC SDT thanks you for your comments. Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired R1 and M1.		
Buckeye Power, Inc.	Yes and No	abstain
SERC OC Standards Review Group	Yes and No	11.1 - Moving R1 and R2 to the RC Certification Procedure will eliminate measurement requirements.
Response: The RC SDT thanks you for your comments. See our response to your comments in Question 10.		
Reliability Coordinator Comment Working Group	Yes	add measures for R1 & R2 see question 10
Response: The RC SDT appreciates your suggestion. See our response to Question 10.		
Entergy Services, Inc	Yes	
PJM Interconnection	Yes	
AEP	Yes	

Organization	Question 11:	Question 11 Comments:
Bonneville Power Administration	Yes	
Manitoba Hydro	Yes	
NPCC	Yes	
Ameren	Yes	
Northern California Power Agency	Yes	
American Transmission Company		Abstain.

12. Do you agree with the Violation Severity Levels proposed in IRO-002-2 as shown in the posted Standard and Implementation Plan?
If not, please explain in the comment area.

Summary Consideration: Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired R1 and M1. The RC SDT has revised R2 and M2 and moved them to IRO-001-2, as Requirement R6 and Measure M6. The VSLs have been revised to reflect the modifications made to the requirement and measure and in response to stakeholders who indicated this is a “binary” requirement.

R6	~~Reliability Coordinator has approval rights for planned outages of analysis tools but does not have approval rights for maintenance on analysis tools.~~	N/A	N/A	Reliability Coordinator failed to provide its operating personnel with the authority to veto ~~approval is not required for planned maintenance or~~ planned outages of its own analysis tools.

Organization	Question 12:	Question 12 Comments:
Independent Electricity System Operator - Ontario	No	R1: The wording for Low VSL is contradictory (e.g. it determined and requested in the first part but did not request in the second part). Suggest to revise it. R1: We suggest to grade the VSLs according to the extent to which the percentage of data specification and/or the number of entities not requested. R2: The RC either has the right or it doesn't, and hence it's a binary requirement. The VSL should be developed accordingly. Further, the wording for the Severe VSL does not correspond to the requirement and measure. The condition should simply be that the Reliability Coordinator failed to demonstrate that it had the authority to veto planned outages to analysis tools, including final approvals for planned maintenance.
Response: The RC SDT thanks you for your comment. Please see Summary Consideration above. The first requirement was retired as part		

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Organization	Question 12:	Question 12 Comments:
of the IROL project. The lower VSL was removed as proposed for the second requirement.		
Southern Company Transmission	No	12.1 - Moving R1 and R2 to the RC Certification Procedure will eliminate VSL requirements.
Response: The RC SDT thanks you for your comment. Please see Summary Consideration above. R1 was retired – and R2 was moved into IRO-001 as Requirement R6. The VSLs for R6 are still needed.		
US Bureau of Reclamation	No	Until the tools are identified, it is premature to insert a placeholder in a mandatory standard; this also applies to the violation severity levels table.
Response: The RC SDT thanks you for your comment. Please see Summary Consideration above. As envisioned, the intent is to protect the analysis tools used by real time operating personnel – and not all companies have the same set of tools, so the SDT will not name specific tools in this standard. The intent is to give the real time operating personnel control over the availability of their tools so that the real time operating personnel will always know if their tools are “unavailable” due to maintenance. Names of specific tools are not needed to enforce the intent of this requirement.		
MRO NERC SDStandards Review Subcommittee	No	For R1, the lower VSL contradicts itself. It states that RC demonstrated that it determined its data requirements and requested that data and then follows with that it didn't request that data. The second option in the Lower VSL category is not practical and a compliance auditor would not be in a position to determine this. In fact, if the administrative data is not requested, other administrative requirements for reporting would be violated. Additionally, it does not make sense that an RC would determine its data needs and then omit data for administrative reporting. Further, is it the compliance auditor's job to judge if the data the RC requests is sufficient or is it his job to see that the RC has met the requirement to define the data? The remaining VSLs imply that the RC may define only partial data requirements. This does not seem likely. Why would the RC do this? This VSL appears to add to the requirement by making it appear that the compliance auditor is to judge the completeness of the data requirement. This violates Guideline 3 of the FERC ORDER ON VIOLATION SEVERITY LEVELS PROPOSED BY THE ELECTRIC RELIABILITY ORGANIZATION. Practically, it would not be enforceable anyway. It would require the RC to admit that they did not include administrative data in their data requirements. It is doubtful this would happen because the RC likely believes they prepared a complete data requirement document.

Organization	Question 12:	Question 12 Comments:
		We suggest that the VSLs should be: Severe: The RC did not determine it data requirements or the RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be demonstrated for greater than 75 to 100% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs. High: The RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be demonstrated for greater than 50 and less than or equal to 75% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs. Medium: The RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be demonstrated for greater than 25% and less than or equal to 50% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs. Lower: The RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be demonstrated for greater than 0% and less than or equal to 25% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs. R2 VSLs are not needed or paragraph 112 of Order 693-A. The Severe VSL contradicts the requirement.
Response: The RC SDT thanks you for your comment. Please see Summary Consideration above. The first requirement was retired as part of the IROL project. For R2, based on your comments and the comments of others, the VSLs were modified – the lower was removed and the requirement was treated as binary with just a Severe VSL rephrased to more closely match the language in the revised requirement.		
FirstEnergy	No	The VSL should be modified per our suggested modifications in question 10.
Response: The RC SDT thanks you for your comment. Please see Summary Consideration above.		
Duke Energy	No	R1 VSL - As a general comment, this VSL is unclear and would be difficult to audit. This VSL uses subjective terms like “material impact” and “minimal impact”. These terms are not used in the associated requirement or measure and should be removed from the VSL. This VSL uses terms like “majority, but not all”; “some, but less than a majority” which provides an opportunity for

Organization	Question 12:	Question 12 Comments:
		a subjective review by Compliance as to what a complete listing of data requirements should be. This term is not used in the Requirements or Measures and should be removed from the VSL. This VSL introduces a concept, data the RC needs for ?? administrative purposes, such as data reporting ??. This concept is not included in the Requirements or Measures portions of the Standard and should be removed from the VSL. This VSL should be written to simply assess whether the RC has made determination of what its data needs are and whether those needs have been communicated to the entities in the footprint. R2 VSL - This VSL clarifies the questions posed above regarding what the RC needs approval rights over. R2 needs to be modified to include this clarity. This VSL needs to clarify that the RC approval rights are for the RC's tools, not tools of other entities. The Severe level of this VSL needs to be re-written along the lines of: The RC does not have approval rights for planned maintenance or outages to its analysis tools.
Response: The RC SDT thanks you for your comment. Please see Summary Consideration above. The first requirement was retired as part of the IROL project. For R2, based on your comments and the comments of others, the requirement, measure and VSLs were all modified – the lower was removed and the requirement was treated as binary with just a Severe VSL rephrased to more closely match the language in the revised requirement.		
ISO/RTO Council Standards Review Subcommittee	No	For R1, the lower VSL contradicts itself. It states that RC demonstrated that it determined its data requirements and requested that data and then follows with that it didn't request that data. The second option in the Lower VSL category is not practical and a compliance auditor would not be in a position to determine this. In fact, if the administrative data is not requested, other administrative requirements for reporting would be violated. Additionally, it does not make sense that an RC would determine its data needs and then omit data for administrative reporting. Further, is it the compliance auditor's job to judge if the data the RC requests is sufficient or is it his job to see that the RC has met the requirement to define the data? The remaining VSLs imply that the RC may define only partial data requirements. This does not seem likely. Why would the RC do this? This VSL appears to add to the requirement by making it appear that the compliance auditor is to judge the completeness of the data requirement. This violates Guideline 3 of the FERC ORDER ON VIOLATION SEVERITY LEVELS PROPOSED BY THE ELECTRIC RELIABILITY ORGANIZATION. Practically, it would not be enforceable anyway. It would require the RC to admit that they did not include administrative data in their data requirements. It is doubtful this would happen because the RC likely believes they prepared a complete data requirement document.

Organization	Question 12:	Question 12 Comments:
		We suggest that the VSLs should be: Severe: The RC did not determine it data requirements or the RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be demonstrated for greater than 75 to 100% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs. High: The RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be demonstrated for greater than 50 and less than or equal to 75% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs. Medium: The RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be demonstrated for greater than 25% and less than or equal to 50% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs. Lower: The RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be demonstrated for greater than 0% and less than or equal to 25% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs. R2 VSLs are not needed er paragraph 112 of Order 693-A. The Severe VSL contradicts the requirement.
Response: The RC SDT thanks you for your comment. Please see Summary Consideration above. The first requirement was retired as part of the IROL project. For R2, based on your comments and the comments of others, the requirement, measure and VSLs were all modified – the lower was removed and the requirement was treated as binary with just a Severe VSL rephrased to more closely match the language in the revised requirement.		
SERC OC Standards Review Group	Yes and No	12.1 - Moving R1 and R2 to the RC Certification Procedure will eliminate VSL requirements.
Response: The RC SDT thanks you for your comment. Please see Summary Consideration above. R1 was retired – and R2 was moved into IRO-001 as Requirement R6. The VSLs for R6 are still needed.		

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Organization	Question 12:	Question 12 Comments:
Buckeye Power, Inc.	Yes and No	abstain
Manitoba Hydro	Yes	
NPCC	Yes	
CU of Springfield	Yes	
Ameren	Yes	
Reliability Coordinator Comment Working Group	Yes	
Northern California Power Agency	Yes	
Entergy Services, Inc	Yes	
Salt River Project	Yes	
AEP	Yes	
PJM Interconnection	Yes	
Bonneville Power Administration	Yes	
American Transmission Company		Abstain.

13. Do you agree with the revisions to IRO-005-1 as shown in the posted Standard and Implementation Plan? The RC SDT is recommending retiring or moving all of the requirements and retiring this standard. If not, please explain in the comment area.

Summary Consideration: Several commenters had concerns around removing the requirement to monitor frequency. Other commenters had concerns with the removal of other monitoring requirements in the standard. While the Standard Drafting Team (SDT) recognizes the concerns raised, the SDT is even more concerned with the subjectivity that any attempt to measure “Monitoring” can provide. It is the SDT’s contention that adherence to reliability standards that require the said monitoring cannot be demonstrated unless the entity is closely monitoring the system parameters. Furthermore, the SDT contends that any requirements that describe the monitoring facilities needed to fulfill fundamental duties should be embedded in organization certification process requirements. With IRO-014 and IRO-001 R1 in place, the actual act of monitoring is a secondary task that is inherent in assessing and responding to situations or events that could have an adverse impact on reliability.

Organization	Question 13:	Question 13 Comments:
Independent Electricity System Operator - Ontario	No	R1: We not agree with removing this requirement for the same reason given for the proposal to remove R5 to R8 from IRO-002 (see comments on 10 (ii), above). R8: We do not agree with completely removing this requirement, especially that part that requires an RC to monitor system frequency. While DCS and CPS are largely a BA's responsibility, the RC is the last line of defense for abnormal system performance and needs to monitor its BAs' performance including their ability to address large frequency deviations, and direct or take corrective actions as needed including requesting emergency assistance on the BAs' behalf and directing load shedding. R9: The second part of this requirement needs to be retained. IRO-004 covers operational planning, not current day operations. Coordinating pending generator and transmission facility outages is an essential and necessary task by the RC to ensure reliability. R11: The RC needs to monitor ACE, detect and identify the cause of any abnormal ACE, and direct its BAs to take necessary actions to return ACE to within a normal range. R13: We do not agree with removing the latter part of R13. The FAC standards cover the methodology used in calculating SOLs and IROLs. Regardless of how these limits are calculated, in practice there always exists the possibility that different entities come up with SOLs/IROLs, especially of the inter-ties, that could be different. Operating to the lowest SOLs/IROLs when more than one set

Organization	Question 13:	Question 13 Comments:
		exists is a necessary requirement for reliable operation.
Response: The RC SDT thanks you for your comment. I While the Standard Drafting Team (SDT) recognizes the concern raised, the SDT is even more concerned with the subjectivity that any attempt to measure "Monitoring" can provide. It is the SDT contention that adherence to reliability standards that require the said monitoring cannot be demonstrated unless the entity is closely monitoring the system parameters. Furthermore, the SDT contends that any requirements that describe the monitoring facilities needed to fulfill fundamental duties should be embedded in organization certification process Requirements. With IRO-014 and IRO-001 R1 in place, the actual act of monitoring is a secondary task that is inherent in responding to situations or events that could have an adverse impact on reliability. li With IRO-014 and IRO-001 R1 in place, the actual act of monitoring is a secondary task that is inherent in assessing and responding to situations or events that could have an adverse impact on reliability. lii The RC SDT proposes retiring this requirement as it is redundant with TOP-003 and IRO-004 (all requirements) for next day requirements. The RC has the authority to coordinate pending outages in real-time through IRO-001-2, R1 (proposed). Iv The SDT feels that there are better avenues to ensure BAs operate within established and acceptable thresholds as described in the BAL-001 and BAL-002 standards. Current standards projects are addressing revisions to the BAL set of standards. V The SDT believes this requirement is redundant with FAC-014. FAC-014 states the requirement for developing and sharing SOL and IROL between the RC, PA, TP and TOP in both the planning and operating time frames.		
American Transmission Company	No	The accountability and monitoring addressed in this Standard is still required. The drafting team's intent was that the ability to monitor is part of the certification process. However, certification is to Standards, and if there is not a Standard which addresses this issue, then an entity cannot certify to it.
Response: The RC SDT thanks you for your comment. While the Standard Drafting Team (SDT) recognizes the concerns raised, the SDT is even more concerned with the subjectivity that any attempt to measure "Monitoring" can provide. It is the SDT's contention that adherence to reliability standards that require the said monitoring cannot be demonstrated unless the entity is closely monitoring the system parameters. Furthermore, the SDT contends that any requirements that describe the monitoring facilities needed to fulfill fundamental duties should be embedded in organization certification process Requirements. With IRO-014 and IRO-001 R1 in place, the actual act of monitoring is a secondary task that is inherent in responding to situations or events that could have an adverse impact on reliability.		
MRO NERC SDTandards	No	R1 includes many requirements for monitoring the system that are important, measurable and should be retained. Monitoring is too critical to operating the system to completely eliminate these

Organization	Question 13:	Question 13 Comments:
Review Subcommittee		requirements. R4, R8 and R11 are problematic as currently written. However, there have been actual instances of a large BA intentionally operating short hundreds of MWs of energy. I believe this occurred during the summer of 1999. Thus, the RC should be monitoring the BAs ACE and directing the BA to correct it if it becomes too large. It is not necessary or even useful for the RC to monitor the BA CPS performance.
Response: The RC SDT thanks you for your comment. The SDT feels that there are better avenues to ensure BAs operate within established and acceptable thresholds as described in the BAL-001 and BAL-002 standards. If a BA chooses to operate off schedule then the BAL standards need to be revisited and tightened up. This is being done in the current projects addressing the BAL standards. Monitoring capability can be objectively measured and is essential to real-time operations – however real-time monitoring is a supporting activity and is only one of several processes used to support operation within defined parameters. Monitoring capability should be assessed during the entity registration certification process and should not be a requirement. Note that certification is aimed at verifying that an entity has the “capability” of operating reliably. With IRO-014 and IRO-001 R1 in place, the actual act of monitoring is a secondary task that is inherent in assessing and responding to situations or events that could have an adverse impact on reliability.		
Ameren	Yes and No	While we agree that most of the requirements are redundancies that properly belong elsewhere, we are concerned that Requirement 4 and Requirement 8 are not properly represented elsewhere and should not be retired until they re-surface in another standard explicitly. We believe it is still very important for an RC to monitor their respective BAs reserves and CPS performance. Likewise in R8, while the frequency monitoring is a BA function, we think that it is important enough to also be included as an RC function explicitly.
Response: The RC SDT thanks you for your comment. The SAR for this project included eliminating redundancies within the standards. In the Implementation Plan for this standard, we show the redundancy between this requirement, R4, and EOP-002-2. (please see pages 6-8 of the Implementation Plan). While the Standard Drafting Team (SDT) recognizes the concern raised, the SDT is even more concerned with the subjectivity that any attempt to measure “Monitoring” can provide. It is the SDT’s contention that adherence to reliability standards that require the said monitoring cannot be demonstrated unless the entity is closely monitoring the system parameters. Furthermore, the SDT contends that any requirements that describe the monitoring facilities needed to fulfill fundamental duties should be embedded in organization certification process Requirements. With IRO-014 and IRO-001 R1 in place, the actual act of monitoring is a secondary task that is inherent in responding to situations or events that could have an adverse impact on reliability.		
Buckeye Power,	Yes and No	Abstain

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 13:	Question 13 Comments:
Inc.		
CU Springfield	Yes	CU supports the retirement of this standard.
Response: The RC SDT thanks you for your comment.		
Southern Company Transmission	Yes	13.1 - We agree with retiring this standard.
Response: The RC SDT thanks you for your comment.		
SERC OC Standards Review Group	Yes	13.1 - We agree with retiring this standard
Response: The RC SDT thanks you for your comment.		
ISO New England Inc.	Yes	
Entergy Services, Inc	Yes	
Reliability Coordinator Comment Working Group	Yes	
Northern California Power Agency	Yes	
US Army Corps of	Yes	

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 13:	Question 13 Comments:
Engineers, Northwestern Division		
Salt River Project	Yes	
US Bureau of Reclamation	Yes	
PJM Interconnection	Yes	
FirstEnergy	Yes	
Bonneville Power Administration	Yes	
Duke Energy	Yes	
AEP	Yes	
Manitoba Hydro	Yes	
NPCC	Yes	

14. Do you agree with the revisions to the Requirements in IRO-014-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Summary Consideration: Several commenters expressed concerns with the term “impacted” and suggested replacing this with “other”. The RC SDT believes “impacted” directly relates to the purpose statement. The original wording of “one or more other” is vague and difficult to measure. Using the word “other” presents a similar situation. The RC SDT chose to use the word “impacted” to tighten the requirement and remove ambiguity. The RC SDT does not intend for non-contiguous reliability coordinators to have “RC agreements”, but to have Procedures, Processes, or Plans with impacted reliability coordinators. Other commenters suggested striking the term “as a minimum” in R1 and the RC SDT agrees and has modified R1 accordingly. Some commenters did not agree with the wording of the new requirements in IRO-014 that were formerly in IRO-016. The RC SDT reviewed the Implementation Plan for IRO-016 and its requirements and made some revisions to the requirements listed in IRO-014-2. The requirement that was transferred from IRO-016 has been translated into 4 requirements in IRO-014:

R5. ~~When an expected or actual reliability issue is detected, the~~ Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify impacted Reliability Coordinators. ~~confirm the existence of the issue with the impacted Reliability Coordinators.~~

R6. ~~In the event that the issue cannot be confirmed, e~~ Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators.

R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists.

~~R6~~R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when ~~When an expected or actual reliability issue exists and~~ the impacted Reliability Coordinators cannot agree on a mitigation plan, ~~all impacted Reliability Coordinators shall implement the mitigation plan developed by the Reliability Coordinator who has the reliability issue.~~

Organization	Question 14:	Question 14 Comments:
Independent Electricity System	No	We suggest to replace the word "impacted" with "other" since there is a preconception that the concerned RC makes an assessment of which other RCs are impacted by the coordinated actions,

Organization	Question 14:	Question 14 Comments:
Operator - Ontario		which may not be the perspective of the other RCs who may in fact be impacted by any coordinated actions among other RCs.
Response: The RC SDT thanks you for your comment. The RC SDT believes "impacted" directly relates to the purpose statement. The original wording of "one or more other" is vague and difficult to measure. Using the word "other" presents a similar situation. The RCSDT chose to use the word "impacted" to tighten the requirement and remove ambiguity. Additionally, R1.1 reconciles the preconception of the Reliability Coordinator making an assessment: R1.1 Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators.		
MRO NERC SDTandards Review Subcommittee	No	Please strike "as a minimum" in R1. By definition, the requirement defines the minimum. Please strike R1.6. RCs already have the authority to act per paragraph 112 of Order 693-A. Since R2 requires the RCs to agree, is the "mutually agreed to" clause in R1.1 necessary? Please strike requirements R4 and R4.1. It is duplicative to R1.1. Conference calls are a form of communication and should be address per R1.1. R5 is confusing. If a reliability issue isn't confirmed, doesn't this mean there is no reliability issue? Isn't this the point of confirming? Additionally, we suggest using validate instead of confirm. R6 appears to be a rewrite of requirements R1, R2 and their sub-requirements in IRO-016. We agree that those requirements do need to be written more succinctly or removed altogether. However, R6 does not accomplish the goal and only confuses that matter further. The reason the RCs may not be able to agree on a mitigation plan is that RC with the reliability issue may be requesting mitigations that the other RCs believe may cause them reliability issues. This requirement appears to suggest that the solution to a disagreement on the mitigation plan is cut and dried. Generally, the reason the disagreement arises is due to one RC not fully understanding the impact of their actions on another RC. The bottom line is that the RCs may have disagreements and there is no way to require a solution in these types of situations. Please revise R6 to require using the mitigation plan developed by the Reliability Coordinator who has the reliability issue provided that the mitigation plan does not cause a reliability issue in the other region. As Requirement 1 is currently written, one could interpret the requirement for every Operating Process, Procedure and Plan to address each of the sub-requirements. That is not necessary. The

Organization	Question 14:	Question 14 Comments:
		drafting team needs to consider modifying the requirement to make it clear that not every sub-requirement must be addressed in every Operating Process, Procedure, and Plan and to also make it clear that the some sub-requirements may only be appropriately addressed in a Process but not a Plan for instance.
		Response: The RC SDT thanks you for your comment. R1: The RC SDT agrees with striking “as a minimum” and the requirement is modified accordingly. The RC SDT believes that the term “collectively” addresses the interpretation of R1 (your last comment). R1.6: The RC SDT disagrees with the MRO interpretation of 693-A and believes R1.6 reinforces the Commission’s determination in paragraph 112 of 693-A which clarifies the reliability coordinator’s authority stating “...authority to issue directives arises out of the Commission’s approval of Reliability Standards that mandate compliance with such directives.” R1.1: R1.1 provides the conditions under which the RC’s will communicate or notify each other. R2 deals with actions that are to be taken beyond notifications. R4 and R4.1: The RC SDT disagrees with the duplicity. R1.1 is a sub-requirement of R1 which requires the reliability coordinator “to have” procedures, processes, or plans, and R4 requires “participation.” R5 & R6: Some commenters did not agree with the wording of the new requirements in IRO-014 that were formerly in IRO-016. The RC SDT reviewed the Implementation Plan for IRO-016 and its requirements and made some revisions to the requirements listed in IRO-014-2. There are now 4 requirements: R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify impacted Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R6. Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators, [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan, [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

Organization	Question 14:	Question 14 Comments:
Southern Company Transmission	No	14.1 - R1 and R2 - The word "impacted" tends to broaden the requirements to have procedures, processes and plans in place with each RC within the RC's Interconnection. We suggest the phrasing should be tightened up to convey the original meaning that the team intended. For example, does the team intend for the FRCC RC to have an agreement with the PJM or MISO RC? 14.2 - We suggest bringing R6 under R1 as subrequirement R1.7 and rewrite it as follows: R1 - The Dispute Resolution process will be followed when the Reliability Coordinator issuing a mitigation plan and the Reliability Coordinator(s) receiving a mitigation plan disagree on the proper steps to be taken. 14.3 - We suggest deleting R4.1 and adding a second sentence to R4: The frequency of these communications shall be at least weekly. 14.4 - R4: The word "impacted" makes it sound like these calls are only to be made when problems are expected or are occurring. If this requirement is intended more for operational awareness calls (such as the daily SERC RC call), then the word "impacted" needs to be changed to "contiguous" or a similar term. 14.5 - We suggest rewriting R5 to read: In the event that a reliability issue cannot be confirmed, each Reliability Coordinator shall operate as though the problem exists. 14.6 - At Requirement R1, the use of the phrase "as a minimum" seems to add some flexibility for development of procedures, processes and plans. A negative consequence is that it introduces more ambiguity. The recommendation is to strike the phrase. 14.7 - At Requirement R1.6, consider the following: "Authority to act to prevent and mitigate instances 'that have the potential to cause' Adverse Reliability Impacts to other Reliability Coordinator Areas."
Response: The RC SDT thanks you for your comments. 14.1: The RC SDT believes "impacted" directly relates to the purpose statement. The original wording of "one or more other" is vague and difficult to measure. Using the word "other" presents a similar situation. The RCSDT chose to use the word "impacted" to tighten the requirement and remove ambiguity. The RC SDT does not intend for non-contiguous reliability coordinators to have "RC agreements", but to have Procedures, Processes, or Plans with impacted reliability coordinators. 14.2: The RC SDT respectfully disagrees with your comment. R6 requires implementation ("shall implement") and R1 is a "shall have" requirement; keeping these separate provides clarity of related measures. The Dispute Resolution process is more administrative in nature regarding compliance, certification, audit processes, or contracts.		

Organization	Question 14:	Question 14 Comments:
		14.3: The RC SDT deleted 4.1 modified R4 to: "The RC shall participate in agreed upon conference calls at least weekly and other communication forums with impacted Reliability Coordinators." 14.4: The RC SDT chose the word "impacted" after much discussion. Impacted has the implication that the RC is immediately impacted or the RC may be impacted by a future situation. We feel that the requirement for weekly calls addresses your concern. 14.5: R5 & R6: Some commenters did not agree with the wording of the new requirements in IRO-014 that were formerly in IRO-016. The RC SDT made some revisions to the requirements listed in IRO-014-2. There are now 4 requirements: R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify impacted Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R6. Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators, [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan, [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] 14.6: The RC SDT agrees with striking "as a minimum" and the requirement is modified accordingly. 14.7: The RC SDT believes that if a reliability coordinator acts to prevent or mitigate instances the "potential to cause" already exists.
ISO New England Inc.	Yes and No	As Requirement 1 is currently written, one could interpret the requirement for every Operating Process, Procedure and Plan to address each of the sub-requirements. That is not necessary. The drafting team needs to consider modifying the requirement to make it clear that not every sub-requirement must be addressed in every Operating Process, Procedure, and Plan and to also make it clear that the some sub-requirements may only be appropriately addressed in a Process but not a Plan for instance. Use of the term collectively may resolve this dilemma.
Response: The RC SDT thanks you for your comment. The RC SDT agrees that the term "collectively" addresses your interpretation and it is already included in R1.		

Organization	Question 14:	Question 14 Comments:
FirstEnergy	No	R1 - Should be revised as follows to improve readability and clarity: R1.3 - Add "Exchanging" before "Planned" R1.4 - Add "Control of voltage" at the beginning of the requirement and delete "for voltage control" at the end of the requirement. Add a new R1.7 as follows: "A process for resolution of the disagreement covered by R6 of this standard."
Response: The RC SDT thanks you for your comment. R1.3: The RC SDT believes adding the term "Exchanging" before "Planned" is redundant with "... exchange of information" stated in R1. R1.4: The RC SDT modified R1.4 to read as "Control of voltage including the coordination of reactive resources." R1.7: R6: To address the process for resolution of disagreements, the RC SDT proposes the 4 requirements: R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify impacted Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R6. Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators, [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan, [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]		
Duke Energy	No	R1 and R2 - The word "impacted" tends to broaden the requirements to have procedures, processes and plans in place with each RC within the RC's Interconnection. We suggest the phrasing should be tightened up to convey the original meaning that the team intended. For example, does the team intend for the FRCC RC to have an agreement with the PJM or MISO RC? We suggest bringing R6 under R1 as subrequirement R1.7 and rewrite it as follows:

Organization	Question 14:	Question 14 Comments:
		R1 - The Dispute Resolution process will be followed when the Reliability Coordinator issuing a mitigation plan and the Reliability Coordinator(s) receiving a mitigation plan disagree on the proper steps to be taken. We suggest deleting R4.1 and adding a second sentence to R4: The frequency of these communications shall be at least weekly. R4: The word "impacted" makes it sound like these calls are only to be made when problems are expected or are occurring. If this requirement is intended more for operational awareness calls (such as the daily SERC RC call), then the word "impacted" needs to be changed to "contiguous". We suggest rewriting R5 to read: In the event that an operating issue cannot be confirmed, each Reliability Coordinator shall operate as though the problem exists.
Response: The RC SDT thanks you for your comment. R1 and R2: The RC SDT believes "impacted" directly relates to the purpose statement. The original wording of "one or more other" is vague and difficult to measure. Using the word "other" presents a similar situation. The RC SDT chose to use the word "impacted" to tighten the requirement and remove ambiguity. The RC SDT does not intend for non-contiguous reliability coordinators to have "RC agreements", but to have Procedures, Processes, or Plans with impacted reliability coordinators. To address your comments on the process for resolution of disagreements and R5, the RC SDT proposes the 4 requirements: R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify impacted Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R6. Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators, [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan, [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R4: The RC SDT deleted 4.1 modified R4 to: "The RC shall participate in agreed upon conference calls, at least weekly, and other communication forums with impacted Reliability Coordinators." The RC SDT chose the word "impacted" after much discussion. Impacted has the implication that the RC is immediately impacted or the RC may be impacted by a future situation. We feel that the requirement for weekly		

Organization	Question 14:	Question 14 Comments:
calls addresses your concern		
ISO/RTO Council Standards Review Subcommittee	No	Please strike "as a minimum" in R1. By definition, the requirement defines the minimum. Please strike R1.6. RCs already have the authority to act per paragraph 112 of Order 693-A. Since R2 requires the RCs to agree, is the "mutually agreed to" clause in R1.1 necessary? Please strike requirements R4 and R4.1. It is duplicative to R1.1. Conference calls are a form of communication and should be address per R1.1. R5 is confusing. If a reliability issue isn't confirmed, doesn't this mean there is no reliability issue? Isn't this the point of confirming? Additionally, we suggest using validate instead of confirm. As Requirement 1 is currently written, one could interpret the requirement for every Operating Process, Procedure and Plan to address each of the sub-requirements. That is not necessary. The drafting team needs to consider modifying the requirement to make it clear that not every sub-requirement must be addressed in every Operating Process, Procedure, and Plan and to also make it clear that the some sub-requirements may only be appropriately addressed in a Process but not a Plan for instance. Use of the term collectively may resolve this dilemma.
Response: The RC SDT thanks you for your comment. R1: The RC SDT agrees with striking "as a minimum" and the requirement is modified accordingly. The RC SDT believes that the term "collectively" addresses your interpretation of R1. R1.6: The RC SDT disagrees with your interpretation of 693-A, and believes R1.6 reinforces the Commission's determination in paragraph 112 of 693-A which clarifies the reliability coordinator's authority stating "...authority to issue directives arises out of the Commission's approval of Reliability Standards that mandate compliance with such directives." R1.1: The RC SDT believes "mutually agreed to" reinforces R2. R4 and R4.1: The RC SDT disagrees with the duplicity. R1.1 is a sub-requirement of R1 which requires the reliability coordinator "to have" procedures, processes, or plans, and R4 requires "participation." R5: The RC SDT proposes the 4 requirements for clarity: R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify impacted Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R6. Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators, [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day		

Organization	Question 14:	Question 14 Comments:
Operations and Real-time Operations] R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan, [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]		
SERC OC Standards Review Group	Yes and No	14.1 - R1 and R2 - The word "impacted" tends to broaden the requirements to have procedures, processes and plans in place with each RC within the RC's Interconnection. We suggest the phrasing should be tightened up to convey the original meaning that the team intended. For example, does the team intend for the FRCC RC to have an agreement with the PJM or MISO RC? 14.2 - We suggest bringing R6 under R1 as subrequirement R1.7 and rewrite it as follows: R1 - The Dispute Resolution process will be followed when the Reliability Coordinator issuing a mitigation plan and the Reliability Coordinator(s) receiving a mitigation plan disagree on the proper steps to be taken. 14.3 - We suggest deleting R4.1 and adding a second sentence to R4: The frequency of these communications shall be at least weekly. 14.4 - R4: The word "impacted" makes it sound like these calls are only to be made when problems are expected or are occurring. If this requirement is intended more for operational awareness calls (such as the daily SERC RC call), then the word "impacted" needs to be changed to "contiguous". 14.5 - We suggest rewriting R5 to read: In the event that an operating issue cannot be confirmed, each Reliability Coordinator shall operate as though the problem exists.
Response: The RC SDT thanks you for your comment. 14.1: The RC SDT believes "impacted" directly relates to the purpose statement. The original wording of "one or more other" is vague and difficult to measure. Using the word "other" presents a similar situation. The RCSDT chose to use the word "impacted" to tighten the requirement and remove ambiguity. The RC SDT does not intend for non-contiguous reliability coordinators to have "RC agreements", but to have Procedures, Processes, or Plans with impacted reliability coordinators. 14.2: To address your comments on the process for resolution of disagreements and R5, the RC SDT proposes the 4 requirements: R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify impacted Reliability Coordinators. [Violation		

Organization	Question 14:	Question 14 Comments:
		Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R6. Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators, [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan, [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] 14.3: The RC SDT deleted 4.1 modified R4 to: "The RC shall participate in agreed upon conference calls at least weekly and other communication forums with impacted Reliability Coordinators." 14.4: The RC SDT chose the word "impacted" after much discussion. Impacted has the implication that the RC is immediately impacted or the RC may be impacted by a future situation. We feel that the requirement for weekly calls addresses your concern. 14.5: R5 was modified as above.
Buckeye Power, Inc.	Yes and No	abstain
Entergy Services, Inc	Yes	
Salt River Project	Yes	
US Bureau of Reclamation	Yes	
PJM Interconnection	Yes	

Organization	Question 14:	Question 14 Comments:
Bonneville Power Administration	Yes	
Manitoba Hydro	Yes	
NPCC	Yes	
CU of Springfield	Yes	
Ameren	Yes	
Reliability Coordinator Comment Working Group	Yes	
Northern California Power Agency	Yes	
AEP	Yes	
American Transmission Company		Abstain

15. Do you agree with the revisions to the Measures in IRO-014-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Summary Consideration: The RC SDT received comments to revise M1 to remove “System operators” as it added to the requirement and to remove “for real-time use”. The RC SDT agrees and has modified the measure as shown below:

M1. The Reliability Coordinator ~~’s System Operators~~ shall have available ~~for Real-time use,~~ the latest approved [documented](#) version of Operating Procedures, Processes, or Plans that require notifications, information exchange or the coordination of actions among impacted Reliability Coordinators. [This documentation may include, but is not limited to, dated, current in force documentation with the specified elements.](#)

~~M1.1 These Operating Procedures, Processes, or Plans shall address:~~

- ~~– M1.1.1 – Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators.~~
- ~~– M1.1.2 – Energy and capacity shortages.~~
- ~~– M1.1.3 – Planned or unplanned outage information.~~
- ~~– M1.1.4 – Voltage control, including the coordination of reactive resources for voltage control.~~
- ~~– M1.1.5 – Coordination of information exchange to support reliability assessments.~~
- ~~– M1.1.6 – Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas.~~

~~– Most oOther The~~ measures were ~~also~~ revised to conform to changes in the requirements [and to provide samples of acceptable evidence.](#)

Organization	Question 15:	Question 15 Comments:
Independent Electricity System Operator -	No	Measure 1 actually contains a number of subrequirements that should be stipulated in R1, not M1. If indeed these are required, they should be stipulated in the Requirement section, not the Measures Section.

Organization	Question 15:	Question 15 Comments:
Ontario		
Response: The RC SDT thanks you for your comment. The RC SDT modified M1 deleting “System Operators” and the submeasures were removed and included only in the requirement.		
ISO/RTO Council Standards Review Subcommittee	No	Measure 1 appears to add to the requirement. Requirement 1 does not mention anything about System Operators yet the measurement does. The measurement should just be to verify that the RC has have Operating Processes, Procedures, and Plans. The sub-measurements are not measurements at all. There should be the single measurement to verify the Operating Processes, Procedures, and Plans have been developed and address the sub-requirements. This really points out the problem with making the criteria that must be considered in the Operating Processes, Procedures, and Plans sub-requirements in the first place. They aren't requirements of any sort. They represent criteria. The drafting team should consider making them a bulleted list without the Rs, then the drafting team won't feel compelled to write sub-measures that don't measure anything.
Response: The RC SDT thanks you for your comment. . The RC SDT modified M1 deleting “System Operators” and the submeasures were removed and included only in the requirement. As the list includes topics for every RC is required to address, these are mandatory and should be numbered rather than bulleted.		
MRO NERC SDTandards Review Subcommittee	No	Measure 1 appears to add to the requirement. Requirement 1 does not mention anything about System Operators yet the measurement does. The measurement should just be to verify that the RC has have Operating Processes, Procedures, and Plans. The sub-measurements are not measurements at all. There should be the single measurement to verify the Operating Processes, Procedures, and Plans have been developed and address the sub-requirements. This really points out the problem with making the criteria that must be considered in the Operating Processes, Procedures, and Plans sub-requirements in the first place. They aren't requirements of any sort. They represent criteria. The drafting team should consider making them a bulleted list without the Rs, then the drafting team won't feel compelled to write sub-measures that don't measure anything. We do not agree with M6 because we don't agree with R6.
Response: The RC SDT thanks you for your comment. The RC SDT modified M1 deleting “System Operators” and the submeasures were removed and included only in the requirement. R6: The RC SDT disagrees with your assertion that “RCs may have disagreements and there is no way to require a solution in these types of		

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 15:	Question 15 Comments:
situations". RC's need to coordinate solutions and the revised wording of the requirements R5-R8 will require that.		
Southern Company Transmission	No	15.1 - In M1, delete "for Real-time use".15.2 - Modify the measures to be consistent with changes requested in R1, R2, R4, R4.1 and R5.
Response: The RC SDT thanks you for your comment. The RC SDT modified M1 and deleted "for Real-time use." The measures were revised based on revisions to the requirements (see response to Q14).		
FirstEnergy	No	The measures should be modified per our suggested modifications in question 14.
Response: The RC SDT thanks you for your comment. The measures were revised based on revisions to the requirements (see response to Q14).		
Duke Energy	No	See comment #14 above. Also, Measure M5 is inconsistent with Requirement R5. It should mirror the requirement. Also, need to add the requirement number at the end of each Measure.
Response: The RC SDT thanks you for your comment. See response to question 14. M5 was modified to reflect the entirety of R5 and new R6/M6, R7/M7 and R8/M8 were written for clarity and completeness.		
SERC OC Standards Review Group	Yes and No	15.1 - In M1, delete "System Operator" and "for real-time use".15.2 - Modify the measures to be consistent with changes requested in R1, R2, R4, R4.1 and R5.
Response: The RC SDT thanks you for your comment. The RC SDT modified M1 and deleted both, "System Operators" and "for Real-time use." The measures were revised based on revisions to the requirements (see response to Q14).		
Buckeye Power, Inc.	Yes and No	Abstain
Manitoba Hydro	Yes	

Organization	Question 15:	Question 15 Comments:
NPCC	Yes	
Ameren	Yes	
Reliability Coordinator Comment Working Group	Yes	
Northern California Power Agency	Yes	
CU of Springfield	Yes	
Entergy Services, Inc	Yes	
Salt River Project	Yes	
US Bureau of Reclamation	Yes	
PJM Interconnection	Yes	
Bonneville Power Administration	Yes	

Organization	Question 15:	Question 15 Comments:
AEP	Yes	
American Transmission Company		Abstain

**16. Do you agree with the Violation Severity Levels proposed in IRO-014-2 as shown in the posted Standard and Implementation Plan?
If not, please explain in the comment area.**

Summary Consideration: Several commenters suggested that the High and Severe VSLs for R2 contradicted the requirement. The RC SDT agreed and removed the "nots" from the VSLs to correct this error.

The VSL for R4 was originally proposed as a binary requirement with only a Lower VSL – since that time, a determination was made that noncompliance with any binary requirement must be classified a Severe VSL – thus the VSL for R4 was changed from Lower to Severe.

Several commenters had suggested revisions for the VSLs for R6. This requirement was imported from IRO-016 and several commenters suggested expanding the set of requirements regarding the Implementation Plan. The RC SDT expanded the requirements to 4 separate requirements and developed VSLs for these requirements (R5-R8). This made some of the comments on the VSLs moot.

Organization	Question 16:	Question 16 Comments:
Independent Electricity System Operator - Ontario	No	R2: the High and Severe VSLs contradict with the requirement. We believe all of the "nots" should be removed. R6: The Low VSL should be a High since not agreeing to a plan but implementing one that has not been agreed to is a high violation of the requirement. The VSLs for R1 may need to be revised if our comments on M1 are adopted.
Response: The RC SDT thanks you for your comment. We have revised the VSL based on your comment. R6 – The requirements were revised and additional requirements were added for clarity. The VSLs were written based on the revised requirements. The VSL for R1 was unchanged as R1 remained unchanged.		
MRO NERC SDTandards Review	No	For R2, the High and Severe VSLs contradict the requirement. We believe all of the "nots" should be removed. We don't agree with the VSLs in R4 since we believe R4 should be struck.

Organization	Question 16:	Question 16 Comments:
Subcommittee		The Lower VSL for R6 should not even be a violation unless the impact was negative. If the RC implemented a different mitigation plan and resolved the issue, then the RC was likely correct to disagree.
Response: The RC SDT thanks you for your comment. We have revised the VSL for R2 per your suggestion. R4 – R4 remains in the standard R6 - The requirements were revised and additional requirements were added for clarity. The VSLs were written based on the revised requirements.		
Southern Company Transmission	No	16.1 - In R2, severe should be "... and no action was taken by the RC". 16.2 - In R5, severe should also include "... or that the RC failed to operate as though the problem existed." 16.3 - Modify the VSLs to be consistent with changes requested in R1, R2, R4, R4.1 and R5.
Response: The RC SDT thanks you for your comment. 16.1 The requirement is to have agreed to plans and to distribute the plans. Other requirements address the actions to be taken. 16.2 The requirements were revised and additional requirements were added for clarity. The VSLs were written based on the revised requirements. 16.3 The VSLs were revised based on stakeholder comments and revised requirements.		
FirstEnergy	No	The VSL should be modified per our suggested modifications in question 14.
Response: The RC SDT thanks you for your comment. The VSLs were revised to reflect revisions to the requirements.		
Duke Energy	No	See comments #14 and #15 above - VSLs need to be revised to correspond to the revised Requirements and Measures.
Response: The RC SDT thanks you for your comment. Please see responses to comment 14 and 15 above. VSLs were revised to reflect		

Organization	Question 16:	Question 16 Comments:
revised requirements.		
ISO/RTO Council Standards Review Subcommittee	No	For R2, the High and Severe VSLs contradict the requirement. We believe all of the "notes" should be removed. We don't agree with the VSLs in R4 since we believe R4 should be struck. The Lower VSL for R6 should not even be a violation unless the impact was negative. If the RC implemented a different mitigation plan and resolved the issue, then the RC was likely correct to disagree.
Response: The RC SDT thanks you for your comment. The VSL for R2 was revised per your suggestion. R4 – R4 remains in the standard. The VSLs were revised to reflect that noncompliance with a binary requirement is Severe. R6 – The requirements were revised and additional requirements were added for clarity. The VSLs were written based on the revised requirements.		
SERC OC Standards Review Group	Yes and No	16.1 - In R2, severe should be "no action was taken by the RC". 16.2 - In R5, severe should also include that the RC failed to operate as though the problem existed. 16.3 - Modify the VSLs to be consistent with changes requested in R1, R2, R4, R4.1 and R5.
Response: The RC SDT thanks you for your comment. 16.1 - The requirement is to have agreed to plans and to distribute the plans. Other requirements address the actions to be taken. 16.2 - The requirements were revised and additional requirements were added for clarity. The VSLs were written based on the revised requirements. 16.3 - The VSLs were revised based on stakeholder comments and revised requirements.		
Buckeye Power, Inc.	Yes and No	abstain

Organization	Question 16:	Question 16 Comments:
US Bureau of Reclamation	Yes	
Entergy Services, Inc	Yes	
Salt River Project	Yes	
Bonneville Power Administration	Yes	
AEP	Yes	
PJM Interconnection	Yes	
Manitoba Hydro	Yes	
NPCC	Yes	
Ameren	Yes	
CU of Springfield	Yes	
Reliability Coordinator Comment Working Group	Yes	
Northern California Power Agency	Yes	

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 16:	Question 16 Comments:
American Transmission Company		Abstain

17. Do you agree with the RC SDT recommendation to retire IRO-015-1 and move the requirements into IRO-014-2? If not, please explain in the comment area.

Summary Consideration: Stakeholders agree with the proposed revisions.

Organization	Question 17:	Question 17 Comments:
Buckeye Power, Inc.	Yes and No	abstain
SERC OC Standards Review Group	Yes	17.1 - We agree with the recommendation to retire IRO-015-2
Response: The RC SDT thanks you for your comment.		
Southern Company Transmission	Yes	17.1 - We agree with the recommendation to retire IRO-015-2.
Response: The RC SDT thanks you for your comment.		
Manitoba Hydro	Yes	
NPCC	Yes	
Ameren	Yes	
Independent Electricity System Operator - Ontario	Yes	

Organization	Question 17:	Question 17 Comments:
CU of Springfield	Yes	
Reliability Coordinator Comment Working Group	Yes	
Northern California Power Agency	Yes	
MRO NERC SDTandards Review Subcommittee	Yes	
ISO New England Inc.	Yes	
Entergy Services, Inc	Yes	
Salt River Project	Yes	
US Bureau of Reclamation	Yes	
PJM Interconnection	Yes	
FirstEnergy	Yes	
Bonneville Power	Yes	

Organization	Question 17:	Question 17 Comments:
Administration		
Duke Energy	Yes	
AEP	Yes	
ISO/RTO Council Standards Review Subcommittee	Yes	
American Transmission Company		Abstain

18. Do you agree with the revisions to IRO-016-1 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Summary Consideration: Stakeholders agree with the concept of moving the requirements of IRO-016-1 into IRO-014-2. Some commenters did not agree with the wording of the new requirements in IRO-014 that were formerly in IRO-016. The RC SDT reviewed the Implementation Plan for IRO-016 and its requirements and made some revisions to the requirements listed in IRO-014-2. There are now 4 requirements formed to cover the intent of the requirement transferred from IRO-016:

R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify impacted Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

R6. Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators, [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan, [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

Organization	Question 18:	Question 18 Comments:
Duke Energy	No	See comment #14 above regarding re-write needed for Requirement R6 of IRO-014-2.
Response: The RC SDT thanks you for your comment. Please see response in #14 above.		
MRO NERC SDTandards Review Subcommittee	Yes	We do agree with moving the requirement. However, the drafting team needs to revisit the wording of the requirement. The new wording is much more confusing. Until we reviewed IRO-016-2, it was not clear at all that R6 in IRO-014 was attempting to mimic R1 and its sub-requirements in IRO-016-2.

Organization	Question 18:	Question 18 Comments:
Response: The RC SDT thanks you for your comment. The RC SDT reviewed the Implementation Plan for IRO-016 and its requirements and made some revisions to the requirements listed in IRO-014-2. There are now 4 requirements: R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify impacted Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R6. Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators, [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan,. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]		
Southern Company Transmission	Yes	18.1 - We agree with the recommendation to retire IRO-016-2.
Response: The RC SDT thanks you for your comment.		
Buckeye Power, Inc.	Yes and No	Abstain
SERC OC Standards Review Group	Yes	18.1 - We agree with the recommendation to retire IRO-016-2
Response: The RC SDT thanks you for your comment.		
ISO/RTO Council Standards Review	Yes	We do agree with moving the requirement. However, the drafting team needs to revisit the wording of the requirement. The new wording is much more confusing. Until we reviewed IRO-016-2, it was not clear at all that R6 in IRO-014 was attempting to mimic R1 and its sub-requirements in IRO-016-

Organization	Question 18:	Question 18 Comments:
Subcommittee		2.
Response: The RC SDT thanks you for your comment. The RC SDT reviewed the Implementation Plan for IRO-016 and its requirements and made some revisions to the requirements listed in IRO-014-2. There are now 4 requirements: R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify impacted Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R6. Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators, [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan,. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]		
Manitoba Hydro	Yes	
NPCC	Yes	
Ameren	Yes	
Independent Electricity System Operator - Ontario	Yes	
CU of Springfield	Yes	
Reliability Coordinator Comment Working	Yes	

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 18:	Question 18 Comments:
Group		
Northern California Power Agency	Yes	
ISO New England Inc.	Yes	
Entergy Services, Inc	Yes	
MEAG Power		
Salt River Project	Yes	
US Bureau of Reclamation	Yes	
PJM Interconnection	Yes	
FirstEnergy	Yes	
Bonneville Power Administration	Yes	
AEP	Yes	
American Transmission Company		Abstain

19. If you have any other comments, not expressed in questions above, on this set of revisions, please provide your comments here.

Summary Consideration: The RC SDT received comments that COM-001-2, R5 should be retired upon regulatory approval. The RC SDT will propose the earliest possible retirement date – the first day of the first calendar quarter following applicable regulatory approval, or in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter following BOT adoption.

Organization	Question 19:
Southern Company Transmission	19.1 - We suggest the effective date for the retirement of R5 (NERC Net Security Policy) in the COM-001-2 Standard should be effective immediately upon regulatory approval. As written, the Policy is unenforceable, contains no measures and is not germane to BES Reliability.
Response: The RC SDT thanks you for your comment. We concur and will request an effective date as you suggest.	
SERC OC Standards Review Group	19.1 - We suggest the effective date for the retirement of R5 (NERC Net Security Policy) in the COM-001-2 Standard should be effective immediately upon regulatory approval. As written, the Policy is unenforceable, contains no measures and is not germane to BES Reliability
Response: The RC SDT thanks you for your comment. We concur and will request an effective date as you suggest.	
Entergy Services, Inc	Overall, we think the coordinated set of standards being developed by the RTOSDT and IROLSDT are good for reliability, crisp, and tightens up the reliability concepts.
Response: The RC SDT thanks you for your comment.	
MEAG Power	My other concerns are addressed in the comments of the SERC OC Standards Review Group.
Response: The RC SDT thanks you for your comment.	
Salt River Project	I appreciate the new comment form in Word version. his allows me to comment on each requirement specifically addressing the requirement, measure or the VSL's

Organization	Question 19:
Response: The RC SDT thanks you for your comment.	
#2 Standards Interface Subcommittee/Compliance Elements Development Resource Pool	Standard – COM-001-2 Telecommunications: Requirement 1: Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall operationally test, on a quarterly basis at a minimum, alternative telecommunications facilities to ensure the availability of their use when normal telecommunications facilities fail. Proposed Measure: Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall provide evidence that it operationally tested, on a quarterly basis at a minimum, alternative telecommunications facilities to ensure the availability of their use when normal telecommunications facilities fail. SDT Proposed Lower VSL The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to operationally test within the last quarter. CEDRP Proposed Lower VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator performed operational testing of alternative telecommunications, but did not perform a test in one of the previous four quarters. SDT Proposed Moderate VSL: The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to operationally test within the last 2 quarters. CEDRP Proposed Moderate VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator performed operational testing of alternative telecommunications, but did not perform a test in two of the previous four quarters. SDT Proposed High VSL: The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to operationally test within the last 3 quarters. CEDRP Proposed High VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator performed operational testing of alternative telecommunications, but did not perform a test in three of the previous four quarters.

Organization	Question 19:
	SDT Proposed Severe VSL: The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to operationally test within the last 4 quarters. CEDRP Proposed Severe VSL: The Responsible Entity failed to operationally test alternative telecommunications every quarter on more than three separate occasions (i.e. more than any three different quarters). ===== Standard – COM-001-2 R2 Telecommunications Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities of the failure of its normal telecommunications facilities, and shall verify that alternate means of telecommunications are functional. Proposed Measure: Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide evidence that it notified impacted entities of failure of their normal telecommunications facilities, and verified the alternate means of telecommunications were functional. Discussion - This requirement needs to be re-written to be more clearly define who the entities are that are “impacted.” The key attributes appear to be notification of ALL (communication) impacted entities (possible omission if some, but not all are not notified). The requirement does not give any guidance on the “verification” side – this is a problem, one entity can interpret that to mean “we looked and it was working”, another may be to verify with all impacted entities that alternate communication is working. We suggest this requirement needs a little more clarification. Response: The RC SDT believes that entities should contact others when their normal communication capability is lost. For example, the normal phone line could be cut and someone trying to contact that entity may only get a busy signal and have no idea that alternate communications is necessary. We have revised the requirement to place time bounds on outages that require notification. The requirement was rewritten to: R2. Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure (30 minutes or longer) of its normal interpersonal communications capabilities. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i> The CEDRP does not feel it can write a valid VSL for this requirement as currently worded. SDT Proposed Lower VSL:

Organization	Question 19:
	The Reliability Coordinator, Transmission Operator or Balancing Authority notified all impacted entities of the failure of their normal telecommunications facilities, but failed to verify the alternate means of telecommunications are functional. CEDRP Proposed Lower VSL: See Discussion SDT Proposed Moderate VSL: The Reliability Coordinator, Transmission Operator or Balancing Authority notified some, but not all, impacted entities of the failure of their normal telecommunications facilities, and failed to verify the alternate means of telecommunications are functional. CEDRP Proposed Moderate VSL: See Discussion: SDT Proposed High VSL: N/A CEDRP Proposed High VSL: See Discussion SDT Proposed Severe VSL: The Reliability Coordinator, Transmission Operator or Balancing Authority failed to notify any impacted entities of the failure of their normal telecommunications facilities, and failed verify the alternate means of telecommunications are functional. CEDRP Proposed Severe VSL: See Discussion Standard – COM-001-2 R3 Telecommunications Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider shall use English as the language for all inter-entity Bulk Electric System (BES) reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected BES. Transmission Operators and Balancing Authorities may use an alternate language for internal operations. Proposed Measure: The Reliability Coordinator, Transmission Operator or Balancing Authority shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, that will be used

Organization	Question 19:
	to determine that personnel used English as the language for all inter-entity BES reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected BES. NOTE: OK with this as is because the requirement and VSLs have been re-written, will be removed from this standard shortly, and included in the new COM-003-1 standard. Response: Thank you for your comment. SDT Proposed Severe VSL: The Responsible Entity failed to provide evidence of concurrence to use a language other than English for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. CEDRP Proposed Severe VSL: The Responsible Entity failed to provide evidence of the concurrence to use a language other than English for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. ===== Standard – COM-001-2 R4 Telecommunications Each Distribution Provider and Generation Operator shall have telecommunications facilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information. Proposed Measure: Each Distribution Provider and Generation Operator has telecommunications facilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information. “has” telecomm with TOP and BA Discussion – Telecommunication Facilities is ambiguous and is not included in the NERC glossary of terms – the CEDRP recommend deleting the word “facilities” from the requirement and measure and leaving it just as “telecommunications” with its TOP and BA . Response: The term “telecommunications facilities” was replaced with “interpersonal communications

Organization	Question 19:
	capabilities" to clarify the intent of the requirement. SDT Proposed High VSL: N/A CEDRP Proposed High VSL: The Responsible Entity failed to establish telecommunications with either their Balancing Authority OR Transmission Operator for the exchange of Interconnection and operating information. SDT Proposed Severe VSL: The Distribution Provider or Generation Operator failed to have telecommunications facilities with its Transmission Operator and Balancing Authority CEDRP Proposed Severe VSL: The Responsible Entity failed to establish telecommunications with their Balancing Authority AND Transmission Operator for the exchange of Interconnection and operating information. 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? Yes, considering the wording of the requirement as written. More specifically, the word "have" as used in the requirement is a bit vague. A better choice could have been, "established and maintains." Response: Thank you for your comment. ===== Standard: COM-002-3 Communications and Coordination
	Response: The RC SDT thanks you for your comments. Please see responses embedded above. In the future, please do not submit comments in this format. It is extremely burdensome on the drafting team in trying to respond to the comments. Please answer each question individually. If you encounter difficulty, please contact NERC for assistance.
Standards Interface Subcommittee/Compliance Elements Drafting	Standard – IRO-001 R1 The Reliability Coordinator shall act or direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts. [Violation Risk

Organization	Question 19:
	Factor: High] [Time Horizon: Real-time Operations and Same Day Operations] Proposed Measure Each Reliability Coordinator shall have evidence that it acted, or issued directives, to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts within its Reliability Coordinator Area Discussion – 1. As currently worded it can be interpreted that any time an event occurs the RC would be in violation of the standard simply because they had failed “to prevent” an event. 2. This requirement does not have a “timing” element included, although it implies timing based on the “duration of the event”. Including that “duration of the event” is problematic – it appears to imply that human intervention may provide a more timely response than relay operation, we would suggest more clarification about what the “duration” element of the requirement is intended to address (e.g. generation re-dispatch?). 3. There also appears to be a “quality” element included based on the mitigation of magnitude of the event. As a result we believe that timeliness, effectiveness and communication should be the basis of the VSLs. 4. The VSLs as differentiate between directing actions and acting. Practically, there is no difference. The RC is still giving the directive. It is just a matter of who is carrying it out. This is not a valid basis for differentiating between VSLs. We suggest the VSLs be defined based on actual system impact (i.e. Was the RC acting or directing actions to prevent or to mitigate?) and to either modify the requirement to remove timing aspects or to add the timing aspects to the VSLs. Response: 1. The RC SDT does not agree that there would be a violation any time an event occurred. The RC should always be looking ahead. Even though events can occur that were not foreseeable or due to catastrophic failures of system equipment. 2. The intent of the phrase of “duration of the event” is to emphasize that there are actions that can be taken to shorten the duration of an event. These include ordering redispatch and system reconfiguration (including load shedding) to mitigate an Adverse Reliability Impact, thus shortening the event and its impact on the interconnection. 3. The VSL has been re-written to include only a Severe VSL. 4. We agree and have revised the VSL to only have a Severe VSL. SDT Proposed High VSL IRO-001 R1

Organization	Question 19:
	The Reliability Coordinator failed to act to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts. CEDRP Proposed VSL The Reliability Coordinator failed to act to prevent the magnitude or duration of Adverse Reliability Impacts. SDT Proposed Severe VSL IRO-001 R1 The Reliability Coordinator failed to act and direct actions to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts CEDRP Proposed VSL The Reliability Coordinator failed to act and direct actions to mitigate the magnitude or duration of Adverse Reliability Impacts CAE Resource Pool Comments The Enforcement Authority Statement, “NERC shall be responsible for compliance monitoring of the Regional Entity.” Is not clear, if it is intended to encompass Regional Entities that perform RC functions is should be clearly stated, if not it should not be included in the Enforcement Authority section. ===== Standard – IRO-001 R2 Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers, and Purchasing-Selling Entities shall act without intentional delay to comply with Reliability Coordinator directives unless such actions would violate safety, equipment, or regulatory or statutory requirements. [Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations] Proposed Measure Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, or Purchasing-Selling Entity shall have evidence that it acted without delay to comply with the Reliability Coordinator’s directives unless such actions would violate safety, equipment, or regulatory or statutory requirements. Discussion - The team would suggest “intentional delay” be eliminated from the requirement – e.g. “shall act to...”). To act with an intentional delay represents a willful act to disregard the requirement. Willful disregard of requirements is one of the factors that the enforcement authority uses to magnify penalties. Requirements should not include attempts to avoid willful disregard of the requirement.

Organization	Question 19:
	The measure and VSLs do not consider the exceptions for not following the RC objective. The drafting team should consider combining requirements R2 and R3. Thus, one VSL would become failure to notify the RC of the inability to comply. The drafting team could consider applying the numerical category of VSLs for some directives such as an order to redispach. Obviously, it would not work well if the directive was to reconfigure the system. Response: The term "intentional delay" was eliminated from the standard as you suggested. The VSLs were revised to reflect the requirement. SDT Proposed Moderate ~~Moderate~~ High VSL The responsible entity followed the Reliability Coordinators directive unless such actions would violate safety, equipment, or regulatory or statutory requirements with a delay. ~~not caused by equipment problems.~~ CEDRP Proposed VSL IRO-001 R2 The team does not agree that this is a valid VSL. SDT Proposed High VSL ~~The responsible entity followed the majority of the Reliability Coordinators directive but did not fully follow the directive because it would violate safety, equipment, statutory or regulatory requirements.~~ CEDRP Proposed VSL IRO-001 R2 The team does not agree that this is a valid VSL. The word majority implies some ability to numerically measure the response to the directive. Thus, the drafting team should consider applying the numerical category of the VSL guidelines. SDT Proposed Severe VSL ~~The responsible entity did not follow the Reliability Coordinators directive. The responsible entity did not follow the Reliability Coordinators directive, the directive would not have violated safety, equipment, regulatory, or statutory requirements, and responsible entity did not communicate the inability to follow the directive to the Reliability Coordinator.~~ CEDRP Proposed VSL IRO-001 R2 The responsible entity did not follow the Reliability Coordinators directive, the directive would not have violated safety, equipment, regulatory, or statutory requirements, and responsible entity did not communicate the inability to follow the directive to the Reliability Coordinator.

Organization	Question 19:
	===== Standard - IRO-001 R3 The Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider or Purchasing-Selling Entity shall immediately confirm the ability to comply with the directive or inform the Reliability Coordinator upon recognition of the inability to perform the directive. [Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations] Proposed Measure Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, or Purchasing-Selling Entity shall have evidence that it confirmed its ability to comply with the Reliability Coordinator's directives, or if for safety, equipment, regulatory or statutory requirements it could not comply, informed the Reliability Coordinator upon recognition of the inability to comply. Discussion – The requirement appears to be based on communication and can be problematic by including the requirement to immediately confirm the ability to comply, a directive can be issued to one entity or several entities at one time (e.g. conference call, all call, electronic notification) that may create several issues when attempting to process all confirmations, the requirement language presents a risk of being found out of compliance for following a directive but not providing an “immediate” confirmation to the RC. The CEDRP believes it to be a reasonable expectation that all entities will comply with reliability directives and notification should be made only on exception. The SDT should consider combining this requirement with R2. Response: The phrase “immediately confirm the ability to comply” was removed from the requirement. The new wording is: R3. Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, or Purchasing-Selling Entity shall inform its Reliability Coordinator upon recognition of its inability to perform the directive. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations]</i> SDT Proposed Lower VSL IRO-001 R3 The responsible entity failed to immediately confirm the ability to comply with the directive issued by the Reliability Coordinator.

Organization	Question 19:
	CEDRP Proposed VSL See above discussion note ===== Standard - IRO-001 R4 Each Reliability Coordinator that identifies an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area shall notify, without intentional delay, all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] Proposed Measure Each Reliability Coordinator shall have evidence that it notified, without intentional delay, all impacted Transmission Operators and balancing Authorities in its Reliability Coordinator Area when it identified a real or potential threat with Adverse Reliability Impacts, within its Reliability Coordinator Area. Discussion – To act with an intentional delay represents a willful act to disregard the requirement. Willful disregard of requirements is one of the factors that the enforcement authority uses to magnify penalties. Requirements should not include attempts to avoid willful disregard of the requirement. This requirement appears to fit the numerical category of the VSL guidelines best. Response: The term “intentional delay” was eliminated from the standard as you suggested. The VSLs were revised as you suggested. SDT Proposed Lower VSL IRO-001 R4 N/A CEDRP Proposed VSL The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify 25% or less of the Transmission Operators and Balancing Authorities within its Reliability Coordination Area. SDT Proposed Moderate VSL IRO-001 R4 N/A CEDRP Proposed VSL

Organization	Question 19:
	The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify more than 25% but less than or equal to 50% of the Transmission Operators and Balancing Authorities within its Reliability Coordination Area. SDT Proposed High VSL IRO-001 R4 N/A CEDRP Proposed VSL The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify more than 50% but less than or equal to 75% of the Transmission Operators and Balancing Authorities within its Reliability Coordination Area. SDT Proposed Severe VSL: IRO-001 R4 The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. CEDRP Proposed Severe VSL: The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify more than 75% of the Transmission Operators and Balancing Authorities within its Reliability Coordination Area. ===== Standard - IRO-001 R5 Each Reliability Coordinator who identifies an expected or actual threat with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify, without intentional delay, all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when the transmission problem has been mitigated. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] Proposed Measure Each Reliability Coordinator shall have evidence that it notified, without intentional delay, all impacted Transmission Operators and balancing Authorities in its Reliability Coordinator Area when the real or potential threat with Adverse Reliability Impacts within its Reliability Coordinator Area has been mitigated.

Organization	Question 19:
	Discussion – To act with an intentional delay represents a willful act to disregard the requirement. Willful disregard of requirements is one of the factors that the enforcement authority uses to magnify penalties. Requirements should not include attempts to avoid willful disregard of the requirement. Measure 5 is written implying that there is an Adverse Reliability Impact. The drafting team should consider wording the measurement to consider that there may not be an Adverse Reliability Impact requiring a directive. The Commission in paragraph 27 of the VSL order has stated that multiple VSLs are preferable where possible. Suggest applying the numerical category of the VSL Guidelines based on the number of entities notified. Response: The term “intentional delay” was eliminated from the standard as you suggested. The VSLs were revised per your suggestion. SDT Proposed Lower VSL: IRO-001 R5 N/A CEDRP Proposed Lower VSL: The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify 25% or less of the impacted Transmission Operators and Balancing Authorities within its Reliability Coordination Area that the Adverse Reliability Impact had been mitigated. SDT Proposed Moderate VSL: IRO-001 R5 N/A CEDRP Proposed Moderate VSL: The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify more than 25% but less than or equal to 50% of the impacted Transmission Operators and Balancing Authorities within its Reliability Coordination Area that the Adverse Reliability Impact had been mitigated. SDT Proposed High VSL: IRO-001 R5 N/A CEDRP Proposed High VSL: The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify more than 50% but less than or equal to 75% of the

Organization	Question 19:
	impacted Transmission Operators and Balancing Authorities within its Reliability Coordination Area that the Adverse Reliability Impact had been mitigated. SDT Proposed Severe VSL: IRO-001 R5 The Reliability Coordinator failed to notify all impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated. CEDRP Proposed Severe VSL: The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify more than 75% of the impacted Transmission Operators and Balancing Authorities within its Reliability Coordination Area that the Adverse Reliability Impact had been mitigated. ===== Standard – IRO-002-2 R1 Each Reliability Coordinator shall determine the data requirements to support its reliability coordination tasks and shall request such data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities, or adjacent Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] Proposed Measure Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a letter to Transmission Operators, Balancing Authorities, Transmission Owners, Generator Owners, Generator Operators, and Load-Serving Entities, or adjacent Reliability Coordinators, or other equivalent evidence that will be used to confirm that the Reliability Coordinator has requested the data required to support its reliability coordination tasks. Discussion – The VSLs attempt to measure the quality of the data requirements. They require the compliance auditor to judge if another RC has material impact and what data is administrative and what data is substantial. Given the typical length of a compliance audit, it is doubtful that the compliance auditor can make these types of judgments about the quality of the data and the material impact of another RC. The drafting team should consider applying numerical category of VSLs based on the number of entities the data request is made from. It is interesting that the measure also does not require

Organization	Question 19:
	any documentation of a data specification. Response: The requirement was retired by the work of the IROLSDT. It is no longer in the standard. SDT Proposed Lower VSL: The Reliability Coordinator demonstrated that it 1) determined its data requirements and requested that data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators with a material impact on the Bulk Electric System in its Reliability Coordination Area but did not request the data from Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators with minimal impact on the Bulk Electric System in its Reliability Coordination Area or 2) determined its data requirements necessary to perform its reliability functions with the exceptions of data that may be needed for administrative purposes such as data reporting. CEDRP Proposed Lower VSL: IRO-002-2 R1 The Reliability Coordinator failed to request data to support its reliability coordination tasks from 25% or less of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities, or adjacent Reliability Coordinators. SDT Proposed Moderate VSL: The Reliability Coordinator demonstrated that it determined the majority but not all of its data requirements necessary to support its reliability coordination functions and requested that data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators. CEDRP Proposed Moderate VSL: IRO-002-2 R1 The Reliability Coordinator failed to request data to support its reliability coordination tasks from more than 25% but less than or equal to 50% of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities, or adjacent Reliability Coordinators. SDT Proposed High VSL: The Reliability Coordinator demonstrated that it determined 1) some but less than the majority of its data requirements necessary to support its reliability

Organization	Question 19:
	coordination functions and requested that data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators Or 2) all of its data requirements necessary to support its reliability coordination functions but failed to demonstrate that it requested data from two of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators. CEDRP Proposed High VSL: IRO-002-2 R1 The Reliability Coordinator failed to request data to support its reliability coordination tasks from more than 50% but less than or equal to 75% of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities, or adjacent Reliability Coordinators. SDT Proposed Severe VSL: The Reliability Coordinator failed to demonstrate that it 1) determined its data requirements necessary to support its reliability coordination functions and requested that data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators Or 2) requested the data from three or more of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators. CEDRP Proposed Severe VSL: IRO-002-2 R1 The Reliability Coordinator failed to request data to support its reliability coordination tasks from more than 75% of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities, or adjacent Reliability Coordinators,

Organization	Question 19:
	Or, The Reliability Coordinator failed to determine data requirements to support its reliability coordination tasks. Standard – IRO-002-2 R2 Each Reliability Coordinator shall have the authority to veto planned outages to analysis tools, including final approvals for planned maintenance. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] Proposed Measure Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a documented procedure or equivalent evidence that will be used to confirm that the Reliability Coordinator has the authority to veto planned outages to analysis tools, including final approvals for planned maintenance as specified in Requirement 2. Is this requirement needed? R1 IRO-001-2 requires the RC to mitigate Adverse Reliability Impacts. R2 IRO-001-2 requires responsible entities to comply with the RC directives. Wouldn't the RC thus have the right to cancel all types of outages (i.e. analysis tools, transmission equipment, etc). FERC has stated in paragraph 112 of Order 693-A that an RC does not derive their authority from agreements but rather from FERC's approval of the standards. Barring the team's decision to remove this requirement, the Severe VSL is confusing. We have suggested different wording. Response: While the RC SDT agrees that the other requirements should cover this subject, this is a direct response to the 2003 blackout and is included here. We have revised the Severe VSL to reflect the revised requirement. SDT Proposed Severe VSL IRO-002-2 R2 Reliability Coordinator approval is not required for planned maintenance or planned outages. CEDRP Proposed VSL Reliability Coordinator does not approve planned maintenance or planned outages.

Organization	Question 19:
	===== Standard – IRO-014-2 R1 No comments ===== Standard – IRO-014-2 R2 R2. Each Reliability Coordinator's Operating Procedure, Process, or Plan that requires one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) shall be: [Violation Risk Factor: Lower] [Time Horizon: Real-time Operations and Operations Planning] R2.1. Agreed to by all the Reliability Coordinators required to take the indicated action(s). R2.2. Distributed to all Reliability Coordinators that are required to take the indicated action(s). Proposed Measure M2. The Reliability Coordinator shall have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were: M2.1 Agreed to by all the Reliability Coordinators required to take the indicated action(s). M2.2 Distributed to all Reliability Coordinators that are required to take the indicated action(s). Discussion – The High and Severe VSLs appear to use “not” incorrectly. Response: We agree and have revised the VSLs. SDT Proposed Moderate VSL: IRO-014-2 R2 The Reliability Coordinator ~~failed to~~ did not have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were distributed to all Reliability Coordinators that are required to take action. CEDRP Proposed Moderate VSL: IRO-014-2 R2 The Reliability Coordinator did not have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were distributed to all Reliability Coordinators that are required to take

Organization	Question 19:
	action. SDT Proposed High VSL: The Reliability Coordinator ~~failed to~~ did not have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were ~~not~~ agreed to by all Reliability Coordinators that are required to take action CEDRP Proposed High VSL: The Reliability Coordinator did not have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were agreed to by all Reliability Coordinators that are required to take action SDT Proposed Severe VSL: The Reliability Coordinator ~~failed to~~ did not have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were ~~not~~ agreed to by all Reliability Coordinators that are required to take action and were ~~not~~ distributed to all Reliability Coordinators that are required to take action CEDRP Proposed Severe VSL: The Reliability Coordinator did not have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were agreed to by all Reliability Coordinators that are required to take action and were distributed to all Reliability Coordinators that are required to take action ===== Standard – IRO-014-2 R3 [Response: The SDT appreciates the comments. To better emphasize the distinction, the SDT decided to underline the “and” and the “or”.] Requirement (including sub-requirements) R3. The Reliability Coordinator shall make notifications and exchange reliability-related information with impacted Reliability Coordinators using its predefined Operating Procedures, Processes, or Plans for conditions that may impact other Reliability Coordinator Areas or other means to accomplish the notifications and exchange of reliability-related information. [Violation Risk Factor: Medium][Time

Organization	Question 19:
	Horizon: Real-time Operations and Operations Planning] Proposed Measure M3. The Reliability Coordinator shall have evidence it made notifications and exchanged reliability–related information with impacted Reliability Coordinators using its predefined Operating Procedures, Processes, or Plans for conditions that may impact other Reliability Coordinator Areas or other means to accomplish the notifications and exchange of reliability-related information. Discussion: The VSLs appear to be appropriate. Since the only difference is the use of the “and” and “or”, we suggest emphasizing those words in bold. We read this more than once before we noticed the difference. Response: We revised the VSL to emphasize the “OR” and “AND” parts. SDT Proposed High VSL: The Reliability Coordinator failed to make notifications or exchange reliability–related information with impacted Reliability Coordinators. CEDRP Proposed High VSL: IRO-014-2 R3 The Reliability Coordinator failed to make notifications or exchange reliability–related information with impacted Reliability Coordinators. SDT Proposed Severe VSL: The Reliability Coordinator failed to make notifications and exchange reliability–related information with impacted Reliability Coordinators. CEDRP Proposed Severe VSL: IRO-014-2 R3 The Reliability Coordinator failed to make notifications and exchange reliability–related information with impacted Reliability Coordinators. ===== Standard – IRO-014-2 R4 R4. The Reliability Coordinator shall participate in agreed upon conference calls and other communication forums with impacted Reliability Coordinators. [Violation Risk Factor: Lower][Time

Organization	Question 19:
	Horizon: Real-time Operations] The frequency of these conference calls shall be agreed upon by all involved Reliability Coordinators and shall be at least weekly. Proposed Measure M4. The Reliability Coordinator shall have evidence it participated in agreed upon (at least weekly) conference calls and other communication forums with impacted Reliability Coordinators. Discussion – This requirement is purely administrative and probably does not rise to a level of a reliability standard requirement. It is in essence redundant, with R1.1 IRO-014-2? It appears R1.1 addresses the same information that would be expected to be discussed in a weekly conference call. Should the drafting team disagree and retain this requirement, please consider applying multiple VSLs based on how often the RC participates in conference calls, how many they missed, or how many impacted RCs they participated in conference calls with. Response: R1.1 is a sub-requirement of R1 which requires the reliability coordinator “to have” procedures, processes, or plans, and R4 requires “participation.” R4 requires participation on calls. If the RC fails to participate, that is a violation of the requirement, making it a binary requirement with only one VSL. SDT Proposed Lower VSL: The Reliability Coordinator failed to participate in agreed upon (at least weekly) conference calls and other communication forums with impacted Reliability Coordinators. CEDRP Proposed Lower VSL: IRO-014-2 R4 The Reliability Coordinator participated in agreed upon conference calls and other communication forums with impacted Reliability Coordinators bi-weekly, Or the Reliability Coordinator failed to participate in one weekly conference call, Or the Reliability Coordinator agreed to participate in conference calls with 25% or less of the impacted Reliability Coordinators. SDT Proposed Moderate VSL: N/A

Organization	Question 19:
	CEDRP Proposed Moderate VSL: IRO-014-2 R4 The Reliability Coordinator participated in agreed upon conference calls and other communication forums with impacted Reliability Coordinators every third week, Or the Reliability Coordinator failed to participate in two weekly conference calls, Or the Reliability Coordinator agreed to participate in conference calls with more than 25% but less than or equal to 50% of the impacted Reliability Coordinators. SDT Proposed High VSL: N/A CEDRP Proposed High VSL: IRO-014-2 R4 The Reliability Coordinator participated in agreed upon conference calls and other communication forums with impacted Reliability Coordinators fourth week, Or the Reliability Coordinator failed to participate in three weekly conference calls, Or the Reliability Coordinator agreed to participate in conference calls with more than 50% but less than or equal to 75% of the impacted Reliability Coordinators. SDT Proposed Severe VSL: N/A CEDRP Proposed Severe VSL: IRO-014-2 R4 The Reliability Coordinator participated in agreed upon conference calls and other communication forums with impacted Reliability Coordinators at least every fifth week, Or the Reliability Coordinator failed to participate in four weekly conference calls, Or the Reliability Coordinator failed to agree to participate in any conference calls, Or the Reliability Coordinator agreed to participate in conference calls with more than 75% but less than 100% of the impacted Reliability Coordinators. =====

Organization	Question 19:
	Standard – IRO-014-2 R5 R5. When an expected or actual reliability issue is detected, the Reliability Coordinator shall confirm the existence of the issue with the impacted Reliability Coordinators. ~~Until in the event that the issue cannot be~~ has been proven to not exist, confirmed, each Reliability Coordinator shall operate as though the problem exists. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] Proposed Measure The Reliability Coordinator shall have evidence that, in cases when an expected or actual reliability issue was detected, it has confirmed the existence of the issue with the impacted Reliability Coordinators. Discussion – This requirement is confusing in the way it is worded. We think it is trying to say that the RC should operate as though the reliability issue (should this be Adverse Reliability Impact) is detected until the issue is confirmed not to exist. The way it is worded might imply that if one doesn't confirm it to exist, operate as though it does. This leaves open the interpretation that a confirmation that it doesn't exist must still be operated to as though it does exist. The drafting team should consider splitting operating to prevent from operating to mitigate an existing event in the VSLs. Response: The RC SDT reviewed the Implementation Plan for IRO-016 and its requirements and made some revisions to the requirements listed in IRO-014-2. There are now 4 requirements: R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify impacted Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R6. Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators, [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. [Violation Risk

Organization	Question 19:
	Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan,. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] The RC SDT has revised / created VSLs based on the new requirements. SDT Proposed Lower VSL The Reliability Coordinator that detected an expected or actual reliability issue contacted the other Reliability Coordinator(s) to confirm that there was a problem but could not confirm that the problem existed and failed to operate as though the problem existed. CEDRP Proposed VSL IRO-014-2 R5 N/A SDT Proposed High VSL N/A CEDRP Proposed VSL IRO-014-2 R5 The Reliability Coordinator that detected an expected reliability issue failed to contact the other Reliability Coordinator(s) to confirm that there was a problem. SDT Proposed Severe VSL The Reliability Coordinator that detected an expected or actual reliability issue failed to contact the other Reliability Coordinator(s) to confirm that there was a problem. CEDRP Proposed VSL IRO-014-2 R5 The Reliability Coordinator that detected an actual reliability issue failed to contact the other Reliability Coordinator(s) to confirm that there was a problem. ===== Standard – IRO-014-2 R6 When an expected or actual reliability issue exists and the impacted Reliability Coordinators cannot agree on a mitigation plan, all impacted Reliability Coordinators shall implement the mitigation plan developed by the Reliability Coordinator who has the reliability issue. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] Proposed Measure

Organization	Question 19:
	The affected Reliability Coordinators shall have evidence that, in cases when an expected or actual reliability issue existed and the impacted Reliability Coordinators could not agree on a mitigation plan, they implemented the mitigation plan developed by the Reliability Coordinator who has the reliability issue. Discussion: We are concerned the validity of this requirement, it may force an RC to implement a solution that they don't agree with and ultimately result in an Adverse Reliability Impact. The RC may not agree with the solution because it may not be reliable for their footprint. They need to have the ability to veto mitigation plans that cause Adverse Reliability Impacts in their footprint without incurring a compliance violation. Response: R6 was brought into this standard from IRO-016, R1 and R2. The RC SDT removed the wording relating to the "most conservative solution" because it can not be measured. We are proposing to use the mitigation plan of the RC who is experiencing the issue in cases where an agreed to mitigation plan can not be developed. SDT Proposed Lower VSL The Reliability Coordinator did not agree on a mitigation plan and implemented a plan other than the one developed by the Reliability Coordinator who had the reliability issue. CEDRP Proposed VSL IRO-014-2 R6 N/A SDT Proposed Severe VSL The Reliability Coordinator did not agree on a mitigation plan and did not implement a mitigation plan. CEDRP Proposed VSL IRO-014-2 R6 What if the RC is correct in disagreeing and the mitigation plan would have caused an Adverse Reliability Impact on their system?
	Response: The RC SDT thanks you for your comments. Please see responses embedded above. In the future, please do not submit comments in this format. It is extremely burdensome on the drafting team in trying to respond to the comments. Please answer each question individually. If you encounter difficulty, please contact NERC for assistance.

Consideration of Comments on Reliability Coordination — Project 2006-06

The Reliability Coordination Standard Drafting Team (RC SDT) thanks all commenters who submitted comments proposed revisions to the standards for Project 2006-06: Reliability Coordination. These standards were posted for a 30-day public comment period from July 10, 2009 through August 9, 2009. The stakeholders were asked to provide feedback on the standards through a special Electronic Comment Form. There were 31 sets of comments, including comments from more than 87 different people from over 62 companies representing 8 of the 10 Industry Segments as shown in the table on the following pages.

All comments received have been reformatted so that all comments received in response to the first question appear following the first question, etc. All comments have been posted at the following site:

http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html

Changes to Requirements, Measures and Violation Severity Levels in COM-001-2: Stakeholders suggested that there is a need to define Interpersonal Communications for this standard. The RC SDT is proposing the following definitions:

Interpersonal Communication: Any method that allows two or more individuals to interact, consult, or exchange information.

Alternative Interpersonal Communication: Any method that is able to serve as a substitute for and is redundant to normal Interpersonal Communication and does not utilize the same infrastructure (medium) as normal Interpersonal Communications.

Other stakeholders suggested edits to the requirements. The RC SDT revised the wording of R2 to add clarity and revised R3 to include the phrase “unless dictated by law...” to address legal requirements in some areas.

Several stakeholders suggested removing the mitigation plan from R1 and M1. The RC SDT agreed and made revisions to other measures to reflect changes to the requirements.

Stakeholders suggested adding more VSLs for R2. The RC SDT agreed and drafted additional VSLs reflecting timing and the number of entities notified. Other changes to the VSLs were made based on revisions to the requirements.

Stakeholders suggested removing the Distribution Provider and Generator Operator from the Data Retention section for R1 of COM-001. Since these are not applicable entities in R1, they were removed from Data Retention for the requirement.

The standard and the proposed definitions will be posted for an additional comment period.

Changes to Requirements, Measures and Violation Severity Levels in COM-002-3 Stakeholder consensus has been achieved with respect to the retirement of R1 and M1 from the last approved version of the standard. In response to the majority of the comments, the drafting team has modified and rearranged the order of the remaining requirements, and coined a definition for “Reliability Directive”. The drafting team is also coordinating with the RTO SDT (Project 2007-03) and the OCP SDT (Project 2007-02) on the definition and usage of the term “Reliability Directive”.

Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.

As a reference, we have included the existing definition of Emergency:

Emergency: Any abnormal system condition that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System.

In accord with the majority of commenters, the drafting team made changes to the Measures to bring them into conformance with the adopted suggestions from question 4 for improving the Requirements.

Changes to Requirements, Measures and Violation Severity Levels in IRO-001-2

Stakeholders generally agreed with the revisions to the requirements. Several stakeholders suggested adding the words “an issued” before “directive” in R3. The RC SDT agreed and made the change. No further revisions were made to the requirements. The proposed revisions to the definition of Adverse Reliability Impacts is being posted for comment.

Stakeholders agreed with the measures for IRO-001-2. The measure M3 was revised to reflect the revision to R3. No other revisions were suggested for the measures.

The VLS for R3 was revised to add the word “issued” before directive to match the revised requirement. Stakeholders suggested minor revisions to the VSLs for R4 and R5. The RC SDT agreed and made the revisions.

The RC SDT believes that stakeholder consensus has been achieved on IRO-001-2. The definition of Adverse Reliability Impacts is included in this posting for comment.

Changes to Requirements, Measures and Violation Severity Levels in IRO-014-2

Stakeholders suggested revising R8 to include provisions for avoiding implementing actions that would violate safety, equipment or regulatory or statutory requirements. The RC SDT agreed and added this to the requirement. Other stakeholders suggested adding “For conditions or activities that impact other Reliability Coordinator Areas,...” at the beginning of R1 and R3. The RC SDT agreed and added this to the requirements. The Time Horizons for R2 were revised as suggested to “Same Day Operations and Operations Planning”. Several stakeholders expressed concerns regarding having R6-R8 as separate requirements. The intent of R6, R7, and R8 is to handle those things that arise that may not have had a plan identified in advance. The RC SDT contends the requirements should be separate requirements as they identify distinctly different actions and are adequate as written.

Stakeholders agreed with the Measures, except to make conforming changes for revisions to the requirements. The RC SDT has revised the measures based on the new requirements. One stakeholder suggested revision to the Data Retention for R5-R8. Data Retention was revised for R5 to 12 months, however the RC SDT believes that three years is the correct period for R6-R8.

Several stakeholders suggested developing four VSLs for R5. Typically, in the course of BES operations, the number of impacted Reliability Coordinators will be a small number. The SDT effort in this regard was to write the VSLs to represent both the large and small

scenarios containing an Adverse Reliability Impact. The essence of the severe VSL is that the RC did not notify any (as in no one) impacted RC's. As such, it should be severe. The essence of the moderate VSL is that the RC notified one other RC, however did not notify the remaining impacted RC's. The SDT felt the VSL's appropriately addressed the large and small scenarios. Other stakeholders suggested four VSLs for R4. The essence of R4 is written to require impacted RC's to talk at least weekly and is singular in nature. VSL's can not be written for conference calls that exceed the singular requirement.

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Gerry Adamski, at 609-452-8060 or at gerry.adamski@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.¹

¹ The appeals process is in the Reliability Standards Development Procedures:
<http://www.nerc.com/standards/newstandardsprocess.html>.

Index to Questions, Comments, and Responses

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Consideration of Comments on Project 2006-06 Reliability Coordination

The Industry Segments are:

- 1 — Transmission Owners
- 2 — RTOs, ISOs
- 3 — Load-serving Entities
- 4 — Transmission-dependent Utilities
- 5 — Electric Generators
- 6 — Electricity Brokers, Aggregators, and Marketers
- 7 — Large Electricity End Users
- 8 — Small Electricity End Users
- 9 — Federal, State, Provincial Regulatory or other Government Entities
- 10 — Regional Reliability Organizations, Regional Entities

		Commenter	Organization	Industry Segment									
				1	2	3	4	5	6	7	8	9	10
1.	Group	Russell A. Noble	Northwest LSE Group			X							
Additional Member		Additional Organization		Region Segment Selection									
1. Rick Paschall		Pacific Northwest Generating Cooperative		WECC 3									
2.	Group	Guy Zito	Northeast Power Coordinating Council										X
Additional Member		Additional Organization		Region Segment Selection									
1.	Ralph Rufrano	New York Power Authority	NPCC	5									
2.	Alan Adamson	New York State Reliability Council, LLC	NPCC	10									
3.	Paul Kiernan	New York Independent System Operator	NPCC	2									
4.	Roger Champagne	Hydro-Quebec TransEnergie	NPCC	2									
5.	Kurtis Chong	Independent Electric System Operator	NPCC	2									
6.	Sylvain Clermont	Hydro-Quebec TransEnergie	NPCC	1									
7.	Edward Dahill	National Grid	NPCC	1									
8.	Bohdan M. Dackow	US Power Generating Company (USPG)	NPCC	NA									
9.	Chris de Graffenried	Consolidated Edison Co. of New York	NPCC	1									
10.	Brian D. Evans-Mongeon	Utility Services	NPCC	8									

Consideration of Comments on Project 2006-06 Reliability Coordination

	Commenter	Organization	Industry Segment									
			1	2	3	4	5	6	7	8	9	10
11. Mike Garton	Dominion Resources Services, Inc.	NPCC	5									
12. Brian L. Gooder	Ontario Power Generation Incorporated	NPCC	5									
13. Kathleen Goodman	ISO - New England	NPCC	2									
14. David Kiguel	Hydro One Networks Inc.	NPCC	1									
15. Michael R. Lombardi	Northeast Utilities	NPCC	1									
16. Randy MacDonald	New Brunswick System Operator	NPCC	2									
17. Greg Mason	Dynegy Generation	NPCC	5									
18. Bruce Metruck	New York Power Authority	NPCC	6									
19. Chris Orzel	FPL/NextEra Energy	NPCC	5									
20. Robert Pellegrini	The United Illuminating Company	NPCC	1									
21. Michael Schiavone	National Grid	NPCC	1									
22. Peter Yost	Consolidated Edison Co. of New York, Inc.	NPCC	3									
23. Gerry Dunbar	Northeast Power Coordinating Council	NPCC	10									
24. Lee Pedowicz	Northeast Power Coordinating Council	NPCC	10									
25. Gregory Campoli	New York Independent System Operator	NPCC	2									
3.	Group	Jim Case	SERC OC Standards Review Group	X		X						
Additional Member			Additional Organization	Region	Segment Selection							
1.	Jack Kerr	Dominion Virginia Power	SERC	1, 3								
2.	Steve Fritz	ACES Power Marketing	SERC	6								
3.	Joel Wise	Tennessee Valley Authority	SERC	1, 3, 5, 9								
4.	Hugh Francis	Southern Co.	SERC	1, 3, 5								
5.	Alan Jones	Alcoa Power Generation	SERC	1, 5								
6.	Scott McGough	Oglethorpe Power Corporation	SERC	5								
7.	Keith Steinmetz	E.ON US Services	SERC	1, 3, 5								
8.	Mike Hardy	Southern Co.	SERC	1, 3, 5								
9.	Steve McElhaney	South Mississippi Electric Membership Corp.	SERC	1, 3, 5								
10.	Gary Hutson	South Mississippi Electric Membership Corp.	SERC	1, 3, 5								
11.	John Rembold	Southern Illinois Power Cooperative	SERC	1, 3, 5								

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	Commenter	Organization	Industry Segment									
			1	2	3	4	5	6	7	8	9	10
12. Timmy LeJeune	Louisiana Generating, LLC	SERC	1, 3, 5									
13. Wayne Pourciau	Georgia System Operations Corp.	SERC										
14. Tim Hattaway	PowerSouth Energy Cooperative	SERC										
15. Tony Halcomb	Cogentrix Energy, LLC	SERC										
16. Robert Thomasson	Big Rivers Electric Cooperative	SERC										
17. Wes Davis	SERC Reliability Corp.	SERC										
18. John Troha	SERC Reliability Corp.	SERC										
4.	Group	Denise Koehn	Bonneville Power Administration	X		X		X	X			
Additional Member Additional Organization Region Segment Selection												
1.	Steven Davis	Generation Support	WECC	1								
5.	Group	Sam Ciccone	FirstEnergy	X		X	X	X	X			
Additional Member Additional Organization Region Segment Selection												
1.	Dave Folk	FE	RFC									
2.	Doug Hohlbaugh	FE	RFC									
3.	John Martinez	FE	RFC									
4.	Kevin Querry	FE	RFC									
6.	Group	Ben Li	IRC Standards Review Committee		X							
Additional Member Additional Organization Region Segment Selection												
1.	Patrick Brown	PJM	RFC	2								
2.	James Castle	NYISO	NPCC	2								
3.	Anita Lee	AESO	WECC	2								
4.	Bill Phillips	MISO	MRO	2								
5.	Steve Myers	ERCOT	ERCOT	2								
6.	Lourdes Estrada-Saliner	CAISO	WECC	2								
7.	Charles Yeung	SPP	SPP	2								
8.	Matt Goldberg	ISO-NE	NPCC	2								

Consideration of Comments on Project 2006-06 Reliability Coordination

		Commenter	Organization	Industry Segment									
				1	2	3	4	5	6	7	8	9	10
7.	Group	Jason L. Marshall	Midwest ISO Standards Collaborators		X								
Additional Member Additional Organization Region Segment Selection 1. Joe Knight Great River Energy MRO 1 2. Bob Thomas IMEA SERC 4 3. Barb Kedrowski We Energies RFC 3, 4, 5 4. Jim Cyrulewski JDRJC Associates RFC 8													
8.	Individual	Steve Alexanderson	Central Lincoln			X							
9.	Individual	Virginia Cook	JEA	X		X		X					
10.	Individual	Daniel Duff	Liberty Electric Power LLC					X					
11.	Individual	Mike Davis	WECC Reliability Coordinator										X
12.	Individual	Sandra Shaffer	PacifiCorp	X		X		X	X				
13.	Individual	Brent Hebert	Calpine Corporation					X	X				
14.	Individual	Brandy A. Dunn	Western Area Power Administration	X					X				
15.	Individual	Hugh Francis	Southern Company	X		X		X					
16.	Individual	Rao Somayajula	ReliabilityFirst Corporation										X
17.	Individual	James H. Sorrels, Jr.	American Electric Power	X		X		X	X				
18.	Individual	Brent Ingebrigtsen	E.ON U.S.	X		X		X	X				
19.	Individual	Kasia Mihalchuk	Manitoba Hydro	X		X		X	X				
20.	Individual	Troy Willis	Georgia Transmission Corporation	X									

Consideration of Comments on Project 2006-06 Reliability Coordination

		Commenter	Organization	Industry Segment									
				1	2	3	4	5	6	7	8	9	10
21.	Individual	Bob Thomas	Illinois Municipal Electric Agency				X						
22.	Individual	Chris Scanlon	Exelon	X		X		X	X				
23.	Individual	Roger Champagne	Hydro-Québec TransEnergie (HQT)	X									
24.	Individual	Scott Berry	Indiana Municipal Power Agency				X						
25.	Individual	Greg Rowland	Duke Energy	X		X		X	X				
26.	Individual	Jianmei Chai	Consumers Energy Company			X	X	X					
27.	Individual	Michael R. Lombardi	Northeast Utilities	X		X		X					
28.	Individual	Dan Rochester	Independent Electricity System Operator		X								
29.	Group	Carol Gerou	MRO NSRS										
30.	Individual	Alice Murdock	Xcel Energy										
31.	Individual	Jason Shaver	American Transmission Company	X									

1. Do you agree with the revisions made to the Requirements in COM-001-2 as shown in the posted Standard? If not, please explain in the comment area.

Summary Consideration: Most stakeholders agreed with the requirements in COM-001. Stakeholders suggested that there is a need to define Interpersonal Communications for this standard. The RC SDT is proposing the following definitions:

Interpersonal Communication: Any method that allows two or more individuals to interact, consult, or exchange information.

Alternative Interpersonal Communication: Any method that is able to serve as a substitute for and is redundant to normal Interpersonal Communication and does not utilize the same infrastructure (medium) as normal Interpersonal Communications.

Other stakeholders suggested edits to the requirements. The RC SDT revised the wording of R2 to add clarity, revised R3 to include the phrase “unless dictated by law...” to address legal requirements in some areas, and removed references to the mitigation plan in R1.

Organization	Yes or No	Question 1 Comment
Central Lincoln		Comments: The inclusion of load serving entities and distribution providers does not address any present reliability gap. R4 is extremely vague, and is not likely to be interpreted consistently. What form of evidence will be acceptable? Photos of telephones?
Response: The RC SDT thanks you for your comment. The LSE and DP were added as applicable entities to R3 as a result of stakeholder comments during the previous posting. The DP and GOP were added as applicable entities in R4 per FERC Order 693 directives. The Measure M4 for Requirement R4 was revised to: M4. Each Distribution Provider and Generator Operator shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent that it had Interpersonal Communications capabilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information. (R4.)		
JEA		R2 I would suggest that R2 be clarified so that it is understood that the 60 minutes starts at the beginning of the outage (or the end of the 30 minute period, if that was instead the intent) so that there can be no confusion about when the clock starts for notification periods. Otherwise, the wording of these standards is clearer than the current version. R4 I am concerned that with the word "capabilities" that the DP/GO's will be expected by the auditors to demonstrate that its "capability" was working every single second of every day since their last audit, especially since you have not included a data retention period(especially since this is rated a "high" VRF).

Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Yes or No	Question 1 Comment
Response: The RC SDT thanks you for your comment. R2: We have revised the wording to clarify the intent: Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure of its normal Interpersonal Communications capabilities that lasts 30 minutes or longer. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i> R4: The Measure 4 for Requirement R4 was revised to: M4. Each Distribution Provider and Generator Operator shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent that it had Interpersonal Communications capabilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information. (R4.) Data retention for R4, M4 was added to the revised standard.		
Northwest LSE Group	No	The RC STD has done a commendable effort. However, it is questionable how expanding the applicability to include LSEs, DPs, & PSEs that are non-scheduling/tagging entities will increase reliability of the BES. In fact, we believe that increasing the applicability could do just the opposite. Many of these entities that are only registered as a LSE, DP, and/or PSE do not have a 24/7 desk/dispatch facility to receive RC/BA/TOP reliability directives, and are too small (10s of MW) to effectively assist during a reliability crisis. In addition, the Regional Entities (WECC in this case) are overwhelmed as it is, asking them to take on even more audit responsibilities is unrealistic, and not worth the effort. In addition, for the small Registered Entity, what would constitute compliance with R3 & R4 if no TOP/BA real-time directives were received? Everyone employed speaks English and there is at least one phone on the premises? Will the small DP and/or LSE be required to monitor its communication system 24/7 with competent personnel for an unlikely TOP/BA directive?
Response: The RC SDT thanks you for your comment. The LSE, DP and PSE were added as applicable entities to R3 as suggested by other stakeholders in the last posting. The Distribution Provider and Generator Operator are in R4 per FERC Order 693 directives. The measures for the requirements specify what would constitute evidence needed to demonstrate compliance. Note that R3 and R4 are not focused solely on communication related to “directives.” Requirement R3 is focused on all “. . . inter-entity Bulk Electric System (BES) reliability communications . . . “ The drafting team feels that R4 as written allows flexibility to the entities in meeting the performance requirement. Note that R4 only applies to Distribution Providers and Generator Operators, not to LSEs.		
American Transmission Company	No	We believe that the team needs to define the term “interpersonal communications capabilities”. It’s our understanding that the term refers to how entities will communicate (i.e. phone, cell phone, video conferencing, email or satellite phone) with each other, but that is not being clearly communicated by the requirement. A clear definition of the term “interpersonal communication capabilities” will likely provide needed clarity to the requirement.

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Organization	Yes or No	Question 1 Comment
		Requirement 1 seems to imply that an entity will be judge based on a single test of its alternative communication system within any given quarter, and if that test fails they must develop a mitigation plan. Our concern is that the requirement should allow for multiple testing and only if all or a reoccurring issue is found should you document and fix the issue. (Example: An entity performs weekly tests of its alternative communication system. One of the test's fails. All other tests, following the failed test, are successful. Would the entity have to develop a mitigation plan based on the one failure, or are the other successful tests sufficient to show compliance?) In R2, we assume that the 30 minutes or longer in parenthesis is intended to describe the length of the outage. To clarify, we suggest that the language be changed to: Each RC, TOP and BA shall notify impacted entities within 60 minutes of the detection of a failure of its normal interpersonal communication systems lasting longer than 30 minutes.
Response: The RC SDT thanks you for your comment. Several stakeholders have expressed a concern with the definition of interpersonal communications capabilities. The RC SDT concurs and has drafted a definition that will be posted for comment. R1: Other stakeholders also expressed concern with developing a mitigation plan in this requirement. The RC SDT has revised the requirement to: R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, its Alternative Interpersonal Communications capability used for communicating real-time operating information. If the test is unsuccessful, the entity shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communications capability. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i> The RC SDT feels that this will address your comment. R2: We concur and have revised the requirement as you suggest.		
Northeast Power Coordinating Council	No	Interpersonal communication includes more than voice, such as instant messaging, text messaging and email. This Standard needs a definition of interpersonal communication. Having alternative interpersonal communications should be specified as a requirement. Work communication within Québec must be in French according to the law. It is understood and agreed that communication outside Québec with adjacent entities would be, and in fact is already, in English. Accordingly, R3 should be modified as the proposition below: R3. Unless dictated by law or otherwise agreed to,
Response: The RC SDT thanks you for your comment. The RC SDT agrees that there is a need for a definition of Interpersonal Communications Capability. We have developed a draft definition that will be posted for comment which meets the FERC Order 693 directive to: Includes adequate flexibility for compliance with the reliability standard, adoption of new technologies and cost-effective solutions. The RC SDT agrees with your comment regarding the alternate interpersonal communications capability and has revised the requirement to read: R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, its Alternative Interpersonal		

Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Yes or No	Question 1 Comment
Communications capability used for communicating real-time operating information. If the test is unsuccessful, the entity shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communications capability. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i> We concur with your suggestion regarding R3 and have made the suggested revision.		
SERC OC Standards Review Group	No	The STD should clarify what types of communications are considered in the standard is it voice or data communications or both?
Response: The RC SDT thanks you for your comment. Interpersonal communication does not include data (see IRO-010-1) and includes more than voice, such as instant messaging, text messaging and email. The RC SDT has developed a draft definition of interpersonal communications capabilities that will be posted for comment which meets the FERC Order 693 directive to: Includes adequate flexibility for compliance with the reliability standard, adoption of new technologies and cost-effective solutions.		
IRC Standards Review Committee	No	(1) We do not believe a mitigation plan is necessary in R1. If the interpersonal communication capability fails during the quarterly test, the entity simply needs to fix it, document the fix and re-test. A mitigation plan is unnecessary and will only delay repairing the interpersonal communication capability as it would have to be completed first before fixing the system. If repairing the system would be a lengthy process, then a mitigation plan may be developed to document that the entity is in process to fix the system. There is no associated requirement to have an alternate interpersonal communication capability along with R1 to test it. Thus, if a responsible entity did not have an alternate interpersonal communication capability, R1, in essence, does not apply. We suggest adding a requirement to have an alternate interpersonal communication capability to address this gap. Alternatively, the requirement to have an alternate interpersonal communication capability along with requirements to test and fix it could be stipulated in the Organization Certification Requirements. (2) In R2, we assume that the 30 minutes or longer in parenthesis is intended to describe the length of the outage. We think this would be clearer if the requirement were revised to: "Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure of its normal interpersonal communications capabilities lasting longer than 30 minutes." (3) R3 is not necessary. This requirement results in the waste of compliance resources managing and auditing documentation associated with it with no measurable improvement to reliability.
Response: The RC SDT thanks you for your comment. 1) The RC SDT agrees with your comment regarding the mitigation plan and the requirement for alternate interpersonal communications capability and has revised the requirement to read: R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, its Alternative Interpersonal Communications capability used for communicating real-time operating information. If the test is unsuccessful, the entity shall take action within 60 minutes to		

Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Yes or No	Question 1 Comment
restore the identified alternative or identify a substitute Alternative Interpersonal Communications capability. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i> 2) We concur with your comment and have revised the requirement accordingly. 3) The RC SDT does not agree with your assertion regarding R3. There is a reliability need to speak a common language, especially in issuing and receiving directives. There are several areas of the continent where this could be a reliability gap if there is no requirement.		
Midwest ISO Standards Collaborators	No	We do not believe a mitigation plan is necessary in R1. If the interpersonal communication capability fails during the quarterly test, the entity simply needs to fix it, document the fix and re-test. A mitigation plan is unnecessary and will only delay repairing the interpersonal communication capability as it would have to be completed first before fixing the system. In R2, we assume that the 30 minutes or longer in parenthesis is intended to describe the length of the outage. We think this would be clearer if the requirement were revised to: "Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure of its normal interpersonal communications capabilities lasting longer than 30 minutes." R3 is not necessary as it would be impossible to meet many other requirements if a common language such as English was not used. This requirement results in the waste of compliance resources managing and auditing documentation associated with it.
Response: The RC SDT thanks you for your comment. 1) The RC SDT agrees with your comment regarding the mitigation plan and the requirement for alternate interpersonal communications capability and has revised the requirement to read: R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, its Alternative Interpersonal Communications capability used for communicating real-time operating information. If the test is unsuccessful, the entity shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communications capability. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i> 2) We concur with your comment and have revised the requirement accordingly. 3) The RC SDT does not agree with your assertion regarding R3. There is a reliability need to speak a common language, especially in issuing and receiving directives. There are several areas of the continent where this could be a reliability gap if there is no requirement.		
ReliabilityFirst Corporation	No	FERC 693 excludes distribution providers if they are not a user, owner or operator of BES. This should be reflected in R4 of the standard
Response: The RC SDT thanks you for your comment. FERC Order 693 endorses the NERC Statement of Compliance Registry criteria (paragraph 512) and also adopted the proposal to require the ERO to modify COM-001 to apply to distribution providers and generator operators (paragraph 493).		

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Organization	Yes or No	Question 1 Comment
E.ON U.S.	No	E.ON U.S. suggests deleting “interpersonal” from the term “interpersonal communications capabilities”. The need for and meaning of the term “interpersonal” isn’t clear. Does it infer communications must be to/from a specific individual rather than to/from another reliability entity? Verbal vs electronic communications? All non-data communications? E.ON U.S. believes that the term “interpersonal” must be clarified if it is to remain in the standard. In the proposed R1 “how extensive must the quarterly testing be “ establish contact or verify all functions? Does the term “alternative” include the “normal” communication medium or only the “backup” mediums? Does the alternative imply ALL possible communication alternatives? E.ON U.S. suggests replacing the term “alternative” with “planned backup” or similar. Quarterly testing needs to be limited to only established/planned backup communication methods not any potential “alternative” communication method.
Response: The RC SDT thanks you for your comment. The RC SDT agrees with several stakeholders that there is a need for a definition of Interpersonal Communications Capability. We have developed a draft definition that will be posted for comment which meets the FERC Order 693 directive to: Includes adequate flexibility for compliance with the reliability standard, adoption of new technologies and cost-effective solutions. The testing requirement is to ensure that the alternative (not “normal”) interpersonal communications capability works as a minimum. Entities may go above and beyond the requirement if they desire. The requirement was edited to identify the alternative and test it. R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, its alternative Interpersonal Communication capability used for communicating real-time operating information. If the test is unsuccessful, the entity shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communications capability. <i>[Violation Risk Factor: Lower][Time Horizon: Real-time Operations]</i>		
Manitoba Hydro	No	do not believe a mitigation plan is necessary in R1. If the interpersonal communication capability fails during the quarterly test, the entity simply needs to fix it, document the fix and re-test. A mitigation plan is unnecessary as it would delay repairing the interpersonal communication capability. R2 assumed that the 30 minutes or longer in parenthesis is intended to describe the length of the outage. We think this would be clearer if the requirement were revised to: Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure of its normal interpersonal communications capabilities lasting longer than 30 minutes? R3 is not necessary as it would be impossible to meet many other requirements if a common language such as English was not used. This requirement results in the waste of compliance resources managing and auditing documentation associated with it.
Response: The RC SDT thanks you for your comment. 1) The RC SDT agrees with your comment regarding the mitigation plan and the requirement		

Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Yes or No	Question 1 Comment
for alternate interpersonal communications capability and has revised the requirement to read: R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, its Alternative Interpersonal Communications capability used for communicating real-time operating information. If the test is unsuccessful, the entity shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communications capability. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i> 2) We concur with your comment and have revised the requirement accordingly. 3) The RC SDT does not agree with your assertion regarding R3. There is a reliability need to speak a common language, especially in issuing and receiving directives. There are several areas of the continent where this could be a reliability gap if there is no requirement.		
Georgia Transmission Corporation	No	Per the NERC Reliability Standards Development Procedure, under the definition of a Reliability Standard? The obligations or requirements must be material to reliability and measurable? With regards to R3. - It goes without saying that inter-entity BES reliability communications must be in a common language between the entities for understanding operation instructions. From an audit/measurability standpoint, the evidence to the requirement would not converge to a finite amount of material. The amount of evidence required to demonstrate compliance of this requirement would be a huge administrative burden. It seems this concept (for use of the English language) could be captured under the "Entity Tasks and Interrelationships" section of the NERC Reliability Functional Model which defines the set of functions that must be performed to ensure the reliability of the bulk electric system. It also explains the relationship between and among the entities responsible for performing the tasks within each function. Additionally, this concept (for use of the English language) could further be explained under each applicable registration type (BA, GOP, TSP, LSE, PSE, and DP) in the NERC Reliability Functional Model. The Second option for R3 is to remove the Requirement from the continent wide Standards and have the effected entities/regions create a "Regional Standard" where entities involved in inter-entity BES reliability communications have a history of language barrier concerns. As a separate issue to R3, it also seems conflicting that a written requirement would provide the option of "Unless agreed to otherwise". This option described in the language of the requirement implies that it is not a requirement but an option which further supports the suggestions above.
Response: The RC SDT thanks you for your comment. The RC SDT does not agree with your assertion regarding R3. There is a reliability need to speak a common language, especially in issuing and receiving directives. There are several areas of the continent where this could be a reliability gap if there is no requirement. The Reliability Functional Model is not an enforceable standard.		
Illinois Municipal Electric Agency	No	The IMEA supports comments submitted by the MISO Standards Collaboration Group indicating R3 is not necessary. Similarly, IMEA questions the necessity of R4. Therefore, we question the need to expand the applicability of COM-001 to DP, LSE, and PSE since R3 and R4 are the only two Requirements applicable to those functions.

Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Yes or No	Question 1 Comment
Response: The RC SDT thanks you for your comment. The RC SDT does not agree with your assertion regarding R3. There is a reliability need to speak a common language, especially in issuing and receiving directives. There are several areas of the continent where this could be a reliability gap if there is no requirement. R4 is included per FERC Order 693 directive.		
Exelon	No	Agree with the revisions with the following exception/recommendation: COM-001: purpose is to address communication facilities / capabilities (technical/hardware). COM-002: purpose is to address effectiveness (protocols).COM-001: R.1-3 address telecommunication facility requirements. R4 requires English use. Recommend the drafting team move COM-001 R4 (use English) to COM-002 where effectiveness of communications (protocols) between entities is addressed.
Response: The RC SDT thanks you for your comment. COM-001 Requirement R3 (English use) is being incorporated into COM-003-1 by the Operations Personnel Communications Protocols SDT (Project 2007-02). It will be retired from this standard upon approval of COM-003-1. We see no benefit to moving it to COM-002 at this time.		
Hydro-Québec TransEnergie (HQT)	No	Interpersonal communication includes more than voice, such as instant messaging, text messaging and email. This Standard needs a definition of interpersonal communication. Having alternative interpersonal communications should be specified as a requirement since there is actually no requirement to have that alternative way of communication in the first place. Work communication within Québec must be in French according to the law. It is understood and agreed that communication outside Québec with adjacent entities would be, and is in fact already, in English. Accordingly, R3 should be modified as the proposition below: R3. Unless determined by law or otherwise agreed to,
Response: The RC SDT thanks you for your comment. The RC SDT agrees that there is a need for a definition of Interpersonal Communications Capability. We have developed a draft definition that will be posted for comment which meets the FERC Order 693 directive to: Includes adequate flexibility for compliance with the reliability standard, adoption of new technologies and cost-effective solutions. The RC SDT agrees with your comment regarding the alternate interpersonal communications capability and has revised the requirement to read: R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, its Alternative Interpersonal Communications capability used for communicating real-time operating information. If the test is unsuccessful, the entity shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communications capability. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i> We concur with your suggestion regarding R3 and have made the suggested revision.		
Duke Energy	No	R1 requires an entity to “develop a mitigation plan” if a test of alternative communications capabilities is unsuccessful. We believe that this phrase should be changed to “take action”, reflecting that an entity’s response to an unsuccessful test may

Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Yes or No	Question 1 Comment
		be to simply call or email a repair order. The phrase "develop a mitigation plan" implies that an entity must establish a backup to the alternative communications capabilities rather than just restore the alternative communications capabilities.
Response: The RC SDT thanks you for your comment. We concur with your comment regarding the mitigation plan and have revised the requirement to: R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, its alternative Interpersonal Communication capability used for communicating real-time operating information. If the test is unsuccessful, the entity shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communications capability. <i>[Violation Risk Factor: Lower][Time Horizon: Real-time Operations]</i>		
Northeast Utilities	No	It is understood that the use of the term "interpersonal communications" and "interpersonal communications capabilities" were selected by the RC SDT to better reflect the intent of the Standard. However, NU reviewers are concerned over the new terminology and believe that it is unclear and not universally accepted to mean the same thing to all parties. NU's belief is that the original use of the terms "telecommunications" and "telecommunications facilities" are clearer and universally understood. NU recommends that the original terms be re-instated or the term "interpersonal communications" be replaced to reflect the intent of the Standard is to ensure "voice and text equipment" is adequate for communicating real-time operating information. R1 ? the requirement has evolved to test alternative equipment, versus a requirement to have primary and alternative equipment. Standard should require entities to have the equipment such as in the -1 version.R2 is to notify impacted entities in the event of a loss of normal communications. With backup communications operating correctly do we assume there is no impact and therefore notification is not required? This is unclear from a compliance perspective and unnecessary if backup communications are available. Alternative communications often go several layers deep including cell phones, satellite phones, radio, etc.
Response: The RC SDT thanks you for your comment. Several stakeholders have expressed a concern about the definition of interpersonal communications. The RC SDT is proposing a definition that will be posted for comment to address those concerns as well as your comment. R1: The intent of the requirement is as you suggest. This requirement has been revised to: R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, its Alternative Interpersonal Communications capability used for communicating real-time operating information. If the test is unsuccessful, the entity shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communications capability. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i> Notification of a failure of the normal interpersonal communications is still required by R2. The testing requirement is for one designated alternative. No notification is required for the failure of a non-designated alternative.		

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Organization	Yes or No	Question 1 Comment
Independent Electricity System Operator	No	We suggest the SDT review the applicability to Transmission Service Providers, Load-Serving Entities and Purchasing Entities from a real time operating perspective. We do not believe they are active participants in real time operation for which they require to have the same communication capability as the RCs, TOPs, BAs and DPs. Interpersonal communication includes more than voice, such as instant messaging, text messaging and email. This Standard needs a definition of interpersonal communication. Having alternative interpersonal communications should also be specified as a requirement. Work communication within Quebec must be in French according to the law. It is understood and agreed that communication outside Québec with adjacent entities would be, and already is, in English. Accordingly, R3 should be modified as proposed below: R3. Unless dictated by law or otherwise agreed to, R4: We believe “Interconnection” should be replaced by “interconnection” since the former is not a defined term.
Response: The RC SDT thanks you for your comment. TSP, LSE and PSE are not required to have the same Interpersonal communication as RC, TOP or BA. The only requirement applicable to TSP, LSE and PSE is R3 (English language). The RC SDT agrees that there is a need for a definition of Interpersonal Communications Capability. We have developed a draft definition that will be posted for comment which meets the FERC Order 693 directive to: Includes adequate flexibility for compliance with the reliability standard, adoption of new technologies and cost-effective solutions. The RC SDT agrees with your comment regarding the alternate interpersonal communications capability and has revised the requirement to read: R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, its Alternative Interpersonal Communications capability used for communicating real-time operating information. If the test is unsuccessful, the entity shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communications capability. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i> We concur with your suggestion regarding R3 and have made the suggested revision. R4: Interconnection is a defined term in the NERC Glossary of Terms (Updated on April 20, 2009).		
MRO NSRS	No	(1) The MRO NSRS does not believe a mitigation plan is necessary in R1. If the interpersonal communication capability fails during the quarterly test, the entity simply needs to fix it, document the fix and re-test. A mitigation plan is unnecessary and will only delay repairing the interpersonal communication capability as it would have to be completed first before fixing the system. Please create a definition for the interpersonal communication capability (or systems) term used in the response to comments to draft 1 in the summary of consideration for question 1. (2) In R2, MRO NSRS assumes that the 30 minutes or longer in parenthesis is intended to describe the length of the outage. MRO NSRS thinks this would be clearer if the requirement were revised to: “Each Reliability Coordinator,

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Organization	Yes or No	Question 1 Comment
		Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure of its normal interpersonal communications capabilities lasting longer than 30 minutes.” (3) R3 is not necessary as it would be impossible to meet many other requirements if a common language such as English was not used. This requirement results in the waste of compliance resources managing and auditing documentation associated with it.
Response: The RC SDT thanks you for your comment. 1) The RC SDT agrees with your comment regarding the mitigation plan and the requirement for alternate interpersonal communications capability and has revised the requirement to read: R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, its Alternative Interpersonal Communications capability used for communicating real-time operating information. If the test is unsuccessful, the entity shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communications capability. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i> The team has drafted a definition for both the term “Interpersonal Communication” and the term, “Alternative Interpersonal Communication.” 2) We concur with your comment and have revised the requirement accordingly. 3) The RC SDT does not agree with your assertion regarding R3. There is a reliability need to speak a common language, especially in issuing and receiving directives. There are several areas of the continent where this could be a reliability gap if there is no requirement.		
Xcel Energy	No	(1) While an improvement from the terminology used in version 1, the term “interpersonal communications” is still vague. We feel the intent of the drafting team was to include non-verbal communication as well, like email. However, as drafted, this point is not clear. We feel a definition is needed in order avoid disparity in its interpretation. (2) It appears that the requirement for RCs, TOPs and BAs to have communication capabilities (whether primary or backup/alternative) was removed from the standard. Yet, R1 requires the RC, TOP and BA to test alternative communications capabilities. Requirements to have primary and backup/alternative communication capabilities should be explicitly stated. (3) Additionally, we feel that the DP and GOP should have testing requirements for their communication capabilities with their TOP and BA.
Response: The RC SDT thanks you for your comment. 1) The RC SDT agrees that there is a need for a definition of Interpersonal Communications Capability. We have developed a draft definition that will be posted for comment which meets the FERC Order 693 directive to: Includes adequate flexibility for compliance with the reliability standard, adoption of new technologies and cost-effective solutions. 2) The RC SDT does not agree with your assertion regarding R1. The requirement for alternate interpersonal communications capability implies that primary interpersonal communications are in place.		

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Organization	Yes or No	Question 1 Comment
3) The DP and GOP were added as applicable entities in R4 per FERC Order 693 directives. The RC SDT does not agree with your assertion regarding the need for testing requirements. However, your concerns may be addressed in the Measure 4 revision: M4. Each Distribution Provider and Generator Operator shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent that it had Interpersonal Communications capabilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information. (R4.)		
Western Area Power Administration	Yes	R4 should say "Generator Operator" rather than "Generation Operator"
Response: The RC SDT thanks you for your comment. We have made this revision.		
American Electric Power	Yes	AEP does generally agree with the revisions, but the use of the term "interpersonal communication capabilities" needs a NERC-approved definition. Otherwise, what is in scope? Are e-mail or text messages acceptable, and, if so, what type of guaranteed delivery is necessary?
Response: The RC SDT thanks you for your comment. The RC SDT agrees that there is a need for a definition of Interpersonal Communications Capability. We have developed a draft definition that will be posted for comment which meets the FERC Order 693 directive to: Includes adequate flexibility for compliance with the reliability standard, adoption of new technologies and cost-effective solutions.		
FirstEnergy	Yes	We agree with many of the changes made to the standard including the change of title to reflect communications (voice and text messages). The parenthesis around 30 minutes or longer should be removed as parenthesis by definition mean a word, phrase, or sentence inserted in a passage to explain or modify the thought. This phrase is more than an explanation of the term failure. It sets forth a time requirement that is an integral part of R1. We suggest rewording the requirement as "Each RC, TOP, and BA shall notify impacted entities within 60 minutes of a failure of its normal interpersonal communications capabilities that lasts 30 minutes or longer."
Response: The RC SDT thanks you for your comment. We concur with your comment and have revised the requirement accordingly.		
Bonneville Power Administration	Yes	
PacifiCorp	Yes	
Southern Company	Yes	

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Organization	Yes or No	Question 1 Comment
Calpine Corporation	Yes	

2. Do you agree with the revisions made to the Measures in COM-001-2 as shown in the posted Standard? If not, please explain in the comment area.

Summary Consideration: Most commenters agreed with the measures for COM-001. The measures were revised based on revisions to the requirements as well as comments received below. Several stakeholders suggested removing the mitigation plan from R1 and M1. The RC SDT agreed and made the revision. M3 and M4 were revised as:

M3. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Purchasing-Selling Entity, and Distribution Provider shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, that will be used to determine that its personnel used English as the language for all inter-entity BES reliability communications between and among operating personnel responsible for the real-time generation control or operation of the interconnected BES. If a language other than English is used, each party shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, of agreement to use the alternate language or the law that requires the use of an alternate language. (R3.)

M4. Each Distribution Provider and Generator Operator shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent that it had Interpersonal Communications capabilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information (R4).

Organization	Yes or No	Question 2 Comment
Northwest LSE Group	No	To demonstrate compliance the small Registered Entities will be in the position of proving a negative: i.e., there is no real-time BES operational communication from or to any other entity. Currently, for the smaller entities, communication with the Transmission Operator or Balancing Authority is strictly for operational safety and local reliability of service, not operational reliability for the BES as defined by NERC. It is not clear how the small entity will show compliance. If R4 requires the small load-only DP and/or LSE to have 24/7 monitoring of its phone, and contracted answering service is unable to contact anyone, will this be a violation?
Response: The RC SDT thanks you for your comment. R4 is applicable only to registered Distribution Providers and Generator Operators. The RC SDT has revised the measure to prevent having to prove a negative: M4. Each Distribution Provider and Generator Operator shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent that it had Interpersonal Communications capabilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information		

Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Yes or No	Question 2 Comment
There is no 24/7 monitoring requirement in R4.		
Northeast Power Coordinating Council	No	See our comment for R3 in Q1. Accordingly, M3 should be modified as the proposition below: M3. "that will be used to determine that personnel used English "or another language" as the language for all inter-entity Bulk Electric System reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. If a language other than English is used, both parties shall have and provide upon request, evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, of agreement shall be provided to explain the use of the alternate language. (R3.) M3 allows a language other than English. Must the agreement for non-English be in place in advance of the call?
Response: The RC SDT thanks you for your comment. The RC SDT has revised the measure to conform to revisions in the requirement: M3. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, that will be used to determine that personnel used English as the language for all inter-entity BES reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected BES. If a language other than English is used, both parties shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, of agreement to use the alternate language or the law that requires the use of an alternate language. The RC SDT feels that agreement is not required prior to the call, but only prior to the conversation using the alternate language.		
Bonneville Power Administration	No	Issue #1: Measure M3 The measure states that entities "shall have and provide" evidence that "personnel used English as the language for all" communications. This infers that all communications must be documented in some form or fashion and that any outage of the normal communication system must be met with alternative processes which will meet this measure, even if the alternative is the preparation of handwritten notes of each person's conversations, noting that the communications occurred in English. Unfortunately, there have been times where our Dictaphone stopped recording phone calls, and nobody knew it for days! This measure sets us up for a violation! It's just a matter of time.
Response: The RC SDT thanks you for your comment. The measure as written is consistent with the requirement. The RC SDT did not receive any other comments to modify this measure.		
IRC Standards Review Committee	No	Conforming changes are required to the Measures based on the suggested modifications to the requirements in question 1.
Response: The RC SDT thanks you for your comment. Changes were made to the Measures to conform to revisions of the requirements.		

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Organization	Yes or No	Question 2 Comment
Midwest ISO Standards Collaborators	No	Conforming changes are required to the Measures based on the suggested modifications to the requirements in question 1.
Response: The RC SDT thanks you for your comment. Changes were made to the Measures to conform to revisions of the requirements.		
Central Lincoln	No	Comments: M4 is of little help regarding R4. How does an entity perform this demonstration, especially in the case of an off-site audit? If left to the regions, there will be no consistency.
Response: The RC SDT thanks you for your comment. Based on comments received on R4 and M4, the RC SDT has revised M4 to: M4. Each Distribution Provider and Generator Operator shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent that it had Interpersonal Communications capabilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information. (R4.)		
ReliabilityFirst Corporation	No	No measures are posted for R4 of the revised standard
Response: The RC SDT thanks you for your comment. A measure M4 is in both the redline and clean version of the posted standard.		
E.ON U.S.	No	E.ON U.S. believes that he M1 must be clarified to address whether the testing entity is responsible to develop and implement a mitigation plan when a test is unsuccessful due to an issue at the other end (i.e. non-testing entity).
Response: The RC SDT thanks you for your comment. We have removed the mitigation plan from the requirement and measure.		
Manitoba Hydro	No	Conforming changes are required to the Measures based on the suggested modifications to the requirements in question 1.
Response: The RC SDT thanks you for your comment. Changes were made to the Measures to conform to revisions of the requirements.		
Georgia Transmission Corporation	No	See comments to Question 1 in regards to measurability.
Response: The RC SDT thanks you for your comment. Please see response to question 1.		

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Organization	Yes or No	Question 2 Comment
Illinois Municipal Electric Agency	No	Conforming changes are required to the Measures based on the suggested modifications to the requirements in Question 1.
Response: The RC SDT thanks you for your comment. Changes were made to the Measures to conform to revisions of the requirements.		
Exelon	No	See answer to #1
Response: The RC SDT thanks you for your comment. See response to question 1.		
Hydro-Québec TransÉnergie (HQT)	No	Comments: See our comment for R3 in Q1. Accordingly, M3 should be modify to read as the proposition below: M3. “ that will be used to determine that personnel used English “or another language determine otherwise” as the language for all inter-entity Bulk Electric System reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. If a language other than English is used, upon request, evidence shall be provided to explain the use of the alternate language. (R3.)M3 allows a language other than English. Must the agreement for non-English be in place in advance of the call?
Response: The RC SDT thanks you for your comment. The RC SDT has revised the measure to conform to revisions in the requirement: M3. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, that will be used to determine that its personnel used English as the language for all inter-entity BES reliability communications between and among operating personnel responsible for the real-time generation control or operation of the interconnected BES. If a language other than English is used, both parties shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, of agreement to use the alternate language or the law that requires the use of an alternate language. The RC SDT feels that agreement is not required prior to the call, but only prior to the conversation using the alternate language.		
Duke Energy	No	Replace the phrase “develop a mitigation plan” with the phrase “take action” per our comment on Requirement R1 above. Also, the DP and GOP should be deleted from the Data Retention section requirements for R1/M1 and R2/M2. Need to add a Data Retention requirement for R4/M4 for the DP and GOP.
Response: The RC SDT thanks you for your comment. The measure M1 was revised to conform to suggested revisions to R1. We have also revised the Data Retention section.		
Independent Electricity System	No	M3 and M4 may need to be revised depending on the response to our comments under Q1, above.

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Organization	Yes or No	Question 2 Comment
Operator		
Response: The RC SDT thanks you for your comment. Conforming revisions were made to the measures based on revisions to the requirements.		
MRO NSRS	No	Conforming changes are required to the Measures based on the suggested modifications to the requirements in question 1.
Response: The RC SDT thanks you for your comment. Changes were made to the Measures to conform to revisions of the requirements.		
Xcel Energy	No	Measures should be modified to reflect changes to requirements suggested in question 1.
Response: The RC SDT thanks you for your comment. Changes were made to the Measures to conform to revisions of the requirements.		
American Transmission Company	No	See our comment to question 1
Response: The RC SDT thanks you for your comment. See response to question 1.		
JEA	Yes	M1 - very nice, probably we will also be held responsible for completing the mitigation plans, so perhaps you should go ahead and add that so no one gets caught without sufficient evidence in that regard M2 – fine M3 - this measure would indicate that operators have the authority to agree among themselves to speak other languages, rather than a more formal agreement between entities, which is how I read the language of the requirement. If that is not what is meant, then I would suggest the examples include Memorandums of Agreement or Understanding, Contracts or other more formal mechanisms. M4 - fine
Response: The RC SDT thanks you for your comment. M1: We removed the mitigation plan from R1 and M1. M3: The requirement does not preclude individuals from using an alternate language as long as they agree to do so prior to the conversation.		
FirstEnergy	Yes	However, it is not clear whether to show compliance the voice recordings and associated transcripts are of the test done or of the conversations across those facilities.
Response: The RC SDT thanks you for your comment. Since the requirement is to test, the evidence provided should be sufficient to show that the test		

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Organization	Yes or No	Question 2 Comment
was performed and any appropriate follow up actions taken (in case of failure).		
Western Area Power Administration	Yes	M4 should say "Generator Operator" rather than "Generation Operator"
Response: The RC SDT thanks you for your comment. We have made this revision.		
SERC OC Standards Review Group	Yes	
Liberty Electric Power LLC	Yes	
WECC Reliability Coordinator	Yes	
PacifiCorp	Yes	
Calpine Corporation	Yes	
Southern Company	Yes	
American Electric Power	Yes	
Northeast Utilities	Yes	

3. Do you agree with the revisions made to the Violation Severity Levels in COM-001-2 as shown in the posted Standard? If not, please explain in the comment area.

Summary Consideration: Stakeholders suggested adding more VSLs for R2. The RC SDT agreed and drafted additional VSLs reflecting time and the number of entities notified. Other changes to the VSLs were made based on revisions to the requirements.

Organization	Yes or No	Question 3 Comment
Northwest LSE Group	No	With the vague verbiage of R4 coupled with the High and Severe VSL, it is important to clarify R4 with the small DP in mind, and possibly include Lower and Moderate VSLs for smaller load-only DP violations.
Response: The RC SDT thanks you for your comment. Based on the requirement, the RC SDT does not feel that additional VSLs can be written for R4. The intent of the requirement is missed if the responsible entity does not have Interpersonal Communication Capabilities with both its TOP or its BA.		
Northeast Power Coordinating Council	No	see M3 comment for question 2
Response: The RC SDT thanks you for your comment. See response to question 2.		
IRC Standards Review Committee	No	(1) Conforming changes are required to the VSLs based on the suggested modifications to the requirements in question 1. (2) FERC expressed its desire in the June 2008 order on VSLs to have as many VSLs as possible. We suggest since R2 also has a time component in the requirement four VSLs could be written based on the timeliness of the notification as well as the number of impacted entities that were not notified. The VSLs should reflect both components.
Response: The RC SDT thanks you for your comment. 1) Conforming changes were made to the VSLs based on the modifications to the requirements. 2) We have added VSLs based on the time requirements.		
Midwest ISO Standards Collaborators	No	Conforming changes are required to the VSLs based on the suggested modifications to the requirements in question 1. In addition, we suggest since R2 has a time component in the requirement, four VSLs could be written based on the timeliness of the notification. This would be consistent with the FERC's expressed desire in the June 2008 order on VSLs in which they stated that as many VSLs should be developed as possible.
Response: The RC SDT thanks you for your comment. Conforming changes were made to the VSLs based on the modifications to the requirements.		

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Organization	Yes or No	Question 3 Comment
We have added VSLs based on the time requirements.		
Central Lincoln	No	The severity levels have little or no relationship to reliability. Failure to provide a evidence of an agreement per R3, for example, has no impact on reliability by itself; yet it carries the maximum VSL. In reality, the impact would only be severe if the use of an alternate language resulted in a miscommunication.
Response: The RC SDT thanks you for your comment. The VSLs are a metric applied after a requirement has been violated. The intent is to provide a relative measure of how far the action or inaction was from the threshold set in the requirement. Some requirements lend themselves to a relative measure of meeting the threshold (i.e. “almost met”, 12 minutes when the requirement was 10 minutes, etc), and some do not. Those that do not are often termed “binary” requirements (either you meet the threshold or you do not). The relative risk to the bulk electric system of not meeting a requirement is specifically reflected in the requirement’s VRF. The relative size of a registered entity is beyond the scope of the standard drafting team and is addressed through the NERC Statement of Compliance Registry Criteria or taken into account as a mitigating factor through the Regional compliance enforcement programs.		
E.ON U.S.	No	E.ON U.S. suggests that R1 be modified to include the language that when an RC, BA and/or TOP issue a directive it must state: “This is a directive” and the entity receiving the directive must state: “I understand this is a directive”. E.ON U.S. also requests that language be added to the requirement that states that this communication protocol is only for reliability related directives and not for other operational directives.
Response: The RC SDT thanks you for your comment. The RC SDT does not agree with your assertion regarding R1. The purpose of R1 is to ensure that operating entities have adequate Interpersonal Communications capabilities.		
Manitoba Hydro	No	Conforming changes are required to the VSLs based on the suggested modifications to the requirements in question 1. In addition, since R2 has a time component in the requirement four VSLs could be written based on the timeliness of the notification.
Response: The RC SDT thanks you for your comment. Conforming changes were made to the VSLs based on the modifications to the requirements. We have also added VSLs based on the time requirements.		
Georgia Transmission Corporation	No	Again, Requirement 3 seems to be an option.
Response: The RC SDT thanks you for your comment. The RC SDT does not agree with your assertion regarding R3. There is a reliability need to speak a common language, especially in issuing and receiving directives.		

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Organization	Yes or No	Question 3 Comment
Illinois Municipal Electric Agency	No	Conforming changes are required to the VSLs based on the suggested modifications to the requirements in Question 1.
Response: The RC SDT thanks you for your comment. Conforming changes were made to the VSLs based on the modifications to the requirements.		
Hydro-Québec TransEnergie (HQT)	No	see M3 comment for question 2
Response: The RC SDT thanks you for your comment. See response to question 2.		
Duke Energy	No	Replace the phrase “develop a mitigation plan” with the phrase “take action to restore the capabilities” per our comment on Requirement R1 above.
Response: The RC SDT thanks you for your comment. Mitigation plan was removed from the requirement.		
Independent Electricity System Operator	No	The VSLs for R3 may have to be changed based on the outcome of our comments in Q2 regarding the language of communication.
Response: The RC SDT thanks you for your comment. Conforming changes were made to the VSLs based on the modifications to the requirements.		
MRO NSRS	No	Conforming changes are required to the VSLs based on the suggested modifications to the requirements in question 1. In addition, the MRO NSRS suggests since R2 has a time component in the requirement four VSLs could be written based on the timeliness of the notification. This would be consistent with the FERC’s expressed desire in the June 2008 order on VSLs in which they stated that as many VSLs should be developed as possible.
Response: The RC SDT thanks you for your comment. Conforming changes were made to the VSLs based on the modifications to the requirements. We have also added VSLs based on the time requirements.		
SERC OC Standards Review Group	Yes	
Bonneville Power Administration	Yes	

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Organization	Yes or No	Question 3 Comment
FirstEnergy	Yes	
JEA	Yes	
Liberty Electric Power LLC	Yes	
WECC Reliability Coordinator	Yes	
PacifiCorp	Yes	
Calpine Corporation	Yes	
Western Area Power Administration	Yes	
Southern Company	Yes	
ReliabilityFirst Corporation	Yes	
American Electric Power	Yes	
Northeast Utilities	Yes	

4. Do you agree with the revisions made to the Requirements in COM-002-3 as shown in the posted Standard? If not, please explain in the comment area.

Summary Consideration: Stakeholder consensus has been achieved with respect to the retirement of R1 (the requirement for the TOP and BA to each have data and voice communication with RCs, BAs and TOPs). In response to the majority of the comments, the drafting team has added a new R1 to require that “Reliability Directives” be identified as such, revised and rearranged the two requirements from the last posting so that the new R2 focuses on repeating the intent of a reliability directive and the new R3 focuses on responding to that repeated directive. The drafting team is also coordinating with the RTO SDT and the OPCP SDT (Project 2007-02) on the definition and usage of the term “Reliability Directive”.

The new R1 through R3 are:

R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time]

R2. Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat the intent of the Reliability Directive back to the issuer of the Reliability Directive. [Violation Risk Factor: High][Time Horizon: Real-Time]

R3. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that identifies an action as a Reliability Directive shall acknowledge the response from the recipient of the Reliability Directive in R2 as correct or reissue the Reliability Directive to resolve any misunderstandings. [Violation Risk Factor: High][Time Horizon: Real-Time]

The proposed definition for Reliability Directive is:

Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.

Organization	Yes or No	Question 4 Comment
Northwest LSE Group	No	It would be advantageous to exempt certain smaller Registered Entities (LSE, DP, & PSE) that are non-scheduling/tagging entities. In addition to not having a scheduling/tagging desk, many of these entities do not have a 24/7 desk to receive RC/BA/TOP reliability directives/calls, and are too small (10s of MW) to even be substantially significant in a reliability crisis. Instead of making this Standard applicable to all DPs, LSEs, and PSEs, we suggest that the RC, BAs, and TOPs to yearly publish those LSEs, DPs, and PSEs responsible for responding to emergency reliability directives. Also, it would be advisable for the RC, BA, and TOP giving a reliability directive to clearly preface the instruction with “The following is an emergency reliability directive” to differentiate from normal operations communications. Many smaller entities

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Organization	Yes or No	Question 4 Comment
		do not have the resources to install reliable voice recording equipment, but having access to such recordings would be beneficial towards compliance documentation; thus, it would be helpful to require the directive issuing RC, BA, or TOP to provide a digital copy of the voice recording, or transcript if available on request to the recipient of the directive. Short of a recording or transcript of the recording, it will be difficult to determine how a small entity without recorded line would show compliance other than writing down the directive as it is given and reading it back to the issuer. If the directive is lengthy, this will slow down the process and probably defeat the purpose and value of quick action. Further, there is no guarantee that the receiver will accurately retain a complicated directive if not immediately documented in some way to allow review. Last of all, what is meant by the word “intent”? Must the recipient understand and demonstrate the “why” the directive is given and the intended “outcome,” or merely paraphrase the directive to demonstrate understanding? If the recipient repeats word for word the directive back to the issuer without any other indication that the directive is understood, is this a violation??
Response: The RC SDT thanks you for your comment. The requirements of COM-002 for LSE, DP and PSE simply state that the entity has to repeat the intent of the directive back. The issue you raise concerning smaller entities is valid, but this standard is not the venue at which to make this argument. Registration criteria are outside the scope of this project. We have included a new requirement R1: R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i> The RC SDT is proposing a new definition for Reliability Directive to differentiate it from normal operations communications. Our proposed definition is: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency. The RTO SDT (Project 2007-03) is also working on a similar path and the RC SDT is coordinating with that team. The word “intent” was chosen so that the recipient did not have to repeat the directive verbatim and to also indicate an understanding of the directive. If a recipient repeats the directive verbatim, it is not a violation of the requirement, as it would also capture the intent.		
Northeast Power Coordinating Council	No	Support the intent but not the existing language. Do not support Requirements that include some examples since the examples can be confused with the Requirement. Do not support one written Requirement that has two requirements. Recommend the following Requirements: A new R1 - Each Entity shall have Operational Procedure requiring that communications directives be repeated back to the issuer. R2 leave as is. A new R3 If not repeated, then issuer shall request the receiving Entity to repeat the communication directive. A new R4 The issuer will acknowledge the correctness of the repetition of the communications directive.
Response: The RC SDT thanks you for your comment. The RC SDT does not see a reliability benefit to having an Operational Procedure requirement, as		

Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Yes or No	Question 4 Comment
it would be redundant since the standard COM-002 would be mandatory and enforceable and requires the actions in the Operational Procedure that you suggest. The RC SDT feels that we have the same requirements that you suggest but in a different arrangement.		
SERC OC Standards Review Group	No	The term “emergency” has a broad definition and other standards use “adverse conditions” or “adverse reliability impact”. There should be a consistency of terms when describing a system condition. The STD should include a definition of “directive” that includes more than “Emergency” operational conditions. Should this requirement be modified to include the term “Directive” and the definition of this term added to the NERC Glossary?
Response: The RC SDT thanks you for your comment. The RC SDT is proposing a new definition for Reliability Directive to differentiate it from normal operations communications. The RC SDT appreciates the baggage that comes with the defined term “Emergency”. However, it is the best fit with the normal messaging that has historically occurred in the bulk electric reliability community. Our proposed definition is: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency. This term has been included in the requirements of COM-002. The RTO SDT (Project 2007-03) is also working on a similar path and the RC SDT is coordinating with that team.		
Midwest ISO Standards Collaborators	Yes	We largely agree with the changes to the requirements and believe it goes a long way towards resolving the issue NERC has created recently with interpreting operating instructions as directives. This makes it clear that only directives that are required for operating emergencies require three way communication. We believe that the SDT could further support resolution to this directive issue by developing a definition for directive. We propose the following definition: Directive or Directive A verbal communication by a Reliability Coordinator, Transmission Operator, or Balancing Authority that requires action by the recipient to prevent or mitigate an Adverse Reliability Impact. In requirement 1, we do believe that another word than “require” should be used. Consider using “request”. An RC, BA, and TOP can't force the recipient of the directive to repeat it back. They can ask or request it be repeated back though.
Response: The RC SDT thanks you for your comment. 1) The RC SDT is proposing a new definition for Reliability Directive to differentiate it from normal operations communications. Our proposed definition is: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency. This term has been included in the requirements of COM-002. The RTO SDT (Project 2007-03) is also working on a similar path and the RC SDT is coordinating with that team. 2) The RC SDT has revised the requirement to remove that part since original R2 required the recipient to repeat the intent of the directive.		

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Organization	Yes or No	Question 4 Comment
Central Lincoln	No	The inclusion of load serving entities and distribution providers does not address any present BES reliability gap.
Response: The RC SDT thanks you for your comment. Loads are under the direct control of Load Serving Entities while underfrequency relays are often under the direct control of distribution providers. Current NERC standards do not address the possibility that a Reliability Directive may be issued to either of these entities. The requirements of COM-002 for LSE and DP simply state that the entity has to repeat the intent of the directive back since these entities may receive reliability directives.		
JEA	No	R1: just to avoid possible auditor misunderstandings the SDT might consider replacing the words "or repeat the original statement" to "reissue the directive" so that the RC does not get into trouble if the second statement is not verbatim of the first. This also helps clarify that another statement is required from the recipient along with a final acknowledgement from the RC that the intent is correct.
Response: The RC SDT appreciates your comment. You have identified a potential problem; the RC SDT agrees with your comment and has replaced the words "repeat the original statement" with "reissue the Reliability Directive".		
Liberty Electric Power LLC	No	The proposed standard does not require the RC, TO, or BA to declare an emergency to the GO when issuing a directive. There has been confusion at times in the past as to whether the entity is issuing a directive based on economics or due to an emergency. The standard should be amended to require the RC/TO/BA to state the directive is due to a declared emergency. The GO is required to repeat back the intent of an emergency directive, but is not required to repeat back the intent of economic directive. This can lead to a finding of a severe VSL non-compliance on the part of the GO due to a failure of the RC/TO/BA to clearly state the nature of the directive.
Response: The RC SDT thanks you for your comment. The RC SDT is proposing a new definition for Reliability Directive to differentiate it from normal operations communications. Our proposed definition is: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency. This term has been included in the requirements of COM-002. The RTOSDT (Project 2007-03) is also working on a similar path and the RC SDT are coordinating with that team. A new R1 has been developed that states: When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i>		
ReliabilityFirst	No	FERC 693 excludes distribution providers if they are not a user, owner or operator of BES. This should be reflected in R2 of

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Organization	Yes or No	Question 4 Comment
Corporation		the standard
Response: The RC SDT thanks you for your comment. Any distribution provider excluded by FERC Order 693 would not be held to the standard since standards only apply to registered entities. FERC Order 693 endorses the NERC Statement of Compliance Registry criteria (paragraph 512) and also adopted their proposal to require the ERO to modify COM-002 to apply to distribution providers and generator operators (paragraph 512). The Functional Model describes the real-time relationships between entities. Among those relationships, the DP: Implements voltage reduction and sheds load as directed by the Transmission Operator or Balancing Authority Such directives fall under COM-002 requirements.		
Illinois Municipal Electric Agency	No	IMEA questions the necessity of expanding the applicability of COM-002 as proposed in R2, particularly to the DP, LSE, and PSE functions. IMEA recommends accomplishing the intent of COM-002-3 R2 by simply referring to COM-002-3 R1 in IRO-001-2 R2 which requires those entities to comply with the RC directive. Thus it would be understood that the functional entity had repeated the directive in order to comply with it; thereby avoiding the necessity of expanding applicability to another reliability standard.
Response: The RC SDT thanks you for your comment. The RC SDT feels that there is a difference between complying with a directive and communicating the directive effectively. The requirements of COM-002 for LSE, PSE and DP simply state that the entity has to repeat the intent of the directive back since these entities may receive reliability directives. The drafting team feels that the current draft adds clarity to the requirements.		
Exelon	No	See answer # 1
Response: The RC SDT thanks you for your comment. See response to answer #1.		
Hydro-Québec TransEnergie (HQT)	No	Support the intent but not the existing language. Do not support Requirements that include some examples since the examples can be confused with the Requirement. Do not support one written Requirement that has two requirements. Recommend the following Requirements A new R1 - Each Entity shall have Operational Procedure requiring that communications directives be repeated back to the issuer R2 leave as is. A new R3 If not repeated, then issuer shall request the receiving Entity to repeat the communication directive. A new R4 The issuer will acknowledge the correctness of the repetition of the communications directive
Response: The RC SDT thanks you for your comment. There are no examples in any of the requirements of COM-002-3 as posted. There are no compound requirements remaining in COM-002-3 as posted. The RC SDT does not see a reliability benefit to having an Operational Procedure requirement, as it would be redundant since the standard COM-002 would be mandatory and enforceable and requires the actions in the Operational Procedure that you suggest. The RC SDT feels that we have the same requirements that you suggest but in a different arrangement that is internally consistent.		

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Organization	Yes or No	Question 4 Comment
Indiana Municipal Power Agency	No	The requirements do not consider a pre-recorded communication that might be sent out from the Transmission Operator to Generator Operators or any other entity. If this communication is a directive associated with a real-time operational emergency condition (depending on the judgment used by an entity or auditor), it does not make sense to repeat back a pre-recorded message on the phone. It might be good to clearly state in the standard that pre-recorded messages do not need to be repeated back.
Response: The RC SDT thanks you for your comment. The RC SDT is proposing a new definition for Reliability Directive to differentiate it from normal operations communications. Our proposed definition is: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency. This term has been included in the requirements of COM-002. The RC SDT can not envision a situation, regardless of the technology, where a Reliability Directive would be issued without confirmation from the recipient and acknowledgement of accuracy. However, even if there were an occasion as suggested by your comment, the bulk electric system can only remain reliable by coordinating actions between reliability entities. A pre-recorded communication is a broadcast, not a coordinating activity. The RTO SDT (Project 2007-03) is also working on a similar path and the RC SDT are coordinating with that team.		
Duke Energy	No	We agree with adding the clarification that these requirements refer to “emergency” communications, but we think the word “Emergency” should be capitalized to further clarify that it is a defined term in the NERC Glossary. Also, the phrase “require the recipient of the verbal directive to repeat the intent of the directive back” should be changed to “have the recipient of the verbal directive repeat the intent of the directive back”. This avoids making the issuer of the directive make a statement requiring a repeat back unless the recipient actually fails to repeat back as normally expected.
Response: The RC SDT thanks you for your comment. We have removed the word “emergency” and are proposing a definition of Reliability Directive which includes the defined term “Emergency” and which is being posted for comment. The RC SDT agrees with the intent of your comment. The phrase you mention has been removed from R1 as it is required by R2. We have made other edits to tighten the requirements as well.		
Consumers Energy Company	No	COM-002 R2 specifies the Generator Operator that receives a directive from the Transmission Operator, Reliability Coordinator or Balancing Authority must repeat the intent of the directive back to the Transmission Operator. COM-002 M2 specifies that evidence must be retained in the form of either voice recordings or transcripts by the generator operator. Since the Transmission Operator, Reliability Coordinator and Balancing Authority already have voice recording capability (centrally located), it is not necessary for the Generator to also install voice recording capability at each generating station. We suggest the wording of COM-002 be changed such that only the Transmission Operator, Reliability Coordinator and Balancing

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Organization	Yes or No	Question 4 Comment
		Authority be required to keep voice recordings or transcripts.
Response: The RC SDT thanks you for your comment. While recordings may be available from other entities, a Generator Operator has mandatory requirements with which it must comply. Generator Operators must have evidence that they complied with the requirement. The evidence mentioned in the measures is a suggestion of possible methods of evidence. We have revised the measure to include "...which could include, but is not limited to, voice recordings, transcripts of voice recordings or operator logs..."		
Independent Electricity System Operator	No	(i) We suggest the word "emergency" be capitalized since it is a defined term which generally covers the conditions under which directives are issued. (ii) We further suggest that to avoid confusion between operating instructions and directives, the term directive should be defined as suggested below: Directive or Directive A verbal communication by a Reliability Coordinator, Transmission Operator, or Balancing Authority that requires complying action by the recipient to prevent or mitigate an Adverse Reliability Impact. (iii) Since R1 contains two requirements, there may be some benefit in separating these since that would make the VSLs clearer, i.e. separate the requirements placed on the issuer of the directive to (a) request the recipient to repeat the intent of the directive and (b) to acknowledge the response of the recipient as correct.
Response: The RC SDT thanks you for your comment. i) We have removed the word "emergency" and are proposing a definition of Reliability Directive which includes the defined term "Emergency" and which is being posted for comment. ii) The RC SDT is proposing a definition of Reliability Directive that will be posted for comment. Our proposed definition is: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency. iii) The RC SDT agrees and has modified R1. Since R2 requires the recipient to repeat the intent of the directive, we have removed the part of R1 that states the issues shall require the recipient to repeat the directive. This removed the compound requirement.		
MRO NSRS	No	The MRO NSRS largely agrees with the changes to the requirements and believes it goes a long way towards resolving the issue NERC has created recently with interpreting operating instructions as directives. This makes it clear that only directives that are required for operating emergencies require three way communication. MRO NSRS believes that the SDT could further support resolution to this directive issue by developing a definition for directive. MRO NSRS proposes the following definition: Directive or Directive – A verbal communication by a Reliability Coordinator, Transmission Operator, or Balancing Authority

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Organization	Yes or No	Question 4 Comment
		that requires action by the recipient to prevent or mitigate an Adverse Reliability Impact. In requirement 1, MRO NSRS does believe that another word than “require” should be used. Consider using “request”. An RC, BA, and TOP can’t force the recipient of the directive to repeat it back. They can ask or request it be repeated back though.
Response: The RC SDT thanks you for your comment. 1) The RC SDT is proposing a new definition for Reliability Directive to differentiate it from normal operations communications. Our proposed definition is: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency. This term has been included in the requirements of COM-002. The RTOSDT (Project 2007-03) is also working on a similar path and the RC SDT is coordinating with that team. We have removed the “require” part of R1 since R2 is an enforceable requirement for repeating the directive.		
American Transmission Company	No	are supportive of the language regarding “directives” which clarifies that directives are those which involve operating emergencies. However, in R1, we believe that the word “requires” should be changed to “request”. An entity can request that another entity repeat back a directive but we cannot “require” it.
Response: The RC SDT thanks you for your comment. The RC SDT is proposing a definition of Reliability Directive that will be posted for comment. Our proposed definition is: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency. We have removed the “require” part of R1 since R2 is an enforceable requirement for repeating the directive.		
IRC Standards Review Committee	Yes	(1) We largely agree with the changes to the requirements and believe it goes a long way towards resolving the issue NERC has created recently with interpreting operating instructions as Directives. This makes it clear that only Directives that are required for operating emergencies require three way communication. We believe that the SDT could further support resolution to this Directive issue by developing a definition for Directive. We propose the following definition: Directive A verbal communication by a Reliability Coordinator, Transmission Operator, or Balancing Authority that requires action by the recipient to prevent or mitigate an Adverse Reliability Impact. Please note that AESO already has this term defined. The above suggested definition may be different from the AESO’s definition. (2) In requirement 1, we do believe that another word than “require” should be used. Consider using “request”. An RC, BA,

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Organization	Yes or No	Question 4 Comment
		and TOP can't force the recipient of the Directive to repeat it back. They can ask or request it be repeated back though.
Response: The RC SDT thanks you for your comment. 1) The RC SDT is proposing a new definition for Reliability Directive to differentiate it from normal operations communications. Our proposed definition is: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency. This term has been included in the requirements of COM-002. The RTO SDT (Project 2007-03) is also working on a similar path and the RC SDT is coordinating with that team. 2) The RC SDT has revised the requirement to remove that part since original R2 required the recipient to repeat the intent of the directive.		
Calpine Corporation	Yes	Calpine supports three part communications when verbal directives are issued during real-time operational emergency conditions. Calpine believes all issued directives should be explicitly identified as such.
Response: The RC SDT thanks you for your comment. A new R1 has been developed that states: When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i>		
Western Area Power Administration	Yes	This is a very good improvement. Some Regional Entities were interpreting every communication from a control room as a "directive" and stating that "directives" were equal to any "normal instruction" that related to operations of the power system. Making it clear that the directives are associated with emergency conditions is a big improvement. The drafting team may wish to consider additional clarification, such as, "The entity that issues a verbal directive shall make it known during the communication that, "This is a directive"? . All parties to the communication would be clear that the real-time situation was an emergency condition, and that the requirements for repeating the intent were in effect.
Response: The RC SDT thanks you for your comment. The RC SDT is proposing a new definition for Reliability Directive to differentiate it from normal operations communications. Our proposed definition is: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency. This term has been included in the requirements of COM-002. The RTO SDT (Project 2007-03) is also working on a similar path and the RC SDT is coordinating with that team. A new R1 has been developed that states:		

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Organization	Yes or No	Question 4 Comment
When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i>		
American Electric Power	Yes	AEP does generally agree with the revisions, but we have concerns with the much wider scope of three part communications that expand the required voice or transcript evidence. There is no rationale provided for changing the text in R1 and M1, and adding a new R2 and M2. We would recommend that these items remain as stated in Version 2.
Response: The RC SDT thanks you for your comment. The RC SDT's intent was to create a consistent set of noncompound requirements and to provide clarity according to the scope of the drafting team.		
Manitoba Hydro	Yes	For the most part agree with the changes to the requirements and believe it goes a long way towards resolving the issue NERC has created recently with interpreting operating instructions as directives. This makes it clear that only directives that are required for operating emergencies require three way communication. The SDT could further support resolution to this directive issue by developing a definition for directive. In requirement 1, I would use another word than "require". Consider using "request". An RC, BA, and TOP can't force the recipient of the directive to repeat it back. They can ask or request it be repeated back though.
Response: The RC SDT thanks you for your comment. 1) The RC SDT is proposing a new definition for Reliability Directive to differentiate it from normal operations communications. Our proposed definition is: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency. This term has been included in the requirements of COM-002. The RTOSDT (Project 2007-03) is also working on a similar path and the RC SDT is coordinating with that team. 2) The RC SDT has revised the requirement to remove that part since original R2 required the recipient to repeat the intent of the directive.		
FirstEnergy	Yes	1. We agree with the clarification in R1 that a directive per COM-002-3 is a "verbal directive associated with real-time operational emergency conditions". We understand this to be a "Reliability" directive used during times of emergency or in situations where reliability may be an issue. Also, with this clarification, it confirms that the term "directive", as used in this standard, does not include "Operational" directives issued by System Operators during normal system conditions to change the status of an element such as a circuit breaker. 2. The industry does not appear to have a clear, consistent definition of what constitutes a directive. We suggest the standard require the person issuing a directive to use the phrase "I am directing you to ?", "I am ordering you to ?" or something similar

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Organization	Yes or No	Question 4 Comment
		to invoke the three part communication requirement. 3. Since this standard deals with communications and coordination during emergency conditions, it may be helpful to change the title of the standard to "Communications and Coordination Emergency Conditions". 4. The phrase "the intent of the directive" could be difficult to comply with and measure. The words "the intent of" should be removed from Requirements R1 and R2.
Response: The RC SDT thanks you for your comment. 1) The RC SDT is proposing a new definition for Reliability Directive to differentiate it from normal operations communications. Our proposed definition is: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency. This term has been included in the requirements of COM-002. The RTO SDT (Project 2007-03) is also working on a similar path and the RC SDT is coordinating with that team. 2) We agree and have included a new R1 that states: When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i> 3) The RC SDT disagrees. This standard covers all interpersonal communications, not just emergency communications. The title stays as is. 4) The phrase was included so that the recipient did not have to repeat the directive verbatim and to also indicate an understanding of the directive. If a recipient repeats the directive verbatim, it is not a violation of the requirement, as it would also capture the intent. The goal of the RC SDT is to assure continued reliability without creating a trap by requiring word-for-word repetition.		
Northeast Utilities	Yes	
Xcel Energy	Yes	
Bonneville Power Administration	Yes	
WECC Reliability Coordinator	Yes	
PacifiCorp	Yes	

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Organization	Yes or No	Question 4 Comment
Southern Company	Yes	
Georgia Transmission Corporation	Yes	

5. Do you agree with the revisions made to the Measures in COM-002-3 as shown in the posted Standard? If not, please explain in the comment area.

Summary Consideration: Stakeholder consensus has been achieved with respect to the retirement of R1 and M1 from the last approved version of this standard. In accord with the majority of commenters, the drafting team made changes to the Measures to bring them into conformance with the adopted suggestions from question 4 for improving the Requirements. Specifically, a new R1 was added to require that reliability directives be identified as such – and the two requirements from the last posting were rephrased and rearranged for clarity. The Measures were changed to match the revised requirements.

Organization	Yes or No	Question 5 Comment
Illinois Municipal Electric Agency		Conforming changes are required to the Measures based on the suggested modifications to the requirements in Question 4.
Response: The RC SDT thanks you for your comment. The measures were revised to reflect changes to the requirements.		
Hydro-Québec TransEnergie (HQT)	No	Address the new proposed Requirements above in Question 4.
Northeast Power Coordinating Council	No	Addressed the new proposed Requirements above in Question 4.
Response: The RC SDT thanks you for your comment. The measures were revised to reflect changes to the requirements.		
Duke Energy	No	Change “emergency” to “Emergency” per comment on R1 above. Also change the phrase “required the recipient of the verbal directive to repeat” to “had the recipient of the verbal directive repeat” per our comment on R1 above.
Response: The RC SDT thanks you for your comment. We have removed the word “emergency” and are proposing a definition of Reliability Directive which includes the defined term “Emergency” and which is being posted for comment.		
Northwest LSE Group	No	Only in making the Measures agree with the suggested changes to the requirements above.
Response: The RC SDT thanks you for your comment. See response to Question 4. The measures have been revised to reflect changes to the requirements.		

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Organization	Yes or No	Question 5 Comment
Central Lincoln	No	M2 goes beyond R2 in requiring recordings. This will be cost prohibitive for small entities that have little impact on the BES. Telephone recording equipment will be needed on company phones, and some way to handle the recording of directives and responses that occur after hours on home or cell phones must be handled. Drafters seem to have missed the fact that not all the applicable entities have 24/7 dispatch centers.
Response: The RC SDT thanks you for your comment. The measure lists possible examples of evidence to prove compliance with the requirement. It does not impose any additional requirements or the purchase of recording systems. We have revised the measure to include "...which could include, but is not limited to, voice recordings, transcripts of voice recordings or operator logs...".		
JEA	No	Not all entities have recorded lines. The standard does not directly require the to record their lines, but the measure implies it. It seems that a written log should be sufficient. Since both sides of the conversation gets audited, the auditors will have ample opportunity to check up on both sides.
Response: The RC SDT thanks you for your comment. The measure lists possible examples of evidence to prove compliance with the requirement. It does not impose any additional requirements or the purchase of recording systems. We have revised the measure to include "...which could include, but is not limited to, voice recordings, transcripts of voice recordings or operator logs...".		
Northeast Utilities	No	NU agrees with expanding the applicability of the Standard beyond the Reliability Coordinators, Balancing Authorities and Transmission Operators to ensure that the recipient of a verbal directive repeats back the directive to the issuer (R2). Despite NU's agreement with R2, NU believes that M2 is duplicative to the intent of M1 and unnecessarily requires the installation of voice recording capabilities at the entities other than a RC, BA or TOP. It is our belief that the voice recordings of the RC, BA and TOP (M1) provide the evidentiary support required by all applicable entities.
Response: The RC SDT thanks you for your comment. The measure lists possible examples of evidence to prove compliance with the requirement. It does not impose any additional requirements or the purchase of recording systems. We have revised the measure to include "...which could include, but is not limited to, voice recordings, transcripts of voice recordings or operator logs...".		
Independent Electricity System Operator	No	Comments: Some changes may be necessary based on the SDT's response to our suggestion in Q4.
Response: The RC SDT thanks you for your comment. See response to your comments on question 4.		
MRO NSRS	No	MRO NSRS largely agrees with the measures with the exception that a conforming change needs to be made to M1 if the suggestion regarding "require" in Q4 is accepted.

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Organization	Yes or No	Question 5 Comment
Response: The RC SDT thanks you for your comment. “Require” was removed from the requirement and the measure edited appropriately.		
American Transmission Company	No	See our comments to question 4
Response: The RC SDT thanks you for your comment. See response to your comments on question 4.		
IRC Standards Review Committee	Yes	We largely agree with the measures with the exception that a conforming change needs to be made to M1 if the suggestion regarding “require” in Q4 is accepted.
Midwest ISO Standards Collaborators	Yes	We largely agree with the measures with the exception that a conforming change needs to be made to M1 if the suggestion regarding “require” in Q4 is accepted.
Response: The RC SDT thanks you for your comment. “Require” was removed from the requirement and the measure edited appropriately.		
American Electric Power	Yes	As described in the question 4 response, there is no rationale provided for changing the text in R1 and M1, and adding a the new R2 and M2. We would recommend that these items remain as stated in Version 2.
Response: The RC SDT thanks you for your comment. See response to question 4.		
Manitoba Hydro	Yes	For the most part agree with the measures with the exception that a conforming change needs to be made to M1 if the suggestion regarding “require” in Q4 is accepted.
Response: The RC SDT thanks you for your comment. “Require” was removed from the requirement and the measure edited appropriately.		
SERC OC Standards Review Group	Yes	
Bonneville Power Administration	Yes	
FirstEnergy	Yes	

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Organization	Yes or No	Question 5 Comment
Liberty Electric Power LLC	Yes	
WECC Reliability Coordinator	Yes	
PacifiCorp	Yes	
Calpine Corporation	Yes	
Western Area Power Administration	Yes	
Southern Company	Yes	
ReliabilityFirst Corporation	Yes	
Georgia Transmission Corporation	Yes	

6. Do you agree with the revisions made to the Violation Severity Levels in COM-002-3 as shown in the posted Standard? If not, please explain in the comment area.

Summary Consideration: Several stakeholders suggested revisions to the VSLs based on suggested revisions to the requirements. The RC SDT made changes to the VSLs to conform to revisions to the requirements.

Organization	Yes or No	Question 6 Comment
Northwest LSE Group	No	Only in making the Measures agree with the suggested changes to the requirements above.
Response: The RC SDT thanks you for your comment. The Measures have been revised to reflect changes to the requirements.		
Northeast Power Coordinating Council	No	Address the new proposed Requirements.
Response: The RC SDT thanks you for your comment. The RC SDT feels that we have the same requirements that you suggest but in a different arrangement. The new proposed Requirements have been addressed.		
Bonneville Power Administration	No	Comments: Issue #1: Violation Severity Level. The Moderate and Severe VSLs for Requirement R1 can lead to confusion. For instance, the Moderate VSL states that the responsible entity "did not acknowledge the recipient was correct in the repeated directive OR (emphasis theirs) failed to repeat the intent of the original statement to resolve any misunderstandings. "What is it saying here? Is it dinging the responsible entity for making no response at all to the recipient after they repeated the intent of the message? Or is that what the Severe VSL is dinging for when it includes an AND rather than an OR in the statement? I can't tell what the drafting team was intending with their statements, but one of the statements seem to infer that the responsible entity can actually be dinged for not doing both, acknowledging the recipient as being correct in their response and at the very same time repeating the intent of the original statement to resolve any misunderstandings because the recipient was incorrect in their response. This then argues that the recipient can be both correct and incorrect at the same time. I didn't think that was possible "similar to binary code" either you get a one or a zero, but not both and never neither! I would argue that the drafting team should rewrite their VSLs to succinctly state that the responsible entity failed to respond after the recipient repeated the intent of the message. With that in mind, either the Moderate or the Severe VSL will be rewritten in an understandable way and the other VSL will disappear in the realms of impossible things.
Response: The RC SDT thanks you for your comment. We have eliminated the Moderate VSL and only have the Severe.		

Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Yes or No	Question 6 Comment
IRC Standards Review Committee	No	If the suggestion regarding “require” in Q4 is accepted, conforming changes to the VSL need to made. Additionally, we believe the Moderate and Severe VSLs are confusing based on repeating the language exactly in the requirement. In most cases, repeating the language of the requirement is best but we believe a deviation is warranted here. The intent of Moderate appears to be that the RC, TOP or BA did not acknowledge the repeat of the Directive was correct and the repeat was correct. In the Severe, we believe the intent appears to be that the RC, TOP or BA did not acknowledge the repeat of the Directive was correct but the repeat was incorrect. We agree that these distinctions make sense but offer the following changes to clarify the intent. Moderate VSL: The responsible entity issued a verbal Directive associated with real-time operating emergency conditions and the recipient repeated the intent of the Directive correctly, but the responsible entity did not acknowledge the recipient was correct. Severe VSL: The responsible entity issued a verbal Directive associated with real-time operating emergency conditions and the recipient repeated the intent of the Directive incorrectly, but the responsible entity failed to repeat the intent of the original statement to resolve any misunderstandings.
Response: The RC SDT thanks you for your comment. We have modified all the requirements in a way that addresses your comments. Conforming changes to the VSLs have been made.		
Midwest ISO Standards Collaborators	No	If the suggestion regarding “require” in Q4 is accepted, conforming changes to the VSL need to made. Additionally, we believe the Moderate and Severe VSLs are confusing based on repeating the language exactly in the requirement. In most cases, repeating the language of the requirement is best but we believe a deviation is warranted here. The intent of Moderate appears to be that the RC, TOP or BA did not acknowledge the repeat of the directive was correct and the repeat was correct. In the Severe, we believe the intent appears to be that the RC, TOP or BA did not acknowledge the repeat of the directive was correct but the repeat was incorrect. We agree that these distinctions make sense but offer the following changes to clarify the intent. Moderate VSL: The responsible entity issued a verbal directive associated with real-time operating emergency conditions and the recipient repeated the intent of the directive correctly, but the responsible entity did not acknowledge the recipient was correct. Severe VSL: The responsible entity issued a verbal directive associated with real-time operating emergency conditions and the recipient repeated the intent of the directive incorrectly, but the responsible entity failed to repeat the intent of the original statement to resolve any misunderstandings.
Response: The RC SDT thanks you for your comment. We have modified all the requirements in a way that addresses your comments. Conforming changes to the VSLs have been made.		
American Electric Power	No	AEP is concerned that the severe VSL assigned to Requirement 2 is excessive and should be reconsidered.
Response: The RC SDT thanks you for your comment. We believe that R2 is a binary requirement which results in a Severe VSL. The entity either performed the requirement or did not.		

Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Yes or No	Question 6 Comment
Manitoba Hydro	No	If the suggestion regarding “require” in Q4 is accepted, conforming changes to the VSL need to made. Additionally, believe the Moderate and Severe VSLs are confusing based on repeating the language exactly in the requirement. In most cases, repeating the language of the requirement is best but we believe a deviation is warranted here. The intent of Moderate appears to be that the RC, TOP or BA did not acknowledge the repeat of the directive was correct and the repeat was correct. In the Severe, we believe the intent appears to be that the RC, TOP or BA did not acknowledge the repeat of the directive was correct but the repeat was incorrect. We agree that these distinctions make sense but offer the following changes to clarify the intent. Moderate VSL: The responsible entity issued a verbal directive associated with real-time operating emergency conditions and the recipient repeated the intent of the directive correctly, but the responsible entity did not acknowledge the recipient was correct. Severe VSL: The responsible entity issued a verbal directive associated with real-time operating emergency conditions and the recipient repeated the intent of the directive incorrectly, but the responsible entity failed to repeat the intent of the original statement to resolve any misunderstandings.
Response: The RC SDT thanks you for your comment. We have modified all the requirements in a way that addresses your comments. Conforming changes to the VSLs have been made.		
Illinois Municipal Electric Agency	No	Conforming changes are required to the VSLs based on the suggested modifications to the requirements in Question 4.
Response: The RC SDT thanks you for your comment. The RC SDT feels that there is a difference between complying with a Reliability Directive and communicating the Reliability Directive effectively. The requirements of COM-002 for LSE, PSE and DP simply state that the entity has to repeat the intent of the directive back since these entities may receive Reliability Directives. The drafting team feels that the current draft adds clarity to the requirements. The VSLs were revised to match the revised requirements.		
Hydro-Québec TransEnergie (HQT)	No	address the new proposed Requirements.
Response: The RC SDT thanks you for your comment. The RC SDT does not see a reliability benefit to having an Operational Procedure requirement, as it would be redundant since the Standard COM-002 would be mandatory and enforceable and requires the actions in the Operational Procedure that you suggest. The RC SDT feels that we have the same requirements that you suggest but in a different arrangement.		
Duke Energy	No	Change “emergency” to “Emergency” in the VSLs per our comment on R1 above. Also, we don’t see a tangible difference between the Moderate and Severe VSLs, and the High VSL should really be the Severe VSL. We suggest having just a High and a Severe VSL as follows:” High VSL: “The responsible entity issued a verbal directive associated with real-time operating Emergency conditions and had the recipient repeat back the intent of the directive, but did not either acknowledge the recipient was correct in the repeated directive or failed to repeat the intent of the original statement to resolve any misunderstandings.” Severe VSL: “The responsible entity issued a verbal directive associated with real-time operating

Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Yes or No	Question 6 Comment
		Emergency conditions, but did not have the recipient repeat back the intent of the directive.”
Response: The RC SDT thanks you for your comment. We have removed the word “emergency” and are proposing a definition of Reliability Directive which will be posted for comment. Our proposed definition is: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency. We have removed the “require” part of R1 since R2 is an enforceable requirement for repeating the directive. Conforming changes to the VSLs have been modified.		
Independent Electricity System Operator	No	The sequence of communication required under R1 is intended to ensure that directives from the issuing entities are clearly understood. The earlier this sequence is broken, the greater the uncertainty that this goal is achieved and the greater should be the severity level. Thus, failure to request that the recipient entity repeat the intent of the directive “ the earliest step in the sequence - should attract the “Severe” VSL.Also, failing to repeat the original directive when there is any misunderstanding, again, in our view, leaves the intent of the directive equally unclear and should also attract a “Severe” VSL.Failing to acknowledge the recipient was correct in the repeating the intent of the directive “ the last step in the sequence “ is already assigned a “Moderate” VSL and this should not be repeated in the “Severe” VSL.We therefore suggest that the two conditions under “High” and “Severe” in R1 be combined as one under “Severe” as follows: The responsible entity issued a verbal directive associated with real-time operating emergency conditions but did not require the recipient to repeat the intent of the directive;ORThe responsible entity issued a verbal directive associated with real-time operating emergency conditions and required the recipient to repeat the intent of the directive, but failed to repeat the intent of the original statement to resolve any misunderstandings.
Response: The RC SDT thanks you for your comment. In the revised standard, R2 requires the recipient to repeat the intent of the directive. We have removed the part of R1, (now R3), that states the issuer shall “require” the recipient to repeat the directive. We have made revisions to the VSLs to match the requirements.		
MRO NSRS	No	If the suggestion regarding “require” in Q4 is accepted, conforming changes to the VSL need to made. Additionally, MRO NSRS believes the Moderate and Severe VSLs are confusing based on repeating the language exactly in the requirement. In most cases, repeating the language of the requirement is best but we believe a deviation is warranted here. The intent of Moderate appears to be that the RC, TOP or BA did not acknowledge the repeat of the directive was correct and the repeat was correct. In the Severe, MRO NSRS believes the intent appears to be that the RC, TOP or BA did not acknowledge the repeat of the directive was correct but the repeat was incorrect. MRO NSRS agrees that these distinctions make sense but offer the following changes to clarify the intent. Moderate VSL: The responsible entity issued a verbal directive associated with real-time operating emergency conditions and the recipient repeated the intent of the directive correctly, but the responsible entity did not acknowledge the recipient

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Organization	Yes or No	Question 6 Comment
		was correct. Severe VSL: The responsible entity issued a verbal directive associated with real-time operating emergency conditions and the recipient repeated the intent of the directive incorrectly, but the responsible entity failed to repeat the intent of the original statement to resolve any misunderstandings.
Response: The RC SDT thanks you for your comment. The RC SDT is proposing a definition of Reliability Directive that will be posted for comment. Our proposed definition is: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency. We have removed the “require” part of R1 since R2 is an enforceable requirement for repeating the directive. Conforming changes to the VSLs have been modified.		
SERC OC Standards Review Group	Yes	If R1 changes as suggested in Question 4, the VSLs will need to be changed also.
Response: The RC SDT thanks you for your comment. The RC SDT is proposing a new definition for Reliability Directive to differentiate it from normal operations communications. Our proposed definition is: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency. The VSLs have been revised to reflect the proposal.		
FirstEnergy	Yes	
JEA	Yes	
Liberty Electric Power LLC	Yes	
WECC Reliability Coordinator	Yes	

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Organization	Yes or No	Question 6 Comment
PacifiCorp	Yes	
Calpine Corporation	Yes	
Western Area Power Administration	Yes	
Southern Company	Yes	
ReliabilityFirst Corporation	Yes	
Georgia Transmission Corporation	Yes	
Northeast Utilities	Yes	

7. Do you agree with the revisions to the definition of Adverse Reliability Impacts (IRO-001-2)? If not, please explain in the comment area.

Summary Consideration: Stakeholders suggested removing the word “outages” after “cascading” as per the NERC Glossary of Terms and a FERC Directive issued December 27, 2007. The RC SDT made the revision. There were no other suggested revisions to the definition.

Organization	Yes or No	Question 7 Comment
Northeast Power Coordinating Council	No	Remove the word “outages” that appears after “cascading” as per NERC Glossary and FERC Directive ssued Dec. 27, 2007.
Hydro-Québec TransEnergie (HQT)	No	Remove the word “outages” that appears after “cascading” as per NERC Glossary and FERC Directive issued Dec. 27, 2007.
Northeast Utilities	No	Remove the word “outages” that appears after “cascading” as per NERC Glossary and FERC Directive issued Dec. 27, 2007.
Independent Electricity System Operator	No	Comments: Remove the word “outages” that appears after “cascading” as per NERC Glossary and FERC Directive issued Dec. 27, 2007.
Response: The RC SDT thanks you for your comment. The RC SDT agrees and has removed “outages”. We have also capitalized “Cascading”		
FirstEnergy	Yes	If the term "cascading" used in the definition is referring to the NERC-defined term, it should be capitalized.
Response: The RC SDT thanks you for your comment. The RC SDT agrees and has capitalized “Cascading”		
IRC Standards Review Committee	Yes	The drafting team should consider that NERC is moving away from using the term "cascading outages". FERC has directed NERC to rescind this definition, and use the defined term "cascading" instead.
Response: The RC SDT thanks you for your comment. The RC SDT agrees and has removed “outages”. We have also capitalized “Cascading”		
SERC OC Standards Review Group	No	What is the difference between “Adverse Reliability Impacts” and the definition of an IROL? Is this going to replace an IROL?

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Organization	Yes or No	Question 7 Comment
Response: The RC SDT thanks you for your comment. Adverse Reliability Impacts is already a defined term that the RC SDT is proposing to revise. IROL is a limit, while ARI is the impact of events. ARI will not replace IROL.		
Northwest LSE Group	Yes	
Bonneville Power Administration	Yes	
Midwest ISO Standards Collaborators	Yes	
Liberty Electric Power LLC	Yes	
WECC Reliability Coordinator	Yes	
PacifiCorp	Yes	
Calpine Corporation	Yes	
Western Area Power Administration	Yes	
Southern Company	Yes	
ReliabilityFirst Corporation	Yes	
American Electric Power	Yes	

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Organization	Yes or No	Question 7 Comment
Manitoba Hydro	Yes	
Georgia Transmission Corporation	Yes	
Illinois Municipal Electric Agency	Yes	
Duke Energy	Yes	
MRO NSRS	Yes	
Xcel Energy	Yes	
American Transmission Company	Yes	

8. Do you agree with the revisions to the Requirements in IRO-001-2 as shown in the posted Standard? If not, please explain in the comment area.

Summary Consideration: Stakeholders generally agreed with the revisions to the requirements. Several stakeholders suggested adding the words “an issued” before “directive in R3. The RC SDT agreed and made the change. No further revisions were made to the requirements.

Organization	Yes or No	Question 8 Comment
Northwest LSE Group	No	To reduce the compliance burden on smaller entities that would never receive a Reliability Coordinator directive and reduce needless Regional Entity auditing, it would be most helpful to require the RC to publish its list of entities responsible for receiving reliability directives. Also, any Registered Entity should be able to request copies of digital audio recordings or transcripts of the audio recordings if available from the RC.
Response: The RC SDT thanks you for your comment. An RC may issue a directive to any registered entity within its footprint. The burden of compliance is assigned by the NERC registration process and is outside of the scope of this drafting team. The requirements of IRO-001 do not preclude an entity from requesting copies of digital audio recordings or transcripts from the RC.		
Northeast Power Coordinating Council	No	Add “an issued” to the wording as shown following: The Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and/or Purchasing-Selling Entity shall immediately confirm the ability to comply with the directive or inform the its Reliability Coordinator upon recognition of its inability to perform the issued directive.
Response: The RC SDT thanks you for your comment. The RC SDT agrees and has added “an issued” before directive. We have also changed directive to Reliability Directive and included the definition at the beginning of IRO-001 and COM-002 Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.		
SERC OC Standards Review Group	No	If R2 of IRO-001-1 is retired, what process is in place to ensure that reliability plans are kept up to date and are reviewed to approve footprint changes?
Response: The RC SDT thanks you for your comment. As stated in the posted implementation of IRO-001, this is covered in NERC Rules of Procedure, Section 503, item 2.2:		

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Organization	Yes or No	Question 8 Comment
“Regional entities shall verify that all balancing authorities and transmission operators are under the responsibility of a reliability coordinator”. The RC SDT proposed retiring R2 and R5 as the regional reliability plan is a “how” document that shows how an RC will comply with all other NERC Standards, making this requirement redundant.		
FirstEnergy	No	Regarding the retirement of IRO-001-1 R7 We are not convinced that this requirement is redundant with IRO-014-1 R1. The existing requirement requires the RC to "have clear, comprehensive coordination agreements with adjacent RCs to ensure that SOL or IROL violation mitigation requiring actions in adjacent RC areas are coordinated". IRO-014-1 R1 requires agreements for coordination of actions between RCs to support Interconnection reliability, but it does not specifically require "clear" and "comprehensive" agreements to mitigate SOL or IROL violations. For IRO-001-1 R7 to be properly retired, the "mitigation of SOL and IROL violations" should be explicitly stated in IRO-014-2 R1 as one of the items to be addressed in the RC's Operating Procedure, Process, or Plan.
Response: The RC SDT thanks you for your comment. The RC SDT believes that R1.6 of IRO-014-2 addresses your concern as the procedures, processes or plans include: Authority to act to prevent and mitigate conditions which could cause Adverse Reliability Impacts to other Reliability Coordinator Areas. The definitions of each are: IROL: A System Operating Limit that, if violated, could lead to instability, uncontrolled separation, or Cascading Outages that adversely impact the reliability of the Bulk Electric System. Adverse Reliability Impacts: The impact of an event that results in Bulk Electric System instability; uncontrolled separation or Cascading.		
Midwest ISO Standards Collaborators	No	We agree with many of the changes. However, we believe R5 is not necessary for reliability. We agree the RC should notify impacted entities when the transmission problem has been mitigated; however, if the RC fails to notify the impacted entities, it will not result in an Adverse Reliability Impact. Thus, it is not necessary as a sanctionable requirement.
Response: The RC SDT thanks you for your comment. The RC SDT concurs that Adverse Reliability Impacts will not result from an RC not notifying impacted entities when a problem has been mitigated. However, impacted entities may have taken actions when the problem arose. These entities need to be informed that the problem has been mitigated so that they can return to normal operations. R5 notifies entities when the system is in a stable state and facilitates Interpersonal Communication between entities.		
Liberty Electric Power LLC	No	Similar objection to COM-002-3: There should be a requirement to the RC to declare the nature of the directive, emergency or economic.
Response: The RC SDT thanks you for your comment. The reliability standards do not address economic issues. The RC SDT has developed a		

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Organization	Yes or No	Question 8 Comment
proposed definition of Reliability Directive that should address your concern. Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.		
Manitoba Hydro	No	R5 does not make sense as it doesn't create an adverse reliability impact should the RC fail to notify impacted entities.
Response: The RC SDT thanks you for your comment. The RC SDT concurs that Adverse Reliability Impacts will not result from an RC not notifying impacted entities when a problem has been mitigated. However, impacted entities may have taken actions when the problem arose. These entities need to be informed that the problem has been mitigated so that they can return to normal operations. R5 let's entities know when the system is in a stable state and facilitates Interpersonal Communication between entities.		
Illinois Municipal Electric Agency	No	IMEA supports the comments submitted by the MISO Standards Collaboration Group. In addition, while we agree with the proposed revisions to IRO-001-2 R2, IMEA recommends (as indicated in our comments to Question 4) that a reference be made to COM-002-3 R1 in IRO-001-2 R2. By including this reference, it is understood the applicable entities successfully repeated the directive in order to comply with the directive.
Response: The RC SDT thanks you for your comment. The RC SDT concurs that Adverse Reliability Impacts will not result from an RC not notifying impacted entities when a problem has been mitigated. However, impacted entities may have taken actions when the problem arose. These entities need to be informed that the problem has been mitigated so that they can return to normal operations. R5 notifies entities when the system is in a stable state and facilitates Interpersonal Communication between entities. We have included our proposed definition of Reliability Directive in both COM-002 and IRO-001 and used the term in the appropriate requirements. This will provide the linkage you suggest.		
Hydro-Québec TransEnergie (HQT)	No	Add "an issued" to the wording as shown following: Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity shall inform its Reliability Coordinator upon recognition of its inability to perform "an issued" directive.
Response: The RC SDT thanks you for your comment. The RC SDT agrees and has added "an issued" before directive. We have also changed directive to Reliability Directive and included the definition at the beginning of IRO-001 and COM-002. Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.		
Northeast Utilities	No	The intent of R3 is not clear - i.e., " shall inform its Reliability Coordinator upon recognition of its inability to perform a directive". Does this requirement pre-suppose a directive has been given? Suggest adding clarifying language that

Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Yes or No	Question 8 Comment
		indicates that the requirement is applicable subsequent to a directive being received. It is our belief that the wording of Measure M3 supports the suggested changes to R3.
Response: The RC SDT thanks you for your comment. R3 has been revised to add clarity per your comment: R3. Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity shall inform its Reliability Coordinator upon recognition of its inability to perform an issued Reliability Directive. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations]</i>		
Independent Electricity System Operator	No	Comments: Change “inability to perform a directive.” to “inability to perform an issued directive.”
Response: The RC SDT thanks you for your comment. The RC SDT agrees and has added “an issued” before directive. We have also changed directive to Reliability Directive and included the definition at the beginning of IRO-001 and COM-002. Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency		
MRO NSRS	No	MRO NSRS agrees with many of the changes. However, we believe R5 is not necessary for reliability. MRO NSRS agrees the RC should notify impacted entities when the transmission problem has been mitigated; however, if the RC fails to notify the impacted entities, it will not result in an Adverse Reliability Impact. Thus, it is not necessary as a sanctionable requirement.
Response: The RC SDT thanks you for your comment. The RC SDT concurs that Adverse Reliability Impacts will not result from an RC not notifying impacted entities when a problem has been mitigated. However, impacted entities may have taken actions when the problem arose. These entities need to be informed that the problem has been mitigated so that they can return to normal operations. R5 notifies entities when the system is in a stable state and facilitates Interpersonal Communication between entities.		
Xcel Energy	No	R6 – while this requirement has merits, it does not appear to fall under the stated purpose of the standard “To establish requirements for issuance of and complying with Reliability Coordinator directives or notification within the Reliability Coordinator Areas.”. Either the purpose should be modified or this requirement should be placed in a more appropriate location, e.g. IRO-002-2 (along with R8).
Response: The RC SDT thanks you for your comment. The RC SDT moved this requirement into IRO-001 from IRO-002 rather than have a single requirement standard.		

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Organization	Yes or No	Question 8 Comment
Western Area Power Administration	Yes	Suggest changing the word "complying" to "compliance" in the purpose statement.
Response: The RC SDT thanks you for your comment. The RC SDT had made the suggested edit.		
Bonneville Power Administration	Yes	
WECC Reliability Coordinator	Yes	
PacifiCorp	Yes	
Calpine Corporation	Yes	
Southern Company	Yes	
ReliabilityFirst Corporation	Yes	
American Electric Power	Yes	
Georgia Transmission Corporation	Yes	
Duke Energy	Yes	
American Transmission Company	Yes	

9. Do you agree with the revisions to the Measures in IRO-001-2 as shown in the posted Standard? If not, please explain in the comment area.

Summary Consideration: Stakeholders agreed with the measures for IRO-001-2. The measure M3 was revised to reflect the revision to R3 and the word, “directive” was changed to the defined term, “Reliability Directive” in M1 through M3. No other revisions were suggested for the measures.

Organization	Yes or No	Question 9 Comment
Northwest LSE Group	No	Only in making the Measures agree with the suggested changes to the requirements above.
Response: The RC SDT thanks you for your comment. The measures were revised as appropriate to reflect revisions to the requirements.		
SERC OC Standards Review Group	No	The measures should indicate how long records should be kept to verify compliance with the requirements.
Response: The RC SDT thanks you for your comment. This is covered in the Data Retention section of the Standard.		
Midwest ISO Standards Collaborators	No	Measurement 5 needs to be struck if R5 is struck per question 8.
Response: The RC SDT thanks you for your comment. The RC SDT retained R5 and M5. Please see discussion above in Q8.		
Manitoba Hydro	No	Measure for R5 would need to be struck should R5 be struck as per question 8.
Response: The RC SDT thanks you for your comment. The RC SDT retained R5 and M5. Please see discussion above in Q8.		
Illinois Municipal Electric Agency	No	IMEA supports the comments submitted by the MISO Standards Collaboration Group.
Response: The RC SDT thanks you for your comment. The RC SDT retained R5 and M5. Please see discussion above in Q8.		

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Organization	Yes or No	Question 9 Comment
MRO NSRS	No	Measurement 5 needs to be struck if R5 is struck per question 8.
Response: The RC SDT thanks you for your comment. The RC SDT retained R5 and M5. Please see discussion above in Q8.		
Northeast Power Coordinating Council	Yes	
Bonneville Power Administration	Yes	
FirstEnergy	Yes	
IRC Standards Review Committee	Yes	
Liberty Electric Power LLC	Yes	
WECC Reliability Coordinator	Yes	
PacifiCorp	Yes	
Calpine Corporation	Yes	
Western Area Power Administration	Yes	
Southern Company	Yes	
ReliabilityFirst	Yes	

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Organization	Yes or No	Question 9 Comment
Corporation		
American Electric Power	Yes	
Georgia Transmission Corporation	Yes	
Hydro-Québec TransEnergie (HQT)	Yes	
Duke Energy	Yes	
Northeast Utilities	Yes	
Independent Electricity System Operator	Yes	
American Transmission Company	Yes	

10. Do you agree with the revisions to the Violation Severity Levels in IRO-001-2 as shown in the posted Standard? If not, please explain in the comment area.

Summary Consideration: Several stakeholders suggested revisions to the VSLs for R4 and R5. The RC SDT concurs that improvements are warranted for the VSLs for R4 and R5. The VSLs have been changed accordingly. The VSL for R3 was revised to add the word “issued” before Reliability Directive to match the revised requirement. The VSLs for R4 and R5 were modified to clarify that if the responsible entity did not notify any others, then this is a Severe VSL.

Organization	Yes or No	Question 10 Comment
Northwest LSE Group	No	Only in making the Measures agree with the suggested changes to the requirements above.
Response: The RC SDT thanks you for your comment. The measures were revised to reflect changes to the requirements as necessary.		
Northeast Power Coordinating Council	No	(i) R4: Since failing to issue an alert to 3 entities already attracts a “High” VSL, not doing so for ANY (i.e. failing to issue an alert to all entities) or more than three should attract a “Severe” VSL. We suggest to change the High VSL to: “failed to issue an alert to three, but not all, impacted”. and the Severe VSL to: “failed to issue an alert to any or more than three impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. Some examples may help to make our intent clearer: If there were 3 BAs, TOPs etc. and none were alerted, this would be a “Severe” violation. If there were 6 BAs, TOPs etc. and 3 were not alerted, this would be a “High” violation. In this last case, if 4 BAs, TOPs etc. were not alerted, this would be a “Severe” violation. (ii) (ii) R5: Similar changes as in R4 should also apply to High and Severe in R5.
Response: The RC SDT thanks you for your comment. We concur that improvements are warranted for the VSLs for R4 and R5. The VSLs have been revised per your suggestion accordingly.		
Midwest ISO Standards Collaborators	No	The Commission stated in their order on VSLs in June of 2008 their preference for as many VSLs as possible. We believe two VSLs are possible for R1 based on whether the RC is acting or directing actions to prevent versus mitigate. Failure to mitigate should be Severe. Failure to prevent should be High because if the RC fails to act or direct action to prevent, the Adverse Reliability Impact may still not happen if system conditions change. For the Moderate VSL of R2, please remove the clause “but not all”. It is not necessary.
Response: The RC SDT thanks you for your comment. The VSL for R1 was revised as recommended. There is not a Moderate VSL for R2.		
Liberty Electric Power LLC	No	The VSL's have a "Severe" VSL attached to a GO who fails to inform the RC when the Go becomes aware it is are unable to fully comply with a directive. However, the RC failing to inform two TO's - who potentially could have many

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Organization	Yes or No	Question 10 Comment
		GOs supplying power to their systems - of an emergency is only a "Moderate" VSL.
Response: The RC SDT thanks you for your comment. The VSLs for R4 and R5 have been revised to more closely fit the intent of the requirements.		
E.ON U.S.	No	E.ON U.S. suggests that the VSL for R4 should be binary with the Severe VSL for failing to notify all entities as per R4. Partially meeting R4 is not consistent with the language in R4. E.ON U.S. also suggests that the VSL for R5 should be binary with the Severe VSL for failing to notify all entities as per R5. Partially meeting R5 is not consistent with the language in R5 but the reliability impact of partially meeting R5 is low.
Response: The RC SDT thanks you for your comment. The requirements R4 and R5 are not binary in nature and therefore do not meet the VSL guideline for binary. We have revised the High and Severe VSLs for R4 and R5 (see comment of NPCC above).		
Manitoba Hydro	No	Believe two VSLs are possible for R1 based on whether the RC is acting or directing actions to prevent versus mitigate. Failure to mitigate should be Severe. Failure to prevent should be High because if the RC fails to act or direct action to prevent, the Adverse Reliability Impact may still not happen if system conditions change. For the Moderate VSL of R2, please remove the clause "but not all". It is not necessary.
Response: The RC SDT thanks you for your comment. We concur with your suggestion to split the single VSL into two separate VSLs, one addressing prevention and one mitigation. The VSLs for R1 have been changed accordingly.		
Illinois Municipal Electric Agency	No	IMEA supports the comments submitted by the MISO Standards Collaboration Group.
Response: The RC SDT thanks you for your comment. Please review the response to MISO SCG comments.		
Hydro-Québec TransEnergie (HQT)	No	(i) R4: Since failing to issue an alert to 3 entities already attracts a "High" VSL, not doing so for ANY (i.e. failing to issue an alert to all entities) or more than three should attract a "Severe" VSL. We suggest to change the High VSL to: "failed to issue an alert to three, but not all, impacted". and the Severe VSL to: "failed to issue an alert to any or more than three impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. Some examples may help to make our intent clearer: If there were 3 BAs, TOPs etc. and none were alerted, this would be a "Severe" violation. If there were 6 BAs, TOPs etc. and 3 were not alerted, this would be a "High" violation. In this last case, if 4 BAs, TOPs etc. were not alerted, this would be a "Severe" violation. (ii) R5: Similar changes as in R4 should also apply to High and Severe in R5.
Response: The RC SDT thanks you for your comment. We concur that improvements are warranted for the VSLs for R4 and R5. The VSLs have been		

Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Yes or No	Question 10 Comment
revised as you suggest.		
Northeast Utilities	No	(i) R4: Since failing to issue an alert to 3 entities already attracts a “High” VSL, not doing so for ANY (i.e. failing to issue an alert to all entities) or more than three should attract a “Severe” VSL. We suggest to change the High VSL to: “failed to issue an alert to three, but not all, impacted”. and the Severe VSL to: “failed to issue an alert to any or more than three impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. Some examples may help to make our intent clearer: If there were 3 BAs, TOPs etc. and none were alerted, this would be a “Severe” violation. If there were 6 BAs, TOPs etc. and 3 were not alerted, this would be a “High” violation. In this last case, if 4 BAs, TOPs etc. were not alerted, this would be a “Severe” violation.(ii) R5: Similar changes as in R4 should also apply to High and Severe in R5.
Response: The RC SDT thanks you for your comment. We concur that improvements are warranted for the VSLs for R4 and R5. The VSLs have been revised as you suggested.		
Independent Electricity System Operator	No	(i) R1: For clarity, we suggest changing “it” to “that”.R4: Since failing to issue an alert to 3 entities already attracts a “High” VSL, not doing so for ANY (i.e. failing to issue an alert to all entities) or more than three should attract a “Severe” VSL. We suggest to change the High VSL to: “failed to issue an alert to three, but not all, impacted”. and the Severe VSL to: “failed to issue an alert to any or more than three impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. Some examples may help to make our intent clearer: If there were 3 BAs, TOPs etc. and none were alerted, this would be a “Severe” violation. If there were 6 BAs, TOPs etc. and 3 were not alerted, this would be a “High” violation. In this last case, if 4 BAs, TOPs etc. were not alerted, this would be a “Severe” violation.(ii) R5: Similar changes as in R4 should also apply to High and Severe in R5.
Response: The RC SDT thanks you for your comment. We concur that improvements are warranted for the VSLs for R4 and R5. The VSLs have been revised as you suggested.		
MRO NSRS	No	The Commission stated in their order on VSLs in June of 2008 their preference for as many VSLs as possible. MRO NSRS believes two VSLs are possible for R1 based on whether the RC is acting or directing actions to prevent versus mitigate. Failure to mitigate should be Severe. Failure to prevent should be High because if the RC fails to act or direct action to prevent, the Adverse Reliability Impact may still not happen if system conditions change. For the Moderate VSL of R2, please remove the clause “but not all”. It is not necessary.
Response: The RC SDT thanks you for your comment. We concur with your suggestion to split the single VSL into two separate VSLs, one addressing prevention and one mitigation. The VSLs for R1 have been changed accordingly. There is not a Moderate VSL for R2.		

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Organization	Yes or No	Question 10 Comment
SERC OC Standards Review Group	Yes	
Bonneville Power Administration	Yes	
FirstEnergy	Yes	
PacifiCorp	Yes	
Calpine Corporation	Yes	
Western Area Power Administration	Yes	
Southern Company	Yes	
ReliabilityFirst Corporation	Yes	
American Electric Power	Yes	
Georgia Transmission Corporation	Yes	
Duke Energy	Yes	

11. Do you agree with the revisions to the Requirements in IRO-014-2 as shown in the posted Standard? If not, please explain in the comment area.

Summary Consideration: Stakeholders suggested revising R8 to include provisions for avoiding implementing actions that would violate safety, equipment or regulatory or statutory requirements. The RC SDT agreed and added this to the requirement. Other stakeholders suggested adding "For conditions or activities that impact other Reliability Coordinator Areas,..." at the beginning of R1 and R3. The RC SDT agreed and added this to the requirements. The Time Horizons for R2 were revised as suggested to "*Same Day Operations and Operations Planning*". Several stakeholders expressed concerns regarding having R6-R8 as separate requirements. The intent of R6, R7, and R8 is to handle those things that arise that may not have had a plan identified in advance. The RC SDT contends the requirements are adequate as written.

Organization	Yes or No	Question 11 Comment
Northwest LSE Group		Abstain
Northeast Power Coordinating Council	No	The intents of Requirements R7 and R8 are addressed in R6, and do not add anything. Suggest removing R7 and R8.
Response: The RC SDT thanks you for your comment. The RC SDT developed R5-R8 of IRO-014 from original IRO-016, R1. This was done to eliminate a compound requirement (a requirement that contained multiple separate requirements). Each requirement is different and requires different specific actions. Please see the posted implementation plan for IRO-014 for details. http://www.nerc.com/docs/standards/sar/IRO-014-2_Implementation_Plan_Clean_2009July9.pdf		
SERC OC Standards Review Group	No	Does the STD intend to give a Reliability Coordinator the authority to direct reliability outside their reliability area? This appears to be in conflict with IRO-001.
Response: The RC SDT thanks you for your comment. IRO-014 deals with coordinating plans, processes and procedures ahead of time. The requirements state that RCs will follow these agreed to plans, processes or procedures.		
FirstEnergy	No	See our comments from Questions 8. If IRO-001 R7 is retired and deemed covered by IRO-014 R1, then IRO-014 R1 should include the "mitigation of SOL and IROL violations" as one of the items to be addressed in the RC's Operating Procedure, Process, or Plan.

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Organization	Yes or No	Question 11 Comment
Response: The RC SDT thanks you for your comment. Please see response to question 8. The RC SDT did not make any revisions as this issue is covered by R1.6 relating to Adverse Reliability Impacts.		
IRC Standards Review Committee	No	(1) R2 appropriately requires the RC experiencing the Adverse Reliability Impact to distribute its Operating Procedure, Process or Plan to other RCs required to take action. However, placing the burden on the same RC to obtain the agreement of impacted RCs may not be appropriate since the RC experiencing the Adverse Reliability Impact may not be able to force impacted RC to concur. We suggest the SDT to consider: a. Remove the bullet to require agreement from the impacted RC; b. Add a new requirement that the impacted RC shall acknowledge the Operating Procedure, Process or Plan with agreement or disagreement. In the event of disagreement, a reliability or legal reason or failure to implement comparable actions should be given. (2) We realize that R7 implies that the RC experiencing the Adverse Reliability Impact has come up with an alternative plan when its initial plan was not agreed to, but the alternative may still be disagreed by the impacted RC. Simply implementing the alternative plan, as stipulated in R8, could expose the impacted RC to operate in an unreliable or unsafe domain. We therefore request the SDT to assess if any requirements need to be introduced to resolve this difference with due regard to reliability concerns in both RC areas when agreement cannot be reached even on the alternative plan.
Response: The RC SDT thanks you for your comment. 1) R2 deals with procedures, processes and plans identified and developed ahead of time. If the plan of one RC requires action from another RC, the RC SDT feels it is necessary to get agreement from the second RC to take action, otherwise the plan is not a plan that will maintain reliability. The intent of R6, 7, and 8 is to handle those things that arise that may not have had a plan identified in advance. The RC SDT believes the requirements are adequate as written. 2) We have modified R8 to allow RCs to avoid implementing actions that violate safety, equipment or regulatory or statutory requirement. R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan unless such actions would violate safety, equipment, or regulatory or statutory requirements. . <i>[Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i>		
Midwest ISO Standards Collaborators	No	Requirements R2 and R8 need additional work. R2 appropriately requires the RC experiencing the Adverse Reliability Impact to distribute its Operating Procedure, Process or Plan to other RCs required to take action. However, it inappropriately places the burden on the same RC to obtain the agreement of impacted RCs. No RC can be forced to agree. Rather R2 should remove the bullet to require agreement from the impacted RC and a new requirement should be written to require the impacted RC to acknowledge the Operating Procedure, Process or Plan with agreement or disagreement. In the event of disagreement, a reliability or legal reason or failure to implement comparable actions should be given as the reason for not agreeing with the Operating Process, Procedure or Plan. This contributes to reliability by forcing the impacted RC to take action if the action is reasonable.

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Organization	Yes or No	Question 11 Comment
		Further, the drafting team needs to clarify that R2 also applies to the mitigation plan in R7. Because R7 requires the RC experiencing the Adverse Reliability Impact to develop the mitigation plan, the mitigation plan may not be agreed to by the impacted RC. The impacted RC may have a perfectly valid reliability, statutory, legal, or regulatory reason for not agreeing to the mitigation plan. R8 still obligates the RC to implement the mitigation plan developed in R7 though it may be contrary to reliability. R8 needs to allow the RC to refuse to implement the mitigation plan if the impacted RC has a reliability, statutory, legal or regulatory reason. Further the drafting team should consider if the impacted RC could refuse because the RC experiencing the Adverse Reliability Impact has not implemented comparable measures in their own area. R8 as written could allow an RC to simply pass cost on to the neighboring RC in the name of reliability. For example, the RC may not want to order a unit to be committed to avoid certain startup costs but they ask the neighboring RC to start up a unit in their footprint.
Response: The RC SDT thanks you for your comment. R2 deals with procedures, processes and plans identified and developed ahead of time. If the plan of one RC requires action from another RC, the RC SDT feels it is necessary to get agreement from the second RC to take action, otherwise the plan is not a plan that will maintain reliability. The intent of R6, R7, and R8 is to handle those things that arise that may not have had a plan identified in advance. The RC SDT believes the requirements are adequate as written. R7/R8: We have modified R8 to allow RCs to avoid implementing actions that violate safety, equipment or regulatory or statutory requirement. R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan unless such actions would violate safety, equipment, or regulatory or statutory requirements. . <i>[Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i> The second comment deals with economic issues and not with reliability. We cannot address economic issues, but it would be reasonable to expect that plans developed in advance could include equity considerations. Also, it is possible to postulate a scenario where the RC experiencing the Adverse Reliability Impact may not have actions to take that are effective and the other impacted RC could have very effective actions to take and should take them regardless of whether the RC developing the mitigation plan has taken comparable measures in its own area.		
Southern Company	No	IRO-001-1 Requirement 3 states that, "The Reliability Coordinator shall have clear decision-making authority to act and to direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing- Selling Entities within its Reliability Coordinator Area to preserve the integrity and reliability of the Bulk Electric System." This does not give one RC the authority to direct another RC. Requirement 7 and 8 would allow one RC to give a directive to another RC if they disagree. This would allow an RC with bad information to require another RC to carry out a mitigation plan that could degrade system reliability. For example, RC1 identifies a possible SOL violation in RC2s reliability area due to RC1s generation pattern. RC1 and RC2 can't agree that there is a problem. In order to mitigate the SOL a mitigation plan is developed by RC1 that requires RC2 to redispatch generation and reconfigure transmission in RC2's area so that the generation and transmission in RC1's area won't have

Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Yes or No	Question 11 Comment
		to be redispached or reconfigured. Suggested rewording of R7 and R8 R7. When Reliability Coordinators can not agree that a problem exists a mitigation plan will be developed by each Reliability Coordinator that will restore system reliability in their respective reliability areas. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed to relieve the identified Adverse Reliability Impact in their reliability area when the impacted Reliability Coordinators can not agree that a problem exists. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]
Response: The RC SDT thanks you for your comment. IRO-014 deals with coordinating plans, processes and procedures ahead of time. The requirements state that RCs will follow these plans processes or procedures. We have modified R8 to allow RCs to avoid implementing actions that violate safety, equipment or regulatory or statutory requirement. The intent of R6, R7, and R8 is to handle those things that arise that may not have had a plan identified in advance. R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan unless such actions would violate safety, equipment, or regulatory or statutory requirements. . [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]		
Manitoba Hydro	No	Requirements R2 and R8 need additional work. R2 appropriately requires the RC experiencing the Adverse Reliability Impact to distribute its Operating Procedure, Process or Plan to other RCs required to take action. However, it inappropriately places the burden on the same RC to obtain the agreement of impacted RCs. No RC can be forced to agree. Rather R2 should remove the bullet to require agreement from the impacted RC and a new requirement should be written to require the impacted RC to acknowledge the Operating Procedure, Process or Plan with agreement or disagreement. In the event of disagreement, a reliability or legal reason or failure to implement comparable actions should be given as the reason for not agreeing with the Operating Process, Procedure or Plan. This contributes to reliability by forcing the impacted RC to take action if the action is reasonable. Further, the drafting team needs to clarify that R2 also applies to the mitigation plan in R7. Because R7 requires the RC experiencing the Adverse Reliability Impact to develop the mitigation plan, the mitigation plan may not be agreed to by the impacted RC. The impacted RC may have a perfectly valid reliability, statutory, legal, or regulatory reason for not agreeing to the mitigation plan. R8 still obligates the RC to implement the mitigation plan developed in R7 though it may be contrary to reliability. R8 needs to allow the RC to refuse to implement the mitigation plan if the impacted RC has a reliability, statutory, legal or regulatory reason. Further the drafting team should consider if the impacted RC could refuse because the RC experiencing the Adverse Reliability Impact has not implemented comparable measures in their own area. R8 as written could allow an RC to simply pass cost on to the neighboring RC in the name of reliability. For example, the RC may not want to order a unit to be committed to avoid certain startup costs but they ask the neighboring RC to start up a unit in their footprint.

Organization	Yes or No	Question 11 Comment
Response: The RC SDT thanks you for your comment. R2 deals with procedures, processes and plans identified and developed ahead of time. If the plan of one RC requires action from another RC, the RC SDT feels it is necessary to get agreement from the second RC to take action, otherwise the plan is not a plan that will maintain reliability. The intent of R6, R7, and R8 is to handle those things that arise that may not have had a plan identified in advance. The RC SDT contends the requirements are adequate as written. R8: We have modified R8 to allow RCs to avoid implementing actions that violate safety, equipment or regulatory or statutory requirement. R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan unless such actions would violate safety, equipment, or regulatory or statutory requirements. . <i>[Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i> The second comment deals with economic issues and not with reliability. We cannot address economic issues, but it would be reasonable to expect that plans developed in advance could include equity considerations. Also, it is possible to postulate a scenario where the RC experiencing the Adverse Reliability Impact may not have actions to take that are effective and the other impacted RC could have very effective actions to take and should take them regardless of whether the RC developing the mitigation plan has taken comparable measures in its own area.		
Hydro-Québec TransEnergie (HQT)	No	The intents of Requirements R7 and R8 are addressed in R6, and do not add anything. Suggest removing R7 and R8.
Response: The RC SDT thanks you for your comment. The RC SDT developed R5-R8 of IRO-014 from original IRO-016, R1. This was done to eliminate a compound requirement. Each requirement is different and requires different specific actions. Please see the posted implementation plan for IRO-014 for details. http://www.nerc.com/docs/standards/sar/IRO-014-2_Implementation_Plan_Clean_2009July9.pdf		
Duke Energy	No	R1 introduces the concept of “impacted Reliability Coordinators” which is unclear. Revise R1 as follows: R1. For conditions or activities that may impact other Reliability Coordinator Areas, each Reliability Coordinator shall have Operating Procedures, Processes, or Plans for notification, exchange of information or coordination of actions with those impacted Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following: R2 Time Horizon should not include Long-term Planning. R3 is unclear. Revise R3 as follows: R3. For conditions or activities that may impact other Reliability Coordinator Areas, each Reliability Coordinator shall make notifications and exchange reliability-related information with those impacted Reliability Coordinators using its predefined Operating Procedures, Processes, or Plans, or other available means to

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Organization	Yes or No	Question 11 Comment
		accomplish the notifications and exchange of reliability-related information. R4 could be interpreted to require a weekly conference call even if there is no need for a call. Revise R4 as follows: R4. When there are conditions or activities that may impact other Reliability Coordinator areas, each Reliability coordinator shall participate in agreed upon conference calls, at least weekly, and other communication forums with those impacted Reliability Coordinators.” R5 “ Insert the word “all” before impacted Reliability Coordinators for clarity.” R6, R7 and R8 are interrelated and unclear. Combine these three requirements into one clear requirement as follows: R6. When the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators, the Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan and each impacted Reliability Coordinator shall implement the plan.
Response: The RC SDT thanks you for your comment. R1: We have revised R1 to include the phrase “For conditions or activities that impact other Reliability Coordinator Areas,...” We removed the word “may” to tighten up the requirement. R2: The RC SDT removed Long term Planning and revised the Time Horizon of R2 to match that of R1: <i>Same Day Operations and Operations Planning</i> R3: We have revised R3 to include the phrase “For conditions or activities that impact other Reliability Coordinator Areas,...” We removed the word “may” to tighten up the requirement. R4: The collective experience of the RC SDT members indicates a clear need to have at least weekly conference calls among impacted Reliability Coordinators among impacted Reliability Coordinators. R5: The RC SDT agrees and added the word “all” as suggested. R6-8: These requirements were developed from IRO-016, R1 which was a compound requirement (it contained multiple requirements for different actions in a single requirement). The RC SDT separated these into distinct requirements for clarity and measurability.		
Northeast Utilities	No	The intents of Requirements R7 and R8 are addressed in R6, and do not add anything. Suggest removing R7 and R8.
Response: The RC SDT thanks you for your comment. The RC SDT developed R5-R8 of IRO-014 from original IRO-016, R1. This was done to eliminate a compound requirement (it contained multiple requirements for different actions in a single requirement. Each requirement is different and requires different specific actions. Please see the posted implementation plan for IRO-014 for details. http://www.nerc.com/docs/standards/sar/IRO-014-2_Implementation_Plan_Clean_2009July9.pdf		

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Organization	Yes or No	Question 11 Comment
Independent Electricity System Operator	No	(i) Definition of Adverse Reliability Impact is duplicated as it is already defined in IRO-001-2 (ii) We do not see the need for R7 and R8 since R6 already stipulates the necessary actions to be taken, it is not necessary for the Reliability Coordinator with the identified Adverse Reliability Impact to develop (re-develop?) a mitigation plan when the impacted Reliability Coordinators did not agree that the problem exists. What may be needed is the insertion of “shall develop a mitigation plan” before “notify impacted Reliability Coordinators” in R5. We suggest removing these requirements (R7 and R8).
Response: The RC SDT thanks you for your comment. i)...The SDT acknowledges that the definition of Adverse Reliability Impact is duplicated in IRO-001-2 and in IRO-014-2. The SDT repeated it in the two standards to facilitate review and consistency. When the standards are approved, the definition will be moved into the NERC Glossary of Terms...only once. ii) The RC SDT developed R5-R8 of IRO-014 from original IRO-016, R1. This was done to eliminate a compound requirement (it contained multiple requirements for different actions in a single requirement. Each requirement is different and requires different specific actions. Please see the posted implementation plan for IRO-014 for details. http://www.nerc.com/docs/standards/sar/IRO-014-2_Implementation_Plan_Clean_2009July9.pdf		
MRO NSRS	No	In bullet 2.1 of Requirement R2, what does the requirement that all RCs that are required to take action must agree to it really mean? Does this mean that if the RCs don't agree that in reality an Operating Procedure, Process or Plan doesn't really exist and thus is not subject to R2? Further, how can one RC require another RC to agree with an Operating Procedure, Process or Plan? Either they agree or they don't. Isn't what is really needed is a requirement for the impacted RC to review and acknowledge the plan? That is give it a thumbs up or a thumbs down? In requirement R4, the clause “at least weekly” should be struck. If the RCs agree that a bi-weekly call is sufficient unless conditions change significantly why must they be held to a weekly standard. Our experience has been that most RCs participate in daily calls anyway based on an agreed need. Please strike IRO-014-2 R7 as it is redundant with IRO-001-2 R1. IRO-001-2 R1 already requires that RC with the identified Adverse Reliability Impact to act or direct actions to prevent or mitigate the magnitude or duration of the event. MRO NSRS does not believe IRO-014-2 R8, yet properly considers why the RCs may not agree on a mitigation plan. If RC A develops a mitigation plan for an identified Adverse Reliability Impact on their system and RC B does not agree with RC A's mitigation plan, RC B will be in violation of R8 if they do not follow the mitigation plan. What if the mitigation plan has an Adverse Reliability Impact on RC B's footprint? They should not have to follow the mitigation plan.
Response: The RC SDT thanks you for your comment. Requirement R2 addresses processes, procedures, and plans developed in advance. Such plans reasonably can be expected to contain agreement. The goal is to ensure reliability; refusal to agree based upon equity issues is unacceptable. If inability to agree is based upon differing opinions as to whether the problem exists, then the coordination requirements are out of		

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Organization	Yes or No	Question 11 Comment
compliance. Technical assessments reasonably can be expected to predict the same effects upon the system. The collective experience of the RC SDT members indicates a clear need to have at least weekly conference calls. IRO-014-2 R7 applies to scenarios and coordination between RCs. IRO-001-2 R1 applies to scenarios and coordination between an RC and TOPs, BAs, GOPs, TSPs, LSEs, DPs, and PSEs within its RC Area. The SDT believes it is appropriate to leave both requirements in place. R8: We have modified R8 to allow RCs to avoid implementing actions that violate safety, equipment or regulatory or statutory requirement. R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan unless such actions would violate safety, equipment, or regulatory or statutory requirements. . <i>[Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i>		
Bonneville Power Administration	Yes	
Liberty Electric Power LLC	Yes	
WECC Reliability Coordinator	Yes	
PacifiCorp	Yes	
Calpine Corporation	Yes	
Western Area Power Administration	Yes	
ReliabilityFirst Corporation	Yes	
American Electric Power		Not applicable.

Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Yes or No	Question 11 Comment
Georgia Transmission Corporation		N/A
Response: The RC SDT thanks you for your comment.		

12. Do you agree with the revisions to the Measures in IRO-014-2 as shown in the posted Standard? If not, please explain in the comment area.

Summary Consideration: Stakeholders agreed with the Measures, except to make conforming changes for revisions to the requirements (M1, M3 and M8). The RC SDT has revised the measures based on the new requirements. One stakeholder suggested revision to the Data Retention for R5-R8. Data Retention was revised for R5 to 12 months, however the RC SDT believes that three years is the correct period for R6-8.

Organization	Yes or No	Question 12 Comment
Northwest LSE Group		Abstain
Northeast Power Coordinating Council	No	The intents of Measures M7 and M8 are addressed in M6, and do not add anything. Suggest removing M7 and M8.
Response: The RC SDT thanks you for your comment. R7 and R8 were not removed, therefore the measures will remain in place.		
IRC Standards Review Committee	No	Conforming changes to the Measurements will be required if changes as suggested in Question 11 are introduced.
Response: The RC SDT thanks you for your comment. The measures were revised to conform to the revised requirements.		
Midwest ISO Standards Collaborators	No	Conforming changes to the Measurements will be required for accepted changes from question 11.
Manitoba Hydro	No	Conforming changes to the Measurements will be required for accepted changes from question 11.
Response: The RC SDT thanks you for your comment. The measures were revised to conform to the revised requirements.		
Hydro-Québec TransEnergie (HQT)	No	The intents of Measures M7 and M8 are addressed in M6, and do not add anything. Suggest removing M7 and M8.

Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Yes or No	Question 12 Comment
Response: The RC SDT thanks you for your comment. R7 and R8 were not removed, therefore the measures will remain in place		
Duke Energy	No	Need to revise the Measures to coincide with the recommended changes to the requirements in #11 above. Also under Data Retention, 12 months of evidence is needed for R3, R4 and M3, M4. However 3 years plus the current year is required for R5 through R8 and M5 through M8. We see no reason the data requirements to be different and believe 12 months is the proper amount of data retention.
Response: The RC SDT thanks you for your comment. The measures were revised to conform to the revised requirements. The RC SDT concurs with the suggested revision to Data Retention for R5. The infrequency of occurrences of R6-8 clearly support a 3 year retention period.		
Northeast Utilities	No	The intents of Measures M7 and M8 are addressed in M6, and do not add anything. Suggest removing M7 and M8.
Response: The RC SDT thanks you for your comment. R7 and R8 were not removed, therefore the measures will remain in place		
Independent Electricity System Operator	No	Depending on the response of the SDT, changes to M5 to M8 may be required.
Response: The RC SDT thanks you for your comment. The measures were revised to conform to the revised requirements		
MRO NSRS	No	Conforming changes to the Measurements will be required for accepted changes from question 11.
Response: The RC SDT thanks you for your comment. The measures were revised to conform to the revised requirements		
SERC OC Standards Review Group	Yes	
Bonneville Power Administration	Yes	
FirstEnergy	Yes	
Liberty Electric Power LLC	Yes	

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Organization	Yes or No	Question 12 Comment
WECC Reliability Coordinator	Yes	
PacifiCorp	Yes	
Calpine Corporation	Yes	
Western Area Power Administration	Yes	
Southern Company	Yes	
ReliabilityFirst Corporation	Yes	
American Electric Power		Not applicable.
Georgia Transmission Corporation		N/A

13. Do you agree with the revisions to the Violation Severity Levels in IRO-014-2 as shown in the posted Standard? If not, please explain in the comment area.

Summary Consideration: Several stakeholders suggested developing four VSLs for R5. Typically, in the course of BES operations, impacted Reliability Coordinators will be a small number. The SDT effort in this regard, was to write the VSLs to represent both the large and small scenario containing an Adverse Reliability Impact. The essence of the severe VSL is that the RC did not notify any (as in no one) impacted RC's. As such, it should be severe. The essence of the moderate VSL is that the RC notified one other RC, however did not notify the remaining impacted RC's. The SDT felt the VSL's appropriately addressed the large and small scenarios. Other stakeholders suggested four VSLs for R4. The essence of R4 is written to require impacted RC's to talk at least weekly and is singular in nature. VSL's can not be written for conference calls that exceed the singular requirement.

Organization	Yes or No	Question 13 Comment
Northwest LSE Group		Abstain
Northeast Power Coordinating Council	No	(i) Arguably, all four VSLs could be developed as opposed to just having the Moderate and Severe, if the VSLs are graded according to the number of impacted RCs that need to be notified. For example, Low for missing one, Moderate for missing two, High for missing three, Severe for missing four or more. (ii) We do not have any issue with the binary nature of the VSLs for R6, R7 and R8, but they may need to be revised (wording change and/or removal) depending on the SDT's response to our comments under Q11.
Response: The RC SDT thanks you for your comment. Typically, in the course of BES operations, impacted Reliability Coordinators will be a small number. The SDT effort in this regard, was to write the VSLs to represent both the large and small scenario containing an Adverse Reliability Impact. The essence of the severe VSL is that the RC did not notify any (as in no one) impacted RC's. As such, it should be severe. The essence of the moderate VSL is that the RC notified one other RC, however did not notify the remaining impacted RC's. The SDT felt the VSL's appropriately addressed the large and small scenarios. The RC SDT developed R5-R8 of IRO-014 from original IRO-016, R1. This was done to eliminate a compound requirement (a single requirement that contained multiple requirements). Each requirement is different and requires different specific actions. Please see the posted implementation plan for IRO-014 for details; as such, the VSL's remain.		
IRC Standards Review Committee	No	(1) In the Commission's June 2008 order on VSLs, they expressed their preference for having as many VSLs as possible. We believe that four VSLs could be written for R4 based on the number of conference calls that are participated in. We also believe this would be consistent with the Commission's guideline 4 because the requirement is written in the plural, that is conference calls, so all conference calls must be considered in aggregate. Thus, failure to participate in more than

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Organization	Yes or No	Question 13 Comment
		one conference call does not represent distinct violations but a single violation. (2) Four VSLs should be written for R5 based on the number of RCs notified. Furthermore, the current Severe VSL is redundant with the Moderate VSL. Failure to notify one RC meets both VSL since Severe uses the word any. Note: CAISO abstains from these comments.
Response: The RC SDT thanks you for your comment. 1) The Commission's June 2008 stated a preference for as many as possible, however the SDT believes the essence of this statement was to write multiple VSLs only where appropriate, not to do so simply because it is possible. Further, the essence of R4 is written to require impacted RC's to talk at least weekly and is singular in nature. VSL's can not be written for conference calls that exceed the singular requirement. 2) Typically, in the course of BES operations, impacted Reliability Coordinators will be a small number. The SDT effort in this regard, was to write the VSLs to represent both the large and small scenario containing an Adverse Reliability Impact. The essence of the severe VSL is that the RC did not notify any (as in no one) impacted RC's. As such, it should be severe. The essence of the moderate VSL is that the RC notified one other RC, however did not notify the remaining impacted RC's. The SDT felt the VSL's appropriately addressed the large and small scenarios.		
Midwest ISO Standards Collaborators	No	In the Commission's June 2008 order on VSLs, they expressed their preference for having as many VSLs as possible. We believe that four VSLs could be written for R4 based on the number of conference calls that are participated in. We also believe this would be consistent with the Commission's guideline 4 because the requirement is written in the plural, that is conference calls, so all conference calls must be considered in aggregate. Thus, failure to participate in more than one conference call does not represent distinct violations but a single violation. Four VSLs should be written for R5 based on the number of RCs notified. Furthermore, the current Severe VSL is redundant with the Moderate VSL. Failure to notify one RC meets both VSL since Severe uses the word any.
Response: The RC SDT thanks you for your comment. The Commission's June 2008 stated a preference for as many as possible, however the SDT believes the essence of this statement was to write multiple VSLs only where appropriate, not to do so simply because it is possible. Further, the essence of R4 is that it is written to require impacted RC's to talk at least weekly and is singular in nature. VSL's can not be written for conference calls that exceed the singular requirement. Typically, in the course of BES operations, impacted Reliability Coordinators will be a small number. The SDT effort in this regard, was to write the VSL to represent both the large and small scenario containing an Adverse Reliability Impact. The essence of the severe VSL is that the RC did not notify any (as in no one) impacted RC's. As such, it should be severe. The essence of the moderate VSL is that the RC notified one other RC, however did not notify the remaining impacted RC's. The SDT felt the VSL's appropriately addressed the large and small scenarios.		
Southern Company	No	Reliability problems identified in other reliability areas are based on modeling information obtained from another reliability region. The fact that one RC will not agree that the model of an adjacent RC's reliability area may be more accurate than their model of the adjacent reliability area is no reason to impose a severe violation on the RC with the more accurate

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Organization	Yes or No	Question 13 Comment
		model of their own reliability region. Example: RC1 identifies a contingency overload of a transformer bank in an adjacent reliability area. The transformer bank was replaced the week before with a larger bank. When RC1 contacts RC2, RC2 explains that the bank overload is not valid because of the replacement. RC2 does not identify a problem due to the fact that the model RC2 is using has been updated with the new transformer bank. RC1 will not agree and requires RC2 to open a tie line with another reliability area to relieve the contingency overload. If RC2 does not follow the instructions of RC1, making the interconnection weaker to relieve a problem that does not exist, RC2 is out of compliance and a severe violation will be imposed.
Response: The RC SDT thanks you for your comment. The scenario you describe is essentially a modeling problem, as such the discrepancy would be vetted and corrected during the discovery phase. Further, an RC1 cannot tell RC2 how to rate facilities owned by entities within the RC2 area. The SDT believes that your scenario would play out like this: RC1 calls RC2 and says, “we show an overload on transformer bank X.” RC2 says, “we do not, what rating are you using?” RC1 replies with the old rating, RC2 states that it is wrong, and here is the correct rating, which RC1 implements, problem solved. RC1 cannot come back and say the rating that you have for transformer bank X is incorrect. Each entity within the RC Area (TO or GO) is responsible for the rating of the facilities it owns. (Taking the scenario even farther, if RC1 believes that the TO or GO has an incorrect rating, then RC1 can challenge the rating methodology of that TO or GO under the FAC standards.)		
Manitoba Hydro	No	Believe that four VSLs could be written for R4 based on the number of conference calls that are participated in. Four VSLs should be written for R5 based on the number of RCs notified. Furthermore, the current Severe VSL is redundant with the Moderate VSL. Failure to notify one RC meets both VSL since Severe uses the word any.
Response: The RC SDT thanks you for your comment. In regards to R4: The essence of R4 is that it is written to require impacted RC's to talk at least weekly and is singular in nature. VSL's can not be written for conference calls that exceed the singular requirement. In regards to R5: Typically, in the course of BES operations, impacted Reliability Coordinators will be a small number. The SDT effort in this regard, was to write the VSL to represent a typical scenario containing an Adverse Reliability Impact. The essence of the severe VSL is that the RC did not notify any (as in no one) impacted RC's. As such, it should be severe. The essence of the moderate VSL is that the RC notified one other RC, however did not notify the remaining impacted RC's.		
Hydro-Québec TransEnergie (HQT)	No	(i) Arguably, all four VSLs could be developed as opposed to just having the Moderate and Severe, if the VSLs are graded according to the number of impacted RCs that need to be notified. For example, Low for missing one, Moderate for missing two, High for missing three, Severe for missing four or more. (ii) We do not have any issue with the binary nature of the VSLs for R6, R7 and R8, but they may need to be revised (wording change and/or removal) depending on the SDT's response to our comments under Q11.
Response: The RC SDT thanks you for your comment. Typically, in the course of BES operations, impacted Reliability Coordinators will be a		

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Organization	Yes or No	Question 13 Comment
small number. The SDT effort in this regard, was to write the VSL to represent both the large and small scenario containing an Adverse Reliability Impact. The essence of the severe VSL is that the RC did not notify any (as in no one) impacted RC's. As such, it should be severe. The essence of the moderate VSL is that the RC notified one other RC, however did not notify the remaining impacted RC's. The SDT felt the VSL's appropriately addressed the large and small scenarios. The RC SDT developed R5-R8 of IRO-014 from original IRO-016, R1. This was done to eliminate a compound requirement (a single requirement that contained multiple requirements). Each requirement is different and requires different specific actions. Please see the posted implementation plan for IRO-014 for details; as such, the VSL's remain.		
Duke Energy	No	Need to revise the VSLs to coincide with recommended changes to the requirements in #11 above.
Response: The RC SDT thanks you for your comment. The VSLs were modified to align with changes made to the requirements. Please see the response to #11. The SDT adopted several, but not all of your suggestions.		
Northeast Utilities	No	(i) Arguably, all four VSLs could be developed as opposed to just having the Moderate and Severe, if the VSLs are graded according to the number of impacted RCs that need to be notified. For example, Low for missing one, Moderate for missing two, High for missing three, Severe for missing four or more.(ii) We do not have any issue with the binary nature of the VSLs for R6, R7 and R8, but they may need to be revised (wording change and/or removal) depending on the SDT's response to our comments under Q11.
Response: The RC SDT thanks you for your comment. Typically, in the course of BES operations, impacted Reliability Coordinators will be a small number. The SDT effort in this regard, was to write the VSL to represent both the large and small scenario containing an Adverse Reliability Impact. The essence of the severe VSL is that the RC did not notify any (as in no one) impacted RC's. As such, it should be severe. The essence of the moderate VSL is that the RC notified one other RC, however did not notify the remaining impacted RC's. The SDT felt the VSL's appropriately addressed the large and small scenarios. The RC SDT developed R5-R8 of IRO-014 from original IRO-016, R1. This was done to eliminate a compound requirement (a single requirement that contained multiple requirements). Each requirement is different and requires different specific actions. Please see the posted implementation plan for IRO-014 for details; as such, the VSL's remain.		
Independent Electricity System Operator	No	(i) Arguably, all four VSLs could be developed as opposed to just having the Moderate and Severe if the VSLs are graded according to then number of impacted RCs that need to be notified. For example, Low for missing one, Moderate for missing two, High for missing three, Severe for missing four or more.(ii) We do not have any issue with the binary nature of the VSLs for R6, R7 and R8, but they may need to be revised (wording change and/or removal) depending on the SDT's response to our comments under Q11.
Response: The RC SDT thanks you for your comment. Typically, in the course of BES operations, impacted Reliability Coordinators will be a		

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Organization	Yes or No	Question 13 Comment
small number. The SDT effort in this regard, was to write the VSL to represent both the large and small scenario containing an Adverse Reliability Impact. The essence of the severe VSL is that the RC did not notify any (as in no one) impacted RC's. As such, it should be severe. The essence of the moderate VSL is that the RC notified one other RC, however did not notify the remaining impacted RC's. The SDT felt the VSL's appropriately addressed the large and small scenarios. The RC SDT developed R5-R8 of IRO-014 from original IRO-016, R1. This was done to eliminate a compound requirement (a single requirement that contained multiple requirements). Each requirement is different and requires different specific actions. Please see the posted implementation plan for IRO-014 for details; as such, the VSL's remain.		
MRO NSRS	No	In the Commission's June 2008 order on VSLs, they expressed their preference for having as many VSLs as possible. The MRO NSRS believes that four VSLs could be written for R4 based on the number of conference calls that are participated in. We also believe this would be consistent with the Commission's guideline 4 because the requirement is written in the plural, that is conference calls, so all conference calls must be considered in aggregate. Thus, failure to participate in more than one conference call does not represent distinct violations but a single violation. Four VSLs should be written for R5 based on the number of RCs notified. Furthermore, the current Severe VSL is redundant with the Moderate VSL. Failure to notify one RC meets both VSL since Severe uses the word any.
Response: The RC SDT thanks you for your comment. The Commission's June 2008 stated a preference for as many as possible, however the SDT believes the essence of this statement was to write multiple VSLs only where appropriate, not to do so simply because it is possible. Further, the essence of R4 is written to require impacted RC's to talk at least weekly and is singular in nature. VSL's can not be written for conference calls that exceed the singular requirement. Typically, in the course of BES operations, impacted Reliability Coordinators will be a small number. The SDT effort in this regard, was to write the VSLs to represent both the large and small scenario containing an Adverse Reliability Impact. The essence of the severe VSL is that the RC did not notify any (as in no one) impacted RC's. As such, it should be severe. The essence of the moderate VSL is that the RC notified one other RC, however did not notify the remaining impacted RC's. The SDT felt the VSL's appropriately addressed the large and small scenarios.		
SERC OC Standards Review Group	Yes	
Bonneville Power Administration	Yes	
FirstEnergy	Yes	

Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Yes or No	Question 13 Comment
Liberty Electric Power LLC	Yes	
WECC Reliability Coordinator	Yes	
PacifiCorp	Yes	
Calpine Corporation	Yes	
Western Area Power Administration	Yes	
ReliabilityFirst Corporation	Yes	
American Electric Power		Not applicable.
Georgia Transmission Corporation		N/A

14.If you have any other comments, not expressed in questions above, for the RC SDT on any of the other changes made to this set of standards and their associated implementation plans, please provide them here.

Summary Consideration: Stakeholders suggested removing the Distribution provider and Generator Operator from the Data Retention section for R1 of COM-001. Since these are not applicable entities in R1, they were removed from Data Retention for the requirement.

Organization	Question 14 Comment
Northeast Power Coordinating Council	NPCC appreciates the work of the Drafting Team. No additional comments.
Response: The RC SDT thanks you for your comment.	
SERC OC Standards Review Group	"The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Standards Review group only and should not be construed as the position of SERC Reliability Corporation, its board or its officers."
Response: The RC SDT thanks you for your comment.	
Bonneville Power Administration	Issue #2: Data Retention Why would the Distribution Provider and Generator Operator be required to store historical data (three years in the case of Requirement R1 and Measure M1; twelve months in the case of Requirement R2 and Measure M2) to show that these requirements and measures have been successfully implemented when these two entities (Distribution Provider and Generator Operator) aren't even included either in Requirements R1 and R2 or in Measure M1 and M2?It would appear that they should only have to provide historical data for three months as required by the data retention time for Requirement 3 and Measure 3. Issue #1: Data Retention: The first bullet in this section states that all entities are responsible for retaining documents associated with all Requirements and Measures associated with this standard. In reality, Requirements R1, R4, R5 and R6 and the corresponding Measures are the responsibility of the Reliability Coordinator. Requirements R2 and R3 and their corresponding Measures are implemented by the Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider, Transmission Service Provider, Purchasing-Selling Entity and the Load Serving Entity. The Data Retention section should be rewritten to reflect this so that entities are not required to maintain documents that they aren't suppose to even possess in some cases.
Response: The RC SDT thanks you for your comment. COM-001 removed DP and GOP from the data retention section regarding R1 and R2. IRO-001-2 changed "all" to "applicable."	

Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Question 14 Comment
IRC Standards Review Committee	AESO abstains from commenting on VSLs. VSLs for Alberta will be developed by provincial authorities.
Response: The RC SDT thanks you for your comment.	
E.ON U.S.	COM-001-2 R1 and R2 and the associated M1 and M2 are only applicable to the RC, TOP and BA but the “Data Retention” for R1/R2 and M1/M2 require the DP and GOP to retain data for the Requirements and Measures. E.ON U.S. suggests that the requirement for data retention of the DP and GOP be eliminated from the standard.
Response: The RC SDT thanks you for your comment. COM-001 removed DP and GOP from the data retention section regarding R1 and R2.	
Illinois Municipal Electric Agency	In order to minimize the number of reliability standards and the details covered in requirements - particularly those dealing with communications - it is recommended that an up-front provision/requirement be included as part of the compliance registration process that certain functional entities (e.g., DP, LSE, PSE, etc.) shall be responsible for providing the necessary information to transact services and for complying with the directives/requests of certain functional authorities (e.g., BA, PC, RC, etc.) in order to maintain/enhance reliability of the BES.
Response: The RC SDT thanks you for your comment. The registration process is not in the scope of this SDT project	
Northeast Utilities	Northeast Utilities appreciates the work of the Drafting Team. No additional comments.
Response: The RC SDT thanks you for your comment.	
Independent Electricity System Operator	In our comments on the previous posting, we expressed a disagreement with a proposed to remove IRO-005, in particular the latter part of R13, which stipulated that: In instances where there is a difference in derived limits, the Reliability Coordinator and its Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities shall always operate the Bulk Electric System to the most limiting parameter. Our rationale was that The FAC standards cover the methodology used in calculating SOLs and IROLs. Regardless of how these limits are calculated, in practice there always exists the possibility that different entities may come up with SOLs/IROLs, especially of the inter-ties, that could be different. Operating to the lowest SOLs/IROLs when more than one set exists is a necessary requirement for reliable operation. The SDT responded by suggesting that this requirement is redundant with FAC-014 which -014 states the requirement for developing and sharing SOL and IROL between the RC, PA, TP and TOP in both the planning and operating time frames. However, this response fails to address the situation where during operation, the situation of disagreeing SOLs or IROLs does arise. FAC-014 or any other standards do not currently have a requirement to ensure that all entities operate to the lower limit before the difference is resolved. This leaves room for unreliable operation. We suggest the SDT to consider restating this requirement somewhere. Note that this requirement is similar to R6 of IRO-014

Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Question 14 Comment
	that when in doubt, the more conservative approach should be taken. If it is necessary to have an R6 to deal with an uncertain identification/notification of an Adverse Reliability Impact, we don't see why it is not necessary to operate to a lower SOL or IROL when there is an unresolved difference.
Response: The RC SDT thanks you for your comment. The SDT team still feels this is covered in FAC-010, 011, and 14. For real-time operations, as you mention, this is covered with IRO-014, R6	

Consideration of Comments on Reliability Coordination (Project 2006-06)

The Reliability Coordination Standard Drafting Team thanks all commenters who submitted comments on the proposed revisions to the standards for Project 2006-06 — Reliability Coordination. These standards were posted for a 45-day public comment period from January 4, 2010 through February 18, 2010. The stakeholders were asked to provide feedback on the standards through a special Electronic Comment Form. There were 42 sets of comments, including comments from more than 150 different people from over 50 companies representing all of the 10 Industry Segments as shown in the table on the following pages.

http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html

Summary Consideration:

Stakeholders had three general concerns with the definition of Interpersonal Communications.

- 1) The definition of Interpersonal Communication to be ambiguous in terms of distinguishing between verbal communications and data transfers; The SDT believes that Webster's definition of Interpersonal: (being, relating to, or involving relations between persons) clarifies the exclusion of media dedicated to Telemetry or other data exchange.**

The RCSDT believes that data communication is covered under IRO-010, R3 which states:

Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. (Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations)

- 2) The definition should also clarify that the communication is between individuals in different entities or physical locations; The SDT believes that the revised Requirements of COM-001-2 satisfy this concern.**

- 3) Use of the term "method" may imply a communication style; The RCSDT changed "method" to "medium" in definition.**

Several stakeholders indicated that a definition of Alternative Interpersonal Communications was not needed. The RCSDT disagrees because there is an important part of the definition of "Alternative Interpersonal Communications" that distinguishes it from simply being an alternative "Interpersonal Communications". The proposed definition contains the words: "which does not utilize the same infrastructure (medium)". Also, some stakeholders had concerns with the usage of "normal". The RCSDT does not propose defining "Normal" Interpersonal Communications and has removed it from the definition. Based on the consensus of stakeholders, we have revised the two definitions to:

Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information.

Alternative Interpersonal Communication: Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.

Stakeholders pointed out that COM-001, R1 was a compound requirement and suggested creating separate requirements. Stakeholders also suggested revising the VRF to “Medium” as it does not meet the guidelines for a “High” VRF. The intent of R1 was three-fold.

- 1 Identify (have) an Alternative Interpersonal Communication capability**
- 2 Test that capability periodically and**
- 3 If the test failed, fix it or identify another Alternative Communications Capability.**

Based on comments received, we have revised R1 (now R9) to eliminate the compound requirement and therefore created more specific requirements to delineate Interpersonal and Alternative Interpersonal Communication, and applicable entity responsibility. The VRF is changed to “Medium.”

The RCSDT also made extensive revisions to COM-001 to provide explicit Interpersonal Communications and Alternative Interpersonal Communications capabilities based on the relationships between various entities. The RCSDT believes that the proposed requirements meet the reliability objectives of the standard as well as the FERC Order 693 directives.

The comments received regarding the definition of Reliability Directive (for COM-002 and IRO-001) ranged from the being “too open-ended” (PPL) to not “flexible” enough (Public Service Enterprise Group Companies). The SDT expected and viewed these as attempting to reach middle ground.

There were also value added comments such as removing the unnecessary and redundant terms “actual or expected” from the definition, which the SDT agrees with. The definition was revised to:

A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an Emergency.

A number of commenter’s expressed a concern about the definition not including three-part communication, clearly identifying a Reliability Directive at the time of issue, and applying to verbal communications. The SDT believes responsibilities should not be imbedded in a definition and, as drafted, the requirements of COM-002 with the proposed definition of Reliability Directive fully address the identification and verbal concerns.

The bulk of the comments received on COM-002 regarded the VSL for R3. The SDT agreed with suggestions for the VSLs and has deleted the Severe VSL and moved the High VSL to Severe. We believe that there are two possible actions within the requirement and failure to perform either warrants a Severe VSL.

Several commenter’s expressed concern about three-part communication. The SDT believes that the requirements as drafted, with the issue, repeat back, and acknowledgement of a Reliability Directive, three-part communication is covered.

There was one commenter suggesting the addition of the DP to the applicability. The RCSdT notes that, per the Functional Model, a DP may “direct” an LSE to communicate requests for voluntary load curtailment and not reliability situations: Item 9 on page 47 of version 5 of the Functional Model: “Directs Load-Serving Entities to communicate requests for voluntary load curtailment.” Furthermore, The RCSdT will forward this comment to the FMWG for their consideration in revising the language.

The comments regarding the use of Reliability Directive in IRO-001 ranged from small entities being excluded to whether regulatory or statutory requirements covers NERC standards. The SDT addressed these by noting registration is not in the SDT scope and NERC’s general council should be contacted for regulatory issues.

A few commenter’s expressed concern with the VSL for R2 and one suggested the words “per Requirement 2,” should be added. The SDT believes the phrase “per Requirement 2” is not necessary as a VSL is only applied AFTER a compliance violation is determined.

Value added comments such as a concern of the use of the word “threat” as it can be defined as cyber-related and suggested replacing “Operating Personnel” with “System Operator” were also made. The SDT concurred and removed the word “threat” and replaced it with “condition” and also made the revision to System Operator.

There were numerous comments regarding the definition of Reliability Directive with multiple wording suggestions. While slightly out of scope for question six, the SDT expected and viewed these as attempting to reach middle ground.

Some commenter’s expressed concern over clarify that the RC has three separate actions. The RC can act, direct others to act, or issue Reliability Directives. The SDT modified R1 to read: “Each Reliability Coordinator shall take actions or direct actions, which could include issuing Reliability Directives, of Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts”

Note: Based on discussions with FERC Staff, the SDT agreed to make the following changes:

IRO-001-2 Requirements R4, R5 and associated Measures and VSLs are moved to IRO-005-4

IRO-001-2 Requirements R6, R7 and associated Measures and VSLs are moved to IRO-002-2

Several commenters made suggestions regarding IRO-014, R2. The original requirement was designed to accomplish in one requirement what is proposed by the commenters as three procedural requirements. R2 is worded to focus on defining what a “compliant plan” is. In the current requirement a “proposed plan” is not the same as a “compliant plan”.

The SDT viewed what the commenters are suggesting as follows:

- The initiating RC would submit its “proposed plan” to the other RCs
- The receiving RCs would provide the initiating RC with their responses indicating whether or not they agree with the proposed roles/actions offered by the initiating RC

- If one or more RCs do not agree with the roles/actions, then the initiating RC would be required to offer an alternative proposal (and go back to the first bullet)
- When all RCs acknowledge that the proposed roles/actions in the revised “proposed plan” are acceptable, then and only then would the “proposed plan” become a “compliant plan”

A closer reading of the current R2 would show the current R2 accomplishes the exact same result but does so without interjecting the need for documenting the intervening processes. The SDT does not see the need to document why each proposal was or was not accepted; nor does the SDT see the need for document the negotiations that are involved in getting to “an agreed to plan”. For example the comments’ subrequirement to show the RC submitted its plan would require a paper trail for the request; followed by a paper trail for the responses, followed by more paperwork if the RCs are not in agreement. In the end, the only action that matters (in both the SDT version and in the commenters alternative version) is a plan that works, and a plan that if others are involved must have their concurrence that those others will participate.

R2 does not impose a requirement to get agreements; what R2 does is to require that a “compliant plan” be developed. A proposed plan does not solve problems. That proposed plan is NOT compliant with R2 if it only assumes that other RC will effect the actions in the proposal; neither is it compliant if the proposed actions are not acceptable to the other RCs who are required to act. To be compliant the initiating RC must either have the concurrence (i.e. agreement) of the other RCs for their respective part(s) in the proposed plans OR the plan must not include those RCs.

R2 says to be compliant the other RC must agree with the “proposed plan” before that “proposed plan” is acceptable as a “compliant plan”. Having a plan that requires someone else to do an action, but that other entity will not effect that action, will not resolve the problem at hand. Further having documentation that someone refuses to participate in the proposed plan does nothing to solve the problem at hand.

In general, the RC SDT feels that the concept of a Reliability Directive is an important tool for RC, BA and TOP to maintain reliability and that the revisions are consistent with the applicable parts of the directives in FERC Order 693. The work of the RC SDT along with the OCPD SDT and the RTO SDT, as currently recognized, will cover the original intent of COM-002 and still provide a “defense in depth strategy” as suggested by commenters. Consensus appears to have been achieved with respect to the definition of Reliability Directive and the requirements that the RC SDT have developed for COM-002. This will further the efforts of the OCPD SDT in achieving stakeholder consensus for their proposed requirements in COM-003. The intent of this DT is to preserve a method for RCs, BAs and TOPs to make the determination of “what actions are required” and clearly communicate the importance to the receiver at a heightened method to normal day-to-day operational communications. The trigger of “Reliability Directive” by the issuer highlights these actions as needed to maintain BES reliability and shall be carried out as directed (unless such actions would violate safety, equipment, regulatory or statutory requirement per the language of the requirement) and all parties to the conversation need to be very cognizant of the system conditions that are requiring actions. The DT has attempted to craft clear and specific language that support BES reliability and hopes that this work can

support and enhance the development of the OPCP SDT. The RCSDT has also attempted to eliminate redundancy and ambiguity while not creating any reliability gaps. Several comments were received on the RC's ability to "act". The RC must "act" (ie. do something, "to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts". This may include analysis, coordination of cooperative actions or the issuance of "Reliability Directives". "Act" does not imply solely the manipulation of BES elements.

RC control of "analysis tools" is critical to maintaining the wide area view. Control by the RC over the tools is imperative and beyond administrative, since it is intended to prevent planned reliability tool outages without the consent or knowledge of operating personnel. Although the DT agrees with the premise that many other requirements may be violated by ineffective communications, the intent of the requirement is to ensure there are effective communications methods in place for communicating BES activity across entities. Effective communication are a cornerstone of BES reliability and the intent of the requirement is to prevent the violation of other more significant performance type standard requirements due to ineffective communications before they impact the BES. Failure of the RC to control outages of analysis tools was mentioned as a contributing factor in the 2003 blackout.

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Gerry Adamski, at 609-452-8060 or at gerry.adamski@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.¹

¹ The appeals process is in the Reliability Standards Development Procedures: <http://www.nerc.com/standards/newstandardsprocess.html>.

Index to Questions, Comments, and Responses

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Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

The Industry Segments are:

- 1 — Transmission Owners
- 2 — RTOs, ISOs
- 3 — Load-serving Entities
- 4 — Transmission-dependent Utilities
- 5 — Electric Generators
- 6 — Electricity Brokers, Aggregators, and Marketers
- 7 — Large Electricity End Users
- 8 — Small Electricity End Users
- 9 — Federal, State, Provincial Regulatory or other Government Entities
- 10 — Regional Reliability Organizations, Regional Entities

		Commenter	Organization	Industry Segment									
				1	2	3	4	5	6	7	8	9	10
1.	Group	Guy Zito	Northeast Power Coordinating Council										X
	Additional Member		Additional Organization	Region					Segment Selection				
1.	Alan Adamson		New York State Reliability Council, LLC	NPCC					10				
2.	Gregory Campoli		New York Independent System Operator	NPCC					2				
3.	Roger Champagne		Hydro-Quebec TransEnergie	NPCC					2				
4.	Kurtis Chong		Independent Electricity System Operator	NPCC					2				
5.	Sylvain Clermont		Hydro-Quebec TransEnergie	NPCC					1				
6.	Chris de Graffenried		Consolidated Edison Co. of New York, Inc.	NPCC					1				
7.	Brian D. Evans-Mongeon		Utility Services	NPCC					8				
8.	Mike Garton		Dominion Resources Services, Inc.	NPCC					5				
9.	Brian L. Gooder		Ontario Power Generation Incorporated	NPCC					5				
10.	Kathleen Goodman		ISO - New England	NPCC					2				
11.	David Kiguel		Hydro One Networks Inc.	NPCC					1				
12.	Michael R. Lombardi		Northeast Utilities	NPCC					1				
13.	Randy MacDonald		New Brunswick System Operator	NPCC					2				
14.	Greg Mason		Dynegy Generation	NPCC					5				

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

	Commenter	Organization	Industry Segment									
			1	2	3	4	5	6	7	8	9	10
15.	Bruce Metruck	New York Power Authority	NPCC					6				
16.	Chris Orzel	FPL Energy/NextEra Energy	NPCC					5				
17.	Robert Pellegrini	The United Illuminating Company	NPCC					1				
18.	Saurabh Saksena	National Grid	NPCC					1				
19.	Michael Schiavone	National Grid	NPCC					1				
20.	Peter Yost	Consolidated Edison Co. of New York, Inc.	NPCC					3				
21.	Lee Pedowicz	Northeast Power Coordinating Council	NPCC					10				
22.	Gerry Dunbar	Northeast Power Coordinating Council	NPCC					10				
2.	Group	Gerald Beckerle	OC Standards Review Group			X			X			
	Additional Member	Additional Organization	Region					Segment Selection				
1.	Laura Lee	Duke						1, 3, 5				
2.	Al DiCaprio	PJM						2				
3.	Gene Delk	SCE&G						1, 3, 5				
4.	Jim Griffith	Southern						1, 3, 5				
5.	Mike Hardy	Southern						1, 3, 5				
6.	Dale Walters	CWLP						1, 3, 5, 9				
7.	Alvis Lanton	SIPC						3, 5				
8.	Larry Rodriguez	Union Power Partners						5				
9.	Tim Lyons	OMU						1, 3, 5				
10.	Barry Hardy	OMU						1, 3, 5				
11.	Dwayne Roberts	OMU						1, 3, 5				
12.	Fred Krebs	Calpine						5				
13.	Tim Hattaway	PowerSouth						3, 5, 9				
14.	Jim Case	Entergy						1, 3				
15.	Rene' Free	Santee Cooper						9, 1, 3, 5				
16.	Glenn Stephens	Santee Cooper						1, 3, 5, 9				
17.	Robert Thomasson	Big Rivers						1, 3, 5, 9				
18.	John Neagle	AECI						3, 5				

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

		Commenter	Organization	Industry Segment									
				1	2	3	4	5	6	7	8	9	10
19. John Troha			SERC	10									
3.	Group	Sam Ciccone	FirstEnergy	X		X	X	X	X				
		Additional Member	Additional Organization	Region					Segment Selection				
1. Dave Folk			FE	RFC					1, 3, 4, 5, 6				
2. Doug Hohlbaugh			FE	RFC					1, 3, 4, 5, 6				
3. kevin Querry			FES	RFC					6				
4. Larry Herman			FE	RFC					3				
4.	Group	Carol Gerou	NERC Standards Review Subcommittee										X
		Additional Member	Additional Organization	Region					Segment Selection				
1. Chuck Lawrence			American Transmission Company	MRO					1				
2. Tom Webb			WPS	MRO					3, 4, 5, 6				
3. Terry Bilke			Midwest ISO Inc.	MRO					2				
4. Jodi Jenson			Western Area Power Administration	MRO					1, 6				
5. Ken Goldsmith			Alliant Energy	MRO					4				
6. Dave Rudolph			Basin Electric Power Cooperative	MRO					1, 3, 5, 6				
7. Eric Ruskamp			Lincoln Electric System	MRO					1, 3, 5, 6				
8. Joseph Knight			Great River Energy	MRO					1, 3, 5, 6				
9. Joe DePoorter			Madison Gas & Electric	MRO					3, 4, 5, 6				
10. Scott Nickels			Rochester Public Utilities	MRO					4				
11. Terry Harbour			MidAmerican Energy Company	MRO					1, 3, 5, 6				
5.	Group	Jalal babak	Electric Market Policy	X		X		X	X				
		Additional Member	Additional Organization	Region					Segment Selection				
1. Louis Slade				SERC					1, 4				
2. Mike Garton				NPCC					5				
6.	Group	Brenda Lyn Truhe	PPL	X				X	X				
		Additional Member	Additional Organization	Region					Segment Selection				

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

		Commenter	Organization	Industry Segment									
				1	2	3	4	5	6	7	8	9	10
1.		Brenda Truhe	PPL Electric Utilities	RFC					1				
2.		Jon Williamson	PPL EnergyPlus	WECC					6				
3.		Mark Heimbach	PPL EnergyPlus	MRO					6				
4.		Mark Heimbach	PPL EnergyPlus	NPCC					6				
5.		Mark Heimbach	PPL EnergyPlus	RFC					6				
6.		Mark Heimbach	PPL EnergyPlus	SERC					6				
7.		Mark Heimbach	PPL EnergyPlus	SPP					6				
8.		Annette Bannon	PPL Generation	RFC					5				
9.		Annette Bannon	PPL Generation	NPCC					5				
10.		Annette Bannon	PPL Generation	WECC					5				
7.	Group	Harry Tom	Operating Personnel Communications Protocols SDT	X	X	X	X	X		X	X		
	Additional Member		Additional Organization		Region				Segment Selection				
1.		Lloyd Snyder	GSOC	SERC					1				
2.		Leanne Harrison	PJM	RFC					2				
3.		Laura Zotter	ERCOT	ERCOT					2				
4.		Tom Irvine	HydroOne	NPCC					1, 5, 6, 7				
5.		Bill Ellard	CAISO	WECC					2				
6.		John Stephens	City of Springfield	RFC					4, 8				
7.		Mike Brost	JEA	FRCC					1, 3, 5, 7				
8.		Mark Bradley	ITC	MRO					1				
9.		Fred Waites	Southern Company	SERC					1, 3, 5, 7				
10.		Wayne Mitchell	Entergy	SPP					1, 3, 5, 7				
8.	Group	Howard Gugel	NERC										
Please complete the following information.													
	Additional Member		Additional Organization		Region				Segment Selection				
1.		Laurel Heacock	NERC	NA - Not Applicable									
2.		Bob Cummings	NERC	NA - Not Applicable									

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

	Commenter	Organization	Industry Segment									
			1	2	3	4	5	6	7	8	9	10
3.	Larry Kezele	NERC										
4.	Ed Ruck	NERC										
5.	Todd Thompson	NERC										
6.	Mark Vastano	NERC										
7.	Roman Carter	NERC										
8.	Jule Tate	NERC										
9.	David Taylor	NERC										
10.	Al McMeekin	NERC										
11.	Maureen Long	NERC										
12.	Andy Rodriguez	NERC										
13.	Michael Moon	NERC										
14.	Stephanie Monzon	NERC										
15.	Gerry Adamski	NERC										
9.	Group	Linda Perez	Western Electricity Coordinating Council									X
Additional Member			Additional Organization			Region			Segment Selection			
1.	Steve Rueckert	WECC	WECC						10			
10.	Group	Jason L. Marshall	Midwest ISO Standards Collaborators		X							
Additional Member			Additional Organization			Region			Segment Selection			
1.	Bob Thomas	Illinois Municipal Electric Agency	SERC						4			
2.	Jose Medina	NextEra Energy Resources, LLC	WECC						5			
3.	Joe O'Brien	NIPSCO	RFC						1			
4.	Joe Knight	Great River Energy	MRO						1, 3, 5, 6			
5.	Kirit Shah	Ameren	SERC						1			
11.	Group	JT Wood	Southern Company Services	X		X						
Additional Member			Additional Organization			Region			Segment Selection			
1.	Hugh Frances		SERC						1			

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

		Commenter	Organization	Industry Segment									
				1	2	3	4	5	6	7	8	9	10
12.	Group	Frank Gaffney	Florida Municipal Power Agency and Some Members	X		X	X	X	X				
		Additional Member	Additional Organization	Region					Segment Selection				
1.		Jim Howard	Lakeland Electric	FRCC					1, 3, 5				
2.		Greg Woessner	Kissimmee Utilities Authority	FRCC					1, 3, 4, 5				
13.	Group	Kenneth D. Brown	Public Service Enterprise Group Companies	X		X		X	X				
		Additional Member	Additional Organization	Region					Segment Selection				
1.		Jeffrey Mueller	PSE&G	RFC					1, 3				
2.		Dave Murray	PSEG Fossil	RFC					5				
3.		Jim Hebson	PSEG ER&T	ERCOT					5, 6				
4.		Clint Bogan	PSEG Power Connecticut	NPCC					5				
14.	Group	Denise Koehn	Bonneville Power Administration	X		X		X	X				
		Additional Member	Additional Organization	Region					Segment Selection				
1.		Steve Davis	BPA, Generation Support	WECC					3, 5, 6				
2.		Tedd Snodgrass	BPA, Transmission Dispatch	WECC					1				
3.		Tim Loepker	BPA, Transmission Dispatch	WECC					1				
4.		Huy Ngo	BPA, Transmission Control Cntr HW Design & Maint						1				
15.	Group	Ben Li	IRC Standards Review Committee		X								
		Additional Member	Additional Organization	Region					Segment Selection				
1.		Charles Yeung	SPP	SPP					2				
2.		James Castle	NYISO	NPCC					2				
3.		Bill Phillips	MISO	MRO					2				
4.		Lourdes Estrada-Salinerio	CAISO	WECC					2				
5.		Steve Myers	ERCOT	ERCOT					2				
6.		Matt Goldberg	ISO-NE	NPCC					2				
7.		Patrick Brown	PJM	RFC					2				

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

		Commenter	Organization	Industry Segment									
				1	2	3	4	5	6	7	8	9	10
8. Mark Thompson			AESO	WECC 2									
16.	Individual	Sandra Shaffer	PacifiCorp	X		X		X	X				
17.	Individual	Brent Ingebrigtsen	E.ON U.S.	X		X		X	X				
18.	Individual	Duncan Brown	Calpine Corporation					X					
19.	Individual	Ron Sporseen	PNGC Power (15 member utilities)				X						
20.	Individual	Chris Scanlon	Exelon	X		X		X	X				
21.	Individual	Steve Alexanderson	Central Lincoln			X							
22.	Individual	Denise Roeder	North Carolina Municipal Power Agency #1			X	X		X				
23.	Individual	Jon Kapitz	Xcel Energy	X		X		X	X				
24.	Individual	Martin Bauer	US Bureau of Reclamation			X							
25.	Individual	Kasia Mihalchuk	Manitoba Hydro	X		X		X	X				
26.	Individual	Howard Rulf	We Energies			X	X	X					
27.	Individual	Michael R. Lombardi	Northeast Utilities	X		X		X					
28.	Individual	CJ Ingersoll	CECD										
29.	Individual	Brandy A. Dunn	Western Area Power Administration	X									
30.	Individual	Michael J Ayotte	ITC Holdings	X									
31.	Individual	Kathleen Goodman	ISO New England Inc		X								

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

		Commenter	Organization	Industry Segment									
				1	2	3	4	5	6	7	8	9	10
32.	Individual	James H. Sorrels, Jr.	American Electric Power	X		X		X	X				
33.	Individual	Greg Rowland	Duke Energy	X		X		X	X				
34.	Individual	James Sharpe	South Carolina Electric and Gas	X		X		X	X				
35.	Individual	Jason Shaver	American Transmission Company	X									
36.	Individual	Richard Kafka	Pepco Holdings, Inc	X		X		X	X				
37.	Individual	Kirit Shah	Ameren	X		X		X	X				
38.	Individual	Charles Yeung	Southwest Power Pool		X								
39.	Individual	Roger Champagne	Hydro-Québec TransEnergie (HQT)	X									
40.	Individual	Dan Rochester	Independent Electricity System Operator		X								
41.	Individual	Laura Zotter	ERCOT ISO		X								X
42.	Individual	Catherine Koch	Puget Sound Energy	X									

- 1 Do you agree with the proposed definition of Interpersonal Communication (COM-001-2)? If not, please explain in the comment area.**

Summary Consideration: Stakeholders had three general concerns with the definition of Interpersonal Communications.

- 1) The definition of Interpersonal Communication to be ambiguous in terms of distinguishing between verbal communications and data transfers; The SDT believes that Webster's definition of Interpersonal: (being, relating to, or involving relations between persons) clarifies the exclusion of media dedicated to Telemetry or other data exchange.**

The RCSDT believes that data communication is covered under IRO-010, R3 which states:

Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. (Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations)

- 2) The definition should also clarify that the communication is between individuals in different entities or physical locations; The SDT believes that the revised Requirements of COM-001-2 satisfy this concern.**
- 3) Use of the term "method" may imply a communication style; changed "method" to "medium" in definition.**

Organization	Yes or No	Question 1 Comment
Calpine Corporation		
North Carolina Municipal Power Agency #1		
Public Service Enterprise Group Companies		
We Energies		

Organization	Yes or No	Question 1 Comment
Operating Personnel Communications Protocols SDT		No comment
CECD	No	CECD agrees that the term should be very broad and allow a registered entity to establish appropriate communication tools, devices, processes or systems to suit their operation. However, there is a need to include the term "normal" interpersonal communication methods based on the definition of alternative interpersonal communication.
Response: The RCSDT thanks you for your comment. RCSDT does not propose defining “Normal” Interpersonal Communications and has removed it from the alternative definition and included “...used for day-to-day operation.” Based on the consensus of stakeholders, we have revised the two definitions to: Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information. Alternative Interpersonal Communication: Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.		
ITC Holdings	No	Comments: As written, the definition could be interpreted to include data communications. Suggest modifying the definition to “Any method that allows two or more individuals to verbally interact, consult, or exchange information.” Interpersonal Communication to operate the BES must be timely and non voice communication cannot be relied upon to be timely in all situations.
Response: The RCSDT thanks you for your comment. The intent of this definition is to exclude data, but not preclude e-mail, text, etc. The RCSDT believes that data communication is covered under IRO-010, R3 which states: Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. (Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations)		
NERC	No	Comments: NERC staff believes the definition is unnecessary. “Interpersonal” is a common term and this definition provides no additional clarity. In addition, COM-001 should maintain the current coverage of voice and data. The requirements should address both primary and alternative/backup capabilities for voice and data. Approved standards including TOP-005-1.1 and IRO-010-1, as well as several others under development rely on the communication capabilities specified in COM-001. By limiting the focus of COM-001-

Organization	Yes or No	Question 1 Comment
		2 to this definition of Interpersonal Communication, there will no longer be an obligation to ensure that data telecommunication paths between entities are adequate and reliable.
Response: The RCSDT thanks you for your comment. The RCSDT and the industry disagree with NERC staff's assessment. A strong industry request to clarify "facilities" led to the definition of interpersonal communication which has been modified to: Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information. Primary communication is inferred when reference to alternative is made. Moreover, the primary capability is used/tested on a daily basis. The RCSDT contends that IRO-010 covers the requirement for data and information that includes a requirement for providing specified data when automated Real-Time system operating data is unavailable.		
Exelon	No	Definition is vague and subject to interpretation. Requirement should be to have primary and backup capabilities. Disagree that a definition is required.
Response: The RCSDT thanks you for your comment. The RCSDT and the industry disagree. A strong industry demand to clarify "facilities" led to the definition of interpersonal communication which has been modified to: Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information. Primary communication is inferred when reference to alternative is made. Moreover, the primary capability is used/tested on a daily basis.		
Southern Company Services	No	If there is going to be an alternative definition, than this should be a definition for Normal Interpersonal Communication.
Response: The RCSDT thanks you for your comment. Primary communication is inferred when reference to alternative is made. Moreover, the primary capability is used/tested on a daily basis.		
Ameren	No	In previous postings, the drafting team confirmed that they intended for COM-001-2 to apply only to verbal communication systems and not data. However, the phrase "or exchange information." could still imply data (information). We suggest that the team should explicitly exclude data in definition.
Midwest ISO Standards Collaborators	No	In previous postings, the drafting team confirmed that they intended for COM-001-2 to apply only to verbal communication systems. We believe this definition had inadvertently brought data back into the standard. Specifically, we are concerned about "or exchange information." Data can be considered information and thus some may now interpret SCADA and ICCP being included. We suggest the definition would be sufficient with the "or exchange information" redacted and would avoid this confusion.

Organization	Yes or No	Question 1 Comment
Response: The RCSDT thanks you for your comment. The SDT believes that Webster’s definition of Interpersonal: (being, relating to, or involving relations between persons) clarifies the exclusion of media dedicated to Telemetry or other data exchange. The RCSDT believes that data communication is covered under IRO-010, R3 which states: Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. (Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations)		
NERC Standards Review Subcommittee	No	In previous postings, the drafting team confirmed that they intended for COM-001-2 to apply only to verbal communication systems. We believe this definition had inadvertently brought data back into the standard. Specifically, we are concerned about “or exchange information.” Data can be considered information and thus some may now interpret SCADA and ICCP being included. To avoid this confusion, we suggest the definition would be sufficient with the “or exchange information” redacted. We believe the proposed definition for the term “Interpersonal Communication” is too broad and ambiguous. We recommend the following instead: “Verbal Communication between two or more registered entities (not within the same organization) to exchange reliability-related information.” The inclusion of this term “registered entities” removes the ambiguity which we believe is contained in the proposed definition. In addition, the inclusion of the phrase “not within the same organization” clarifies that the focus of definition is to address communication between different registered entities.
Response: The RCSDT thanks you for your comment. The SDT believes that Webster’s definition of Interpersonal: (being, relating to, or involving relations between persons) clarifies the exclusion of media dedicated to Telemetry or other data exchange. The RCSDT believes that data communication is covered under IRO-010, R3 which states: Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. (Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations) Also, the SDT believes that the revised Requirements of COM-001-2 satisfy your ambiguity concern.		
Southwest Power Pool	No	It appears as if the following two definitions have the same meaning: COM-001-2 Interpersonal Communication: Any method that allows two or more individuals to interact, consult, or exchange information. COM-003 -1 Interoperability Communication - Communication between two or more entities to exchange reliability-related information to be used by the entities to change the state or status of an element or facility of

Organization	Yes or No	Question 1 Comment
		the Bulk Electric System. SPP recommends changing the word “method” to medium in Interpersonal Communication. For Alternative Interpersonal Communication, that definition uses the term “infrastructure (medium)” as in type of equipment used. These terms should use consistent words if they are referring to the same thing.
Response: The RCSDT thanks you for your comment. We concur and have revised the two definitions to: Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information. Alternative Interpersonal Communication: Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.		
Duke Energy	No	Need to revise this definition to clarify that Interpersonal Communication is the primary method of communication, and that it is limited to verbal or written communications (not data such as SCADA data), and that it is limited to real-time operations (time horizon is Real-time Operations). Suggested wording: Interpersonal Communication: The primary verbal or written method that allows two or more individuals to interact, consult, or exchange information for real-time operations.
Response: The RCSDT thanks you for your comment. . The SDT believes that Webster’s definition of Interpersonal: (being, relating to, or involving relations between persons) clarifies the exclusion of media dedicated to Telemetry or other data exchange. The RCSDT believes that data communication is covered under IRO-010, R3 which states: Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. (Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations) The RCSDT does not believe “primary” is needed because “primary” communication is inferred when reference to “alternative” is made.		
PPL	No	The definition should be clarified to state that it is interpersonal communications between functional entities and not interpersonal communications within the functional entity that the standard is addressing.
Response: The RCSDT thanks you for your comment. The SDT believes that the revised Requirements of COM-001-2 satisfy your concern		
Hydro-Québec TransEnergie (HQT)	No	The definition should be worded to be more explicit, such as: When two or more individuals interact, consult, or exchange information.

Organization	Yes or No	Question 1 Comment
Northeast Power Coordinating Council	No	The definition should be worded to be more explicit, such as: When two or more individuals interact, consult, or exchange information.
Response: The RCSDT thanks you for your comment. We concur and have revised the definition to: Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information.		
Electric Market Policy	No	The SDT has proposed a definition that is meant to limit the standard to two-way person-to-person communication between functional entities. However, as written the definition can also be viewed as so open-ended as to apply to pens and papers used by system operators to show another system operator in the same control room some operational data. The proposed standard does further constrain the application to “real-time operation information”, but may be better served to explicitly constrain the definition to functional-entity-to-functional entity. It is these media that the standard means to address.
Response: The RCSDT thanks you for your comment. The SDT believes that the revised Requirements of COM-001-2 satisfy your concern		
Bonneville Power Administration	No	The term, ‘interpersonal communication’ as defined by common usage and Webster’s Dictionary is sufficient for the work at hand. To provide an additional definition via the NERC Standards Development Process unnecessarily adds to an already convoluted task and provides no further benefit to the user of this proposed standard.
Response: The RCSDT thanks you for your comment. The RCSDT and the industry disagree. A strong industry request to clarify “facilities” led to the definition of interpersonal communication which has been modified to: Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information.		
Northeast Utilities	No	The use of “Any method” as the start of the definition of Interpersonal Communication is too board a qualifier. In normal interpersonal communications only 5 to 10% of the total communication is verbal while 90 to 95% is non-verbal. As it is not the intent of this standard to address non-verbal communications the use of “Any method” should be eliminated from the definition and more specific terms that clearly convey the intent of the standard should be used.

Organization	Yes or No	Question 1 Comment
Response: The RCSDT thanks you for your comment. We concur and have modified the definition to: Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information.		
FirstEnergy	No	This definition should be revised as follows to ensure clarity of scope by excluding electronic data exchange and for consistency with the proposed requirements: "Interpersonal Communication Capability: Any method that allows two or more individuals to interact, consult, or exchange real-time Bulk Electric System operating information using verbal communication equipment."
Response: The RCSDT thanks you for your comment. We agree in principle; however, the SDT believes that Webster's definition of Interpersonal: (being, relating to, or involving relations between persons) clarifies the exclusion of media dedicated to Telemetry or other data exchange. The RCSDT believes that data communication is covered under IRO-010, R3 which states: Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. (Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations)		
Manitoba Hydro	No	When "Interpersonal Communication" is added to the NERC Glossary without the obvious reference to COM-001-2 which is "To ensure that operating entities have adequate Interpersonal capabilities" could and does infer that the definition means "protocol or forum of speaking, interacting or exchanging" information. The suggested definition does not immediately indicate the normal medium of communications, such a land line, mobile, radio, electronic, etc. A suggested definition: Interpersonal Communication: The normal mediums that carry messages, verbal or electronic, between two or more entities, internal or external, for the operation of the Interconnected Bulk Electric System.
Response: The RCSDT thanks you for your comment. We agree in principle and have modified the definition to: Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information. The SDT believes that the revised Requirements of COM-001-2 satisfy your concern of communication between entities.		

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Organization	Yes or No	Question 1 Comment
American Electric Power	Yes	
American Transmission Company	Yes	
Central Lincoln	Yes	
E.ON U.S.	Yes	
Florida Municipal Power Agency and Some Members	Yes	
Independent Electricity System Operator	Yes	
IRC Standards Review Committee	Yes	
ISO New England Inc	Yes	
OC Standards Review Group	Yes	
PacifiCorp	Yes	
Pepco Holdings, Inc	Yes	
PNGC Power (15 member utilities)	Yes	
Puget Sound Energy	No	The proposed definition for this term addresses a method of communication, but not the communication itself. As a result, the defined term is incomplete as proposed. Recommend the addition of the word “capability” so that the defined term is “Interpersonal Communication Capability”. The addition of this word to the term is also consistent with the use of the term in the proposed standard language, where Interpersonal Communication is consistently used in conjunction with the words “capability” or “capabilities”.

Organization	Yes or No	Question 1 Comment
		Response: The RCSDT thanks you for your comment. We agree in principle and have modified the definition which replaces “method” with “medium”: Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information. The RCSDT believes the definition itself infers “capability.”
South Carolina Electric and Gas	Yes	
US Bureau of Reclamation	Yes	
Western Area Power Administration	Yes	
Western Electricity Coordinating Council	Yes	
Xcel Energy	Yes	
ERCOT ISO	No	1) ERCOT ISO considers the definition of Interpersonal Communication to be ambiguous in terms of distinguishing between verbal communications and data transfers; the definition should specify that it applies to verbal communication systems. 2) The definition should also clarify that the communication is between individuals in different physical locations to mitigate any potential for application to communications between employees of the same company communicating to each other in person at the same physical location – e.g. a control center. 3) Additionally, use of the term “method” could imply a communication style (e.g. 3-part communications) as opposed to mode. It should be clear that the Standard only applies to modes of communication. Examples should be provided (e.g. phone, email, etc.) to clarify the scope.
Response: The RCSDT thanks you for your comment. 1. The definition of Interpersonal Communication to be ambiguous in terms of distinguishing between verbal communications and data transfers; the SDT believes that Webster’s definition of Interpersonal: (being, relating to, or involving relations between persons) clarifies the exclusion of media dedicated to Telemetry or other data exchange. The RCSDT believes that data communication is covered under IRO-010, R3 which states:		

Organization	Yes or No	Question 1 Comment
		Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. (Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations) 2. The SDT believes that the revised Requirements of COM-001-2 satisfy your concern of communication in different physical locations. 3. The RCSDT concurs and revised the definition, Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information.

2 Do you agree with the proposed definition of Alternative Interpersonal Communication (COM-001-2)? If not, please explain in the comment area.

Summary Consideration: Several stakeholders indicated that a definition of Alternative Interpersonal Communications was not needed. The RCSDT disagrees because there is an important part of the definition of “Alternative Interpersonal Communications” that distinguishes it from simply being an alternative “Interpersonal Communications”. The proposed definition contains the words: “which does not utilize the same infrastructure (medium)”. Also, some stakeholders had concerns with the usage of “normal”. The RCSDT does not propose defining “Normal” Interpersonal Communications and has removed it from the definition. Based on the consensus of stakeholders, we have revised the two definitions to:

Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information.

Alternative Interpersonal Communication: Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.

Organization	Yes or No	Question 2 Comment
Calpine Corporation		
North Carolina Municipal Power Agency #1		
Public Service Enterprise Group Companies		
We Energies		
Operating Personnel Communications Protocols SDT		No Comment

Organization	Yes or No	Question 2 Comment
Manitoba Hydro	No	“Alternative Interpersonal Communication” also when added to the NERC Glossary without the obvious reference to COM-001-2 which is “To ensure that operating entities have adequate Interpersonal capabilities” could and does infer that the definition means “ other protocols or forums of speaking, interacting or exchanging” information. The suggested definition does not immediately indicate the backup or alternate mediums of communications, such a redundant land lines, Satellite phones, battery or diesel back up electronics, etc. A suggested definition: Alternative Interpersonal Communication: Backup or alternate mediums that during planned or failure of normal medium systems, that can carry messages, verbal or electronic, between two or more entities, internal or external, for the operation of the Interconnected Bulk Electric System.
Response: The RCSDT thanks you for your comment. We have revised the definition to: Alternative Interpersonal Communication: Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation. The RCSDT believes “medium” stands alone in the definition and needs no descriptors.		
Exelon	No	Disagree that a definition is required.
Response: The RCSDT thanks you for your comment. The RCSDT disagrees because there is an important part of the definition of “Alternative Interpersonal Communications” that distinguishes it from simply being an alternative “Interpersonal Communications”. The proposed definition contains the words: “which does not utilize the same infrastructure (medium)”.		
Western Electricity Coordinating Council	No	Do not need an alternate definition
Response: The RCSDT thanks you for your comment. The RCSDT disagrees because there is an important part of the definition of “Alternative Interpersonal Communications” that distinguishes it from simply being an alternative “Interpersonal Communications”. The proposed definition contains the words: “which does not utilize the same infrastructure (medium)”.		
Southern Company Services	No	Interpersonal Communication includes any method. If this includes all possibilities why is an additional definition needed?
Response: The RCSDT thanks you for your comment. The RCSDT revised the definition as: Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information. The RCSDT believes that an important part of the definition of “Alternative Interpersonal Communications” that distinguishes it from simply being an		

Organization	Yes or No	Question 2 Comment
alternative “Interpersonal Communications” are the words: “which does not utilize the same infrastructure (medium)”.		
Duke Energy	No	Need to revise this definition to clarify that Alternative Interpersonal Communication is the identified substitute method for the Interpersonal Communication method. Suggested wording: Alternative Interpersonal Communication: The identified verbal or written method that is able to serve as the substitute for and is redundant to Interpersonal Communication and does not utilize the same infrastructure (medium) as Interpersonal Communication.
Response: The RCSDT thanks you for your comment. The RCSDT does not believe that the definition should be revised as suggested as “Alternative” is clear when the requirements are viewed.		
Southwest Power Pool	No	Replace Alternative Interpersonal Communication definition with: Backup Interpersonal Communication: Any method that is able to serve as a substitute for and is redundant to the primary normal Interpersonal Communication and does not utilize the same infrastructure (medium) as the primary normal Interpersonal Communications. Consistent terms should be used across standards if they are referring to the same thing.
Response: The RCSDT thanks you for your comment. The RCSDT feels that the use of “Alternative” is appropriate and provides flexibility within this standard. The RCSDT does not believe that the definition should be revised as suggested as “Alternative” is clear when the requirements are viewed. There is sufficient stakeholder support to retain “Alternative”.		
NERC	No	See response to Question 1.
Response: The RCSDT thanks you for your comment. Please see response to Question 1.		
E.ON U.S.	No	Suggested edit to definition: Alternative Interpersonal Communication: A Interpersonal Communication method that is able to serve as a substitute for and is functionally redundant to the normal Interpersonal Communication method but does not utilize the same infrastructure (medium) as the normal Interpersonal Communication method. The intent of the edit is to clarify that the entity must to have identified one (1) normal Interpersonal Communication and one (1) Alternative Intercommunication method.
Response: The RCSDT thanks you for your comment. A definition can not impose requirements that are not explicitly stated in the standard. The suggested edit is not necessary as the requirements define what an entity must do to be compliant. The RCSDT has also removed the words “and is redundant to” from the definition based on other stakeholders comments.		

Organization	Yes or No	Question 2 Comment
Bonneville Power Administration	No	The proposed definition adds value for the user of this proposed standard by adding the ideas of the alternate mode of communications being both independent and redundant to normal communications. However, this having been said, the term chosen by the SDT, the term 'Alternative Interpersonal Communication' appears to focus attention on the wrong aspect of what's being discussed. Since the definition focuses on an alternative mode or 'method' of communicating, clarity would be added if the SDT changed the term to be defined to either 'Alternative Mode of Communication' or 'Alternative Method of Communication.' The use of the word 'interpersonal' would be optional, but not necessary.
Response: The RCSDT thanks you for your comment. To clarify our intent, the RCSDT changed “method” to “medium” in the definition. The proposed definition is: Alternative Interpersonal Communication: Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.		
Hydro-Québec TransEnergie (HQT)	No	The proposed definition of Alternative Interpersonal Communication is equally ambiguous as the aforementioned definition of Interpersonal Communication. A precise definition of Interpersonal Communication and “Normal” Interpersonal Communication is required before an agreed upon definition of Alternative Interpersonal Communication can be reached.
Northeast Power Coordinating Council	No	The proposed definition of Alternative Interpersonal Communication is equally ambiguous as the aforementioned definition of Interpersonal Communication. A precise definition of Interpersonal Communication and “Normal” Interpersonal Communication is required before an agreed upon definition of Alternative Interpersonal Communication can be reached.
Northeast Utilities	No	The proposed definition of Alternative Interpersonal Communication is equally ambiguous as the aforementioned definition of Interpersonal Communication. A precise definition of Interpersonal Communication and “Normal” Interpersonal Communication is required before an agreed upon definition of Alternative Interpersonal Communication can be reached.
Response: The RCSDT thanks you for your comment. The RCSDT does not propose defining “Normal” Interpersonal Communications and has removed it from the definition. Based on the consensus of stakeholders, we have revised the two definitions to: Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information. Alternative Interpersonal Communication: Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same		

Organization	Yes or No	Question 2 Comment
infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.		
FirstEnergy	No	The word "normal" in the proposed definition adds some ambiguity to the definition. This definition should be revised as follows to ensure clarity of scope by excluding electronic data exchange and for consistency with the proposed requirements: Alternative Interpersonal Communication Capability: Any verbal communication equipment that is able to serve as a substitute for and is redundant to Interpersonal Communication equipment used during day-to-day operations and does not utilize the same infrastructure as the Interpersonal Communication equipment.
Response: The RCSDT thanks you for your comment. The RCSDT does not propose defining "Normal" Interpersonal Communications and have removed it from the definition. Based on the consensus of stakeholders, we have revised the two definitions to: Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information. Alternative Interpersonal Communication: Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.		
Ameren	Yes	
American Electric Power	Yes	
CECD	Yes	
Central Lincoln	Yes	
Florida Municipal Power Agency and Some Members	Yes	
Independent Electricity System Operator	Yes	
IRC Standards Review Committee	Yes	
ISO New England Inc	Yes	

Organization	Yes or No	Question 2 Comment
Midwest ISO Standards Collaborators	Yes	
OC Standards Review Group	Yes	
PacifiCorp	Yes	
Pepco Holdings, Inc	Yes	
PNGC Power (15 member utilities)	Yes	
PPL	Yes	
Puget Sound Energy	No	As for the proposed term for “Interpersonal Communication”, the proposed definition for this term addresses a method of communication, but not the communication itself. As a result, the defined term is incomplete as proposed. Recommend the addition of the word “capability” so that the defined term is “Alternative Interpersonal Communication Capability”. The addition of this word to the term is also consistent with the use of the term in the proposed standard language, where Alternative Interpersonal Communication is consistently used in conjunction with the words “capability” or “capabilities”.
Response: The RCSDT thanks you for your comment. Based on a consensus of stakeholder comments, the RCSDT has revised the proposed definitions to: Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information. The definition itself describes “capability.” Alternative Interpersonal Communication: Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.		
South Carolina Electric and Gas	Yes	
US Bureau of Reclamation	Yes	
Western Area Power Administration	Yes	

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Organization	Yes or No	Question 2 Comment
Xcel Energy	Yes	
American Transmission Company	Yes	However, clarity is needed for the word “infrastructure (medium)”. ATC’s interpretation is that satellite phones, cell phones, radio and land lines are all different mediums.
Response: The RCSDT thanks you for your comment. The RCSDT agrees that the types of communication that you list are all different media which could be used as a form of Alternative Interpersonal Communications.		
ITC Holdings	Yes	None
NERC Standards Review Subcommittee	Yes	Please clarify. We believe the proposed definition for the term “Interpersonal Communication” is too broad and ambiguous. We recommend the following instead: “Verbal Communication between two or more registered entities (not within the same organization) to exchange reliability-related information.” The inclusion of this term “registered entities” removes the ambiguity which we believe is contained in the proposed definition. In addition, the inclusion of the phrase “not within the same organization” clarifies that the focus of definition is to address communication between different registered entities.
Response: The RCSDT thanks you for your comment. The SDT believes that Webster’s definition of Interpersonal: (being, relating to, or involving relations between persons) clarifies the exclusion of media dedicated to Telemetry or other data exchange. The RCSDT believes that data communication is covered under IRO-010, R3 which states: Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. (Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations) The SDT believes that the revised Requirements of COM-001-2 satisfy your concern of communication in different physical locations.		
Electric Market Policy	Yes	Subject to adequate resolution of comments provided for Question 1
Response: The RCSDT thanks you for your comment. Please see response to question 1 comments.		
ERCOT ISO	No	Although this definition indirectly clarifies the intent of the definition of Interpersonal Communication by noting that communication mediums/infrastructure are at issue, it does not specify verbal or data communication, and needs to be clarified accordingly; ERCOT notes clarification of Interpersonal Communication (IC) on this issue will indirectly clarify this point with respect to the Alternative IC definition.

Organization	Yes or No	Question 2 Comment
		Furthermore, ERCOT ISO considers the definition of Alternative Interpersonal Communication unnecessary. The Standard could simply say an entity must have multiple (at least two) ICs, one of which is primary and others that serve as back-ups. This would eliminate the need for yet another defined term susceptible to conflicting interpretations. In additions, calling the Alternative Interpersonal Communication a substitute and redundant also seems contradictory, or at least confusing in terms of timing. Redundant implies that the entity has two means that are applied at the same time. Substitute seems to mean that the entity have a back-up that only has to be used when the primary isn't used. Also, if Interpersonal Communication is intended to be verbal communication, what are considered acceptable alternates (i.e.: fax, email, etc)? Examples here would be helpful. Is it sufficient to have redundant/substitute means of verbal communication (i.e.: satellite phones, cell phones, etc.). ERCOT ISO believes non-verbal proxies for verbal communications should be eligible ICs – e.g. email. As noted above, ERCOT ISO believes the most efficient way to approach this is to eliminate the use of Alternative Interpersonal Communication and have the standard require that entities have to have at least two means of Interpersonal Communication.
Response: The RCSDT thanks you for your comment. . The SDT believes that Webster’s definition of Interpersonal: (being, relating to, or involving relations between persons) clarifies the exclusion of media dedicated to Telemetry or other data exchange. The RCSDT believes that data communication is covered under IRO-010, R3 which states: Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. (Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations) The RCSDT disagrees that the definition is not needed because there is an important part of the definition of “Alternative Interpersonal Communications” that distinguishes it from simply being an alternative “Interpersonal Communications”. The proposed definition contains the words: “which does not utilize the same infrastructure (medium)”. We concur and have removed the “redundant” portion of the definition. Interpersonal Communication can include voice and text; examples are satellite phones, cell phones, radio and land lines. We have revised the proposed definitions to add clarity: Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information.		

Organization	Yes or No	Question 2 Comment
Alternative Interpersonal Communication: Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.		

3 Do you agree with the revisions made to Requirement 1 in COM-001-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Summary Consideration: Stakeholders pointed out that R1 was a compound requirement and suggested creating separate requirements. Stakeholders also suggested revising the VRF to “Medium” as it does not meet the guidelines for a “High” VRF. The intent of R1 was three-fold.

4 Identify (have) an Alternative Interpersonal Communication capability

5 Test that capability periodically and

6 If the test failed, fix it or identify another Alternative Communications Capability.

Based on comments received, we have revised R1, now R9, to eliminate the compound requirement and therefore created more specific requirements to delineate Interpersonal and Alternative Interpersonal Communication, and applicable entity responsibility. The VRF is changed to “Medium.”

Requirement R1 is now R9; R2 is now R10; R3 is now R11; R4 is now R7 and R8.

Organization	Yes or No	Question 3 Comment
Calpine Corporation		
North Carolina Municipal Power Agency #1		
Operating Personnel Communications Protocols SDT		No Comment
American Electric Power	No	AEP is concerned with the use of a sixty minute window without having a broadcast methodology in place to support the required notifications. As mentioned in other comments, perhaps RCIS could be modified to help support communications and the confirmation of such communications.
Response: The RCSDT thanks you for your comment. Having a failure of the Alternative Interpersonal Communications per R1 does not indicate that the Interpersonal Communications used in day-to-day operations is out of service. It is expected that the Interpersonal Communications used in day-to-day operations is indeed operational to make the notifications required in R3 regarding alternative failure.		

Organization	Yes or No	Question 3 Comment
We Energies	No	An Alternative Personnel Communications (APC) is intended for use at a Primary Control Center for real-time voice communications. That needs to be clear in the definitions and standards. The time to either restore or recognize that the Alternative Communications cannot be re-established should be aligned with proposed EOP-008 which allows 2 hours. This should also apply to COM-001 R2 which would give an hour past the 2 hours that the APC is unavailable to contact impacted parties. Along with conforming changes to measures and the like...
Response: The RCSDT thanks you for your comment. The Alternative Interpersonal Communications capability is intended for use as an alternative for the Interpersonal Communications capability, regardless of whether the normal capability continues to be available or regardless of the location, be it a primary control center or a back-up facility. R1, now R9, includes “...If the test is unsuccessful, the entity shall initiate action to repair or designate a replacement Alternative Interpersonal Communications within 2 hours.”		
ITC Holdings	No	Comments: The intent of the 60 minute requirement is unclear. As written, the 60 minute requirement could be interpreted to apply to the initiation of restoration or, alternatively, to the completion of restoration. If the latter is the intent, then effectively 3 voice communication mediums would be required to ensure compliance which we believe is not warranted. Suggest modifying the requirement to “If the test is unsuccessful, the entity shall take action within 60 minutes to initiate restoration of the identified alternative or...”. In addition, we would suggest separating R1 into two requirements. From an audit perspective, there are two discrete actions being identified: quarterly testing and initiating repairs.
Response: The RCSDT thanks you for your comment. We concur with your comment and have changed the requirement R1, now R9, to state “...If the test is unsuccessful, the entity shall initiate action to repair or designate a replacement Alternative Interpersonal Communications within 2 hours.” The SDT believes that R1, now R9, has a discreet relationship with successful and unsuccessful tests and therefore should remain as one requirement for clarity.		
Public Service Enterprise Group Companies	No	Initiating actions within the hour should be specified, rather than taking action. It could take longer than an hour to take (complete) action that resolves the issue.
Response: The RCSDT thanks you for your comment. We concur with your comment and have changed the requirement to state “...If the test is unsuccessful, the entity shall initiate action to repair or designate a replacement Alternative Interpersonal Communications within 2 hours.”		
Southern Company Services	No	It is quite possible for entities to interpret this requirement as not applicable if they include all of there communications as interpersonal communication.
Response: The RCSDT thanks you for your comment. The requirement states that an entity will “designate” an Alternative Interpersonal		

Organization	Yes or No	Question 3 Comment
Communications capability. To do so, the entity would not be able to declare all communications as Interpersonal Communications.		
FirstEnergy	No	It should be clear that this requirement applies only to BES information. The requirement should be revised as follows to improve clarity: Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, its Alternative Interpersonal Communications capability used for communicating real-time Bulk Electric System operating information.
Response: The RCSDT thanks you for your comment. The RCSDT does not believe that adding BES to the requirement adds any clarity as NERC standards apply to the BES.		
Duke Energy	No	- o Need to clarify who the RC, TOP and BA are required to have Interpersonal Communications and Alternative Interpersonal Communications capability with (i.e., each other and the DP and GOP). We believe that R4 is redundant to R1, and the entities in R4 could be added to R1, and R4 deleted. Also make conforming changes to the Measures, Data Retention and VSLs. - o Need to clarify that that the requirement is to take action to restore the Alternative Interpersonal Communications capability, or take action to identify a substitute within 60 minutes, (not actually restore or identify a substitute within 60 minutes - which may not be possible). Also need to revise the Measure and the Lower VSL to conform with this clarification to the requirement - o Need to strike the phrase “used for communicating real-time operating information”, because this should be included in the definition of Interpersonal Communication, as we propose in Comment #1 above, and it would be redundant to also include it in R1. - o The VRF for R1 should be Medium instead of High, because this is a quarterly test of the alternative capability - doesn’t meet the criteria for a High VRF. - o Need to clarify in Requirement R2 that the 60 minute clock for notifications BEGINS when you KNOW you have a failure that has lasted for 30 or more minutes. - o Strike the word “normal” in Requirement R2, because the definition of Interpersonal Communications as proposed above already includes the word “primary”.
Response: The RCSDT thanks you for your comment. - o To provide better clarity the SDT created more specific requirements to delineate Interpersonal and Alternative Interpersonal Communication, and applicable entity responsibility. - o The RCSDT has revised the requirement R1, now R9, to state “...If the test is unsuccessful, the entity shall initiate action to repair or designate a replacement Alternative Interpersonal Communications within 2 hours.” The Measure and VSL for R1, now R9, reflect the revision		

Organization	Yes or No	Question 3 Comment
- o The definition was not revised to include the phrase “used for communicating real-time operating information” since the Time Horizon is designated as Real-time Operations. - o VRF: The RCSDT agrees and has revised the VRF to “Medium.” - o R2 now R10: The RCSDT believes the requirement as written satisfies your request. The “detection” of failure is the beginning. - o “Normal”: The RCSDT revised R2, now R10, and deleted “normal.”		
Exelon	No	R1. It is not possible to test without identifying, “identify and” is not required. Suggest the requirement say: The applicable entities shall have primary and backup communication capabilities used for communicating real-time operating information. The entities shall test and demonstrate system capabilities on a quarterly basis. Telling someone to “take action” if they identify a failure in their systems is unnecessary. It must be presumed that an entity will “take action”; otherwise they will be non-compliant with the standard. Allowing an entity to “identify a substitute” in lieu of taking action to restore within 60 minutes points to the difficulties inherent in writing prescriptive requirements. The drafting team recognizes all entities may not be able to restore their capabilities within 60 minutes and therefore provides an alternative. The 60 minute requirement becomes a guideline, not a requirement under these conditions it is left to auditors to evaluate the technical and business case that an entity makes for why they can not make the 60 minute deadline.
Response: The RCSDT thanks you for your comment. The RCSDT has revised requirements of COM-001, R1 is now R9, to require an entity to “designate” an Alternative Interpersonal Communication capability rather than to “identify”. The RCSDT agrees with you that an entity must identify something in order to be able to designate it or to test it. An Alternative Interpersonal Communication capability is an alternative regardless of whether one is considering the primary location or a back-up facility. Back-up tends to indicate that it would only be used in the case of the loss of some other primary capability; that is not the intent. The intent is that an alternative is to be designated and periodically tested to verify its continued availability and functionality. The alternative capability may or may not be used in normal operations activities. The SDT changed “take action” to “initiate action” in the requirement and believes the verbiage is needed to identify the start of timing to satisfy “...repair or designate a replacement Alternative Interpersonal Communications within 2 hours.		
Manitoba Hydro	No	R1. Removal of “develop a mitigation plan” and replacing with “take action within 60 minutes” has been done, this improves the Requirement. R2. As suggested in a previous SAR, the time line should be delineated further, “if the ICC will not be in service within 30 minutes, the impacted entities shall be notified within 60 minutes of the detection of the failure”. R3. The addition of “dictated by law or otherwise” disclaimers defogs the requirement for Canadian entities that have varying laws, mandates and obligations: Canada’s basic definition of “Official bilingualism” was

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Organization	Yes or No	Question 3 Comment
		found as follows: - o The federal government must conduct its business and provide services in both official languages English and French. - o The law encourages or mandates lower tiers of government such as provinces, territories and municipalities to provide services in both official languages. - o The law places obligations on private sectors to provide access to services in both official languages, including that products be labeled in both English and French. - o The government provides support to sectors to encourage and promote the use of one or the other of the two official languages, for instance English speaking minorities in Quebec and French Speaking minorities in other provinces. - o New Brunswick is the only official bilingual province and Quebec is officially unilingual (French only).
Response: The RCSDT thanks you for your comment. Thank you for your affirmations with respect to R1 and R3. With respect to R2 (now R10). , it is the intent of the RCSDT to have notifications performed for outages of 30 minutes or longer within 60 minutes		
E.ON U.S.	No	Requiring a 60 minute response to a problem with the Alternative Interpersonal Communication method which is only tested quarterly doesn't seem reasonable. One (or more) entities may need to involve IT/telecom personnel or order parts or material to resolve the problem or agree to the substitute Alternative Interpersonal Communication method. A 48 hour response requirement would be more appropriate.
Response: The RCSDT thanks you for your comment. Requirement R1, now R9, has been revised to clarify the intent for the entity to “initiate actions to repair or designate a replacement Alternative Interpersonal Communications within 2 hours.”		
Puget Sound Energy	Yes	
CECD	No	The requirement to identify an alternative interpersonal communication method within 60 minutes should only apply if the registered entity only has a single alternative interpersonal communication method in place.
Response: The RCSDT thanks you for your comment. Requirement R1, now R9, has been revised to clarify the intent for the entity to “initiate actions to repair or designate a replacement Alternative Interpersonal Communications within 2 hours.”		
NERC	No	There is a disparity in the timing requirements listed in COM-001. If it is important that a known communication path interruption be restored in 60 minutes, why would it be necessary to check a path quarterly only? The drafting team should consider proposing that no concurrent outage of primary and alternative/backup paths can exceed 5 minutes for voice paths. Additionally, NERC staff believes that data path concerns still need to be addressed. As written, there is no requirement coverage for ensuring that data telecommunication paths between entities are adequate and reliable.
Response: The RCSDT thanks you for your comment. The requirement R1, now R9, does not state that a communication path be restored in 60		

Organization	Yes or No	Question 3 Comment
minutes but “...shall initiate action to repair or designate a replacement Alternative Interpersonal Communication within 2 hours.” The SDT believes that it is not feasible to propose that concurrent outages of a primary or backup communication cannot exceed 5 minutes. The SDT believes that IRO-010-1 Requirement R1 and specifically R1.4, adopted by the NERC BOT, address your concerns regarding data paths.		
Southwest Power Pool	No	This standard does want the RC, TOP, and BA to report in R2 if Interpersonal Communication goes down within 60mins to report it. However, we cannot find a specific requirement that subjects the RC, TOP, and BA to have Interpersonal Communication in the first place.
o Response: The RCSDT thanks you for your comment. To provide better clarity the SDT created more specific requirements to delineate Interpersonal and Alternative Interpersonal Communication, and applicable entity responsibility.		
Hydro-Québec TransEnergie (HQT)	No	We agree with the revisions made to R1 to remove the requirement for developing a mitigation plan but have a concern with “...shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communication Capability”. This can be interpreted to mean completing the repair within 60 minutes, and hence can present a difficulty for the responsible entity if the spare parts to facilitate a repair or if a new piece of equipment cannot be obtained within that time frame. More time is needed to fully repair or replace the lost capability. A suggested rewording is “shall initiate action within 60 minutes to restore....” Alternatively, the requirement can be revised to require the identification of a substitute Alternative Interpersonal Communication means within the 60 minute time frame.
Independent Electricity System Operator	No	We agree with the revisions made to R1 to remove the requirement for developing a mitigation plan but have a concern with “...shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communication Capability”. This can be interpreted to mean completing the repair within 60 minutes, and hence can present a difficulty for the responsible entity if the spare parts to facilitate a repair or if a new piece of equipment cannot be obtained within that time frame. More time is needed to fully repair or replace the lost capability. We suggest the wording be revised to “shall initiate action within 60 minutes to restore....” Alternatively, the requirement can be revised to require the identification of a substitute Alternative Interpersonal Communication means within the 60 minute time frame.
Northeast Power Coordinating Council	No	We agree with the revisions made to R1 to remove the requirement for developing a mitigation plan but have a concern with “...shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communication Capability”. This can be interpreted to mean completing the repair within 60 minutes, and hence can present a difficulty for the responsible entity if the spare parts to facilitate a repair or if a new piece of equipment cannot be obtained within that time frame. More time is needed to fully repair or replace the lost capability. A suggested rewording is "shall initiate action within 60 minutes to

Organization	Yes or No	Question 3 Comment
		restore..." Alternatively, the requirement can be revised to require the identification of a substitute Alternative Interpersonal Communication means within the 60 minute time frame.
Response: The RCSDT thanks you for your comment. The RCSDT agrees and has revised R1, now R9, to clarify the intent for the entity to “initiate actions to repair or designate a replacement Alternative Interpersonal Communications within 2 hours.”		
Western Electricity Coordinating Council	No	We do not need the definition for alternate, when the definition for interpersonal communication states all methods of communications. What we think the drafting team is getting at is that we need to test our back up communication systems.
Response: The RCSDT thanks you for your comment. The RCSDT has revised R1, now R9, and R2, now R10, to clarify that an Alternative Interpersonal Communication capability be designated and that alternative capability to be tested at least monthly to verify an alternative is available should the capability normally used be lost. If the test of the Alternative Interpersonal Communication capability is failed, then the entity must initiate actions within 60 minutes. The RCSDT has intentionally avoided the concept of back-up because back-up could be mistakenly believed to apply only in back-up facilities or in the case of loss of some unnecessarily designated primary capability.		
Midwest ISO Standards Collaborators	No	We mostly agree with the revisions and thank the drafting team for modifying the requirement to remove the need for a mitigation plan per our comments from the last posting. However, we do believe that introduction of a requirement to fix the Alternate Interpersonal Communication within 60 minutes could be a compliance problem. Our issue is with the time requirement. For example, our stakeholders have experienced situations with certain communications systems in which a part had to be shipped overnight to fix the communication system. While we still don't believe a mitigation plan is necessary in this case, we are concerned that ordering the part may not be viewed as taking action. Please confirm that SDT believes that the 60 minutes applies to beginning to repair the Alternative Interpersonal Communication and not to full restoration of the Alternative Interpersonal Communication. Further, please confirm that identification of a substitute Alternative Interpersonal Communication could simply mean relying on an already existing and identified secondary or tertiary Alternative Interpersonal Communication? Similar to our concern identified in Q1, we are concerned about the clause “used for communicating real-time operating information.” We believe data could be drawn into the requirement with this clause. Redacting the clause from the requirement will clarify that the requirement applies to only verbal communications.
NERC Standards Review Subcommittee	No	We mostly agree with the revisions and thank the drafting team for modifying the requirement to remove the need for a mitigation plan per our comments from the last posting. However, we do believe that introduction of a requirement to fix the Alternate Interpersonal Communication within 60 minutes could be a compliance problem. Our issue is with the time requirement. For example, our stakeholders have experienced situations with certain communications systems in which a part had to be shipped overnight to fix the communication system. While we still don't believe a mitigation plan is necessary in this case, we are concerned that

Organization	Yes or No	Question 3 Comment
		ordering the part may not be viewed as taking action. Please confirm that SDT believes that the 60 minutes applies to beginning to repair the Alternative Interpersonal Communication and not to full restoration of the Alternative Interpersonal Communication. Further, please confirm that identification of a substitute Alternative Interpersonal Communication could simply mean relying on an already existing and identified secondary or tertiary Alternative Interpersonal Communication. Similar to our concern identified in Q1, we are concerned about the clause “used for communicating real-time operating information.” We believe data could be drawn into the requirement with this clause. Redacting the clause from the requirement will clarify that the requirement applies to only verbal communications.
Response: The RCSDT thanks you for your comment. R1, now R9, has been revised to clarify the intent for the entity to “intiate actions to repair or designate a replacement Alternative Interpersonal Communications within 2 hours.” The verbiage, “used for communicating real-time operating information” is redacted as you suggest. The SDT believes that Alternative Interpersonal Communication is clearly defined.		
Ameren	No	We mostly agree with the revisions. However, we believe that introduction of a requirement to fix the Alternate Interpersonal Communication (AIC) within 60 minutes could be a compliance problem. The issue is with the time requirement. It seems illogical to only test the AIC every 90 days but have to replace the capability in 60 minutes when the IC means is working, It seems more reasonable to have the 60 minutes apply when both are out. Similar to our concern expressed in response to Q1 above, we are concerned about the phrase “used for communicating real-time operating information.” , which could also imply data. We suggest that the team should remove this phrase from the requirement to clarify that the requirement applies to only verbal communications.
Response: The RCSDT thanks you for your comment. R1, now R9, has been revised to clarify the intent for the entity to “intiate actions to repair or designate a replacement Alternative Interpersonal Communications within 2 hours.” Verbiage “used for communicating real-time operating information” is redacted.		
OC Standards Review Group	No	We suggest changing “its” in the first sentence to “their respective” such that the sentence will read, “Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, “their respective”” We also suggest that the risk factor should be “Medium”
Response: The RCSDT thanks you for your comment. The SDT believes that “its” shows appropriate ownership for each respective entity. The risk factor is revised to “Medium” as suggested.		
IRC Standards Review	No	We thank the drafting team for modifying the requirement to remove the need for a mitigation plan per our comments from the last posting. However, we do believe that introduction of a requirement to fix the

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

Organization	Yes or No	Question 3 Comment
Committee		Alternate Interpersonal Communication within 60 minutes could be a compliance problem. Our issue is with the time requirement. It is possible that a communications system may require a part that is currently not available. The requirement should be simply to initiate action to repair the system or to have another Alternate Interpersonal Communication system available. Further, please confirm that identification of a substitute Alternative Interpersonal Communication could simply mean relying on an already existing and identified secondary or tertiary Alternative Interpersonal Communication? To resolve these issues, we suggest the wording be revised to “shall initiate action within 60 minutes to restore....” Alternatively, the requirement can be revised to require the identification of a substitute Alternative Interpersonal Communication means within the 60 minute time frame.
ISO New England Inc	No	We thank the drafting team for modifying the requirement to remove the need for a mitigation plan per our comments from the last posting. However, we do believe that introduction of a requirement to fix the Alternate Interpersonal Communication within 60 minutes could be a compliance problem. Our issue is with the time requirement. It is possible that a communications system may require a part that is currently not available. The requirement should be simply to initiate action to repair the system or to have another Alternate Interpersonal Communication system available. Further, please confirm that identification of a substitute Alternative Interpersonal Communication could simply mean relying on an already existing and identified secondary or tertiary Alternative Interpersonal Communication? To resolve these issues, we suggest the wording be revised to “shall initiate action within 60 minutes to restore....” Alternatively, the requirement can be revised to require the identification of a substitute Alternative Interpersonal Communication means within the 60 minute time frame.
Response: The RCSDT thanks you for your comment. R1, now R9, has been revised to clarify the intent for the entity to “initiate actions to repair or designate a replacement Alternative Interpersonal Communications within 2 hours.” The SDT believes that Alternative Interpersonal Communication is clearly defined.		
Pepco Holdings, Inc	No	Why is a requirement for alternate communications given a VRF of High while a requirement (R2) for normal communications given a VRF of Medium?
Response: The RCSDT thanks you for your comment. The VRF for R1, now R9, has been revised to “Medium.”		
Bonneville Power Administration	Yes	
Central Lincoln	Yes	

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

Organization	Yes or No	Question 3 Comment
Florida Municipal Power Agency and Some Members	Yes	
Northeast Utilities	Yes	
PacifiCorp	Yes	
PNGC Power (15 member utilities)	Yes	
PPL	Yes	
South Carolina Electric and Gas	Yes	
US Bureau of Reclamation	Yes	
Western Area Power Administration	Yes	
Xcel Energy	Yes	
American Transmission Company	Yes	If the “infrastructure” is defined as we have noted in question 2, then we support the revisions to this Requirement.
Response: The RCSDT thanks you for your comment.		
Electric Market Policy	Yes	Subject to adequate resolution of comments provided for Question 1
Response: The RCSDT thanks you for your comment. Please see response to question1.		
ERCOT ISO	No	To follow on the concern noted in Question 1, ERCOT ISO requests that the scope of Interpersonal Communication be clarified. Without specifically limiting Alternative Interpersonal Communication to verbal communications, ERCOT ISO considers this requirement to be too broad in that it could potentially encompass all types of data exchanges and the means for such exchanges.

Organization	Yes or No	Question 3 Comment
		ERCOT ISO also has concerns regarding the intent of the 60 minute requirement. Is noting the failure and identified remedy within 60 minutes sufficient? If not, it may take significantly longer to acquire new equipment or parts to address a problem thereby making compliance with the 60-minute timeframe practically impossible. ERCOT ISO recommends that the 60 minute requirement be replaced with “as soon as practical/possible” to provide the flexibility necessary to cover those types of situations. ERCOT recognizes that the requirement gives the entity the option of restoring the means within 60-minutes or identifying another alternative, but to the extent an entity only has two options available and/or identified, the 60-minute restoration option would practically be the only option. With respect to the third option (i.e. the option if the first “alternative” fails), the requirement does not state any need to test that communication option. It only requires the entity to identify the additional alternative. If the intent is that the second alternative needs to be tested, that should be clarified. If the intent is merely to identify it and then test it on the next quarterly schedule, that should also be clarified./ Also, the need to “identify” the Alternative ICs for the quarterly test seems pointless. The Alternative ICs would already be identified; presumably the entity would have established these means in advance of having to test them. It seems like a pointless exercise to “identify” means already identified. The requirement should impose an obligation to establish ICs and Alternative ICs, and the testing of those should be an independent requirement. With respect to R2, ERCOT recommends clarifying the scope of “impacted entities”. ERCOT ISO believes that the scope should be left to the discretion of the RC/TOP/BA, or that it should be expressly limited to the entities that were the subject of the failed communication. For R3, ERCOT ISO recommends deleting the pre-condition language related to “inter entity” BES “reliability communications”. This introduces confusion as to the scope and timing of communications under this requirement, especially where other standards are subject to Reliability Directives. For example, is a reliability communication a Reliability Directive? If not, what constitutes a reliability communication? The requirement should simply state that English is required for communications from the relevant functional entities. Finally, the risk factor seems inappropriate for the requirement. This is a testing requirement, not real time. The entity has 60 minutes to correct any issues or have a third option already identified and ready to deploy. This requirement does not seem to indicate the need for a high risk factor.
Response: The RCSDT thanks you for your comment. R1 is now R9; R2 is now R10; R3 is now R11; R4 is now R7 and R8. The SDT believes that Webster’s definition of Interpersonal: (being, relating to, or involving relations between persons) clarifies the exclusion of media dedicated to Telemetry or other data exchange and, SDT believes that data communication is covered under IRO-010, R3 which states: Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission		

Organization	Yes or No	Question 3 Comment
Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. (Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations)		
The SDT believes that the revised Requirements of COM-001-2 now satisfy your concern regarding R1, R2 and R3.		

4 Do you agree with the definition of Reliability Directive (COM-002-2)? If not, please explain in the comment area.

Summary Consideration:

The comments received regarding the definition of Reliability Directive ranged from the being “to open-ended” (PPL) to not “flexible” enough (Public Service Enterprise Group Companies). The SDT expected and viewed these as attempting to reach middle ground.

There were also value added comments such as removing the unnecessary and redundant terms “actual or expected” from the definition, which the SDT agrees with.

A number of commenter’s expressed a concern about the definition not including three-part communication, clearly identifying a Reliability Directive at the time of issue, and applying to verbal communications. While valid concerns, the SDT believes responsibilities should not be imbedded in a definition and, as drafted, the requirements of COM-002 fully address the identification and verbal concerns.

While outside of the scope of question four, one commenter suggested assigning the COM standard project to either the OPCPRC or RCS DT projects. The SDT explained the close coordination and collaboration between the two projects.

Organization	Yes or No	Question 4 Comment
Calpine Corporation		
North Carolina Municipal Power Agency #1		
Operating Personnel Communications Protocols SDT		The OPCP SDT received NERC staff comments to our proposed draft of COM-003-1. In those comments NERC staff proposed the term “Operating Communication”, defined as “communication with the intent to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System.” The OPCP SDT is accepting this proposed term in the next version of COM-003-1 for posting. Per agreement reached during the November 17, 2009 joint meeting of the OPCP, RC and RTO SDTs in Charlotte, NC,

Organization	Yes or No	Question 4 Comment
		pending the outcome of the industry evaluation of your proposed “Reliability Directive” term, the OPCP SDT will incorporate the term into COM-003-1 Requirement R?. The OPCP SDT recommends adding the Transmission Owner to the entities that may issue a Reliability Directive because in many cases (e.g., PJM) Transmission Owners “operate” the transmission system from local control centers. The OPCP SDT points out however that the RC SDT have not adhered to scope coordination efforts between our projects. At the outset of both SDT’s work, the OPCP project would focus upon Requirement R2 of COM-002-2 and the RC SDT would focus on Requirement R1 of COM-002-2.
Response: The RCSDT thanks you for your comment. The RCSDT does not believe that the Transmission Owner should be added to the definition as this would be inconsistent with the Functional Model and the registration process. Regarding the scope issue: The RCSDT received strong consensus comments on our first posting to make revisions to the original R2. The RCSDT began making these revisions in response to stakeholder comments.		
American Electric Power	No	AEP would recommend that the words "actual or expected" be removed from the definition as unnecessary and redundant. Since, Emergency: Any abnormal system condition that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System, then an "expected emergency" is by definition the same as an emergency. If you already have an 'expected' emergency that causes intervention of some sort, then you are already in and "emergency." Therefore, you are either in an emergency condition or not in an emergency condition.
Response: The RCSDT thanks you for your comment. The RCSDT agrees with your comment and we have struck “actual or expected” from the proposed definition.		
Southwest Power Pool	No	By NERC’s Functional Model the RC, BA, TOP, and DP issues directives. (DP to LSE)Reliability Directive - A communication initiated by a RC, TOP, BA or DP where action by the recipient is necessary to address an actual or expected Emergency.
Response: The RCSDT thanks you for your comment. The RCSDT notes that, per the Functional Model, a DP may “direct” an LSE to communicate requests for voluntary load curtailment and not reliability situations: Item 9 on page 47 of version 5 of the Functional Model: “Directs Load-Serving Entities to communicate requests for voluntary load curtailment.” The RCSDT will forward this comment to the FMWG for their consideration in revising the language.		
Public Service Enterprise Group	No	It is reasonable to require the directing entity to identify which of its communications is a Reliability Directive

Organization	Yes or No	Question 4 Comment
Companies		either when first communicated or if questioned by the recipient. Flexibility is the key.
Response: The RCSDT thanks you for your comment. The SDT agrees it might be reasonable however, it is not appropriate to imbed requirements in definitions.		
Also please see Requirement R1 of COM-002-3 (When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient.) If the RC, BA, and TOP comply with R1 there is no need for the recipient to question if it is Reliability Directive.		
NERC	No	NERC staff proposed the term “Operating Communication” in our comments to Project 2007-02 Operating Personnel Communications Protocols. Operating Communication would be defined as “communication with the intent to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System.” This captures all communication that affects BES reliability, not just communication between function entities and Reliability Coordinators. If the proposed COM-003 is adopted with the definition of “Operating Communication” and the corresponding three-part communication requirements, this term “Reliability Directive” is not needed in the COM standard family. However because we cannot pre-judge the outcome of the changes proposed in Project 2007-02, we must view the proposal here on its own merits. The proposal herein limits the scope of coverage to emergency situations, a regression from the current coverage in FERC-approved COM-002 and eliminates a key component of the defense in depth strategy the standards as a body attempt to provide. Furthermore, we believe that COM-002 is outside the scope of Project 2006-06 Reliability Coordination and should properly be addressed by Project 2007-02 Operating Personnel Communications Protocols. The fact that two teams are addressing aspects of the same standard and requirements is confusing and because the projects are not linked, there is a real potential to be disjointed if one or the other project modifies its approach. This could create a gap in reliability coverage. One team should be the primary “owner” of this issue. Analysis of past Bulk Electric System reliability events has shown that the lack of three-part communication has been a contributing factor to adverse reliability issues. We believe it is absolutely imperative that standards concerning all verbal instructions to change or maintain the state of a BES element must involve three-part communication in order to provide defense-in-depth and reduce human error in these events.
Response: The RCSDT thanks you for your comment. The RCSDT believes that we are addressing the Blackout Recommendation #26 regarding “tighten communications protocols, especially during alert and emergency situations”. Our contention is that we have made a good faith effort at addressing the scope of our SAR and feel that this current position has been validated by stakeholder comments and the NERC Standards Committee (see November 17, 2009 meeting of RCSDT, OPCSDT and RTOSDT concerning this issue). We understand the concerns expressed above and fully support proceeding with the efforts of the OPCP SDT at improving all communications protocols.		
However, the RCSDT recognizes that the scope of our proposed revisions to COM-002 is limited to Emergency situations only. The RCSDT feels that		

Organization	Yes or No	Question 4 Comment
the concept of a Reliability Directive is an important tool for RC, BA and TOP to maintain reliability and that the revisions are consistent with parts of the directives in FERC Order 693. The work of the RCS DT along with the OPCSDT, as currently recognized, will cover the original intent of COM-002 and still provide a “defense in depth strategy”. Stakeholder requests and consensus appears to have been achieved with respect to the definition of Reliability Directive and the requirements that the RCS DT have developed for COM-002. This will further the efforts of the OCPC SDT in achieving stakeholder consensus for their proposed requirements in COM-003.		
Western Electricity Coordinating Council	No	No, we think IRO 001 R3 covers this more effectively and may be expanded to include transmission operators and balancing authorities. “The Reliability Coordinator shall have clear decision-making authority to act and to direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities within its Reliability Coordinator Area to preserve the integrity and reliability of the Bulk Electric System. These actions shall be taken without delay, but no longer than 30 minutes.”
Response: The RCS DT thanks you for your comment. The revised IRO-001, R3 is to establish the authority of the RC to act or issue Reliability Directives. It does not identify the protocols under which a Reliability Directive needs to be issued, acknowledged and carried out. This is handled through the proposed definition as well as the requirements of COM-002.		
Manitoba Hydro	No	Reliability Directive is more clearly defined in the FRCC website: “Reliability Directives are used during times of emergency or in situations where reliability may be an issue. A Reliability Directive is usually issued to control or prevent emergency situations. ”Extrapolated from proposed and FRCC: Reliability Directive: An instruction initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority that is used during emergencies or reliability issue which will be used to prevent, control or resolve the situation. This definition makes it clear that it is for reliability issues (Thus Reliability Directive) and clarifies better that this is to be used to control or prevent emergency situations. The existing proposed definition doesn't fully infer this. With the addition of this glossary term, so should the addition of a definition for Operational Directive (though not used in this requirement). The new items would further compliment and assist each other in the understanding of the two new Glossary terms. From the FRCC website: “Operational Directives are issued by System Operators when it is necessary to perform a critical function on the BPS, i.e., to manipulate or change the status of a BES element such as a circuit breaker or substation disconnects. For example, Balancing Authorities often issue Operational Directives to Generator Operators to raise or lower the MW or MVAR output of generators during the course of balancing load and generation on the BPS. Transmission Operators often issue Operational Directives to substation operators to change the status of voltage control devices or clearing BPS substation equipment or transmission lines for routine maintenance, etc”. Extrapolated from proposed and FRCC: Operational Directive: An instruction initiated by a Transmission Operator or Balancing Authority that is used to perform planned or routine critical functions on the Bulk Power System.
Response: The RCS DT thanks you for your comment. The RCS DT believes that our proposed definition of Reliability Directive along with the existing		

Organization	Yes or No	Question 4 Comment
definition of Emergency address all of the concepts that you suggest. The comments regarding Operational Directive are more suited to the work of the OPCP SDT as they are developing requirements along this line. We will forward your comment to that team for their consideration.		
Midwest ISO Standards Collaborators	No	The combination of the COM-002-3 standard and the definition of Reliability directive do not clearly specify that the communication is verbal and between only two responsible entities. Otherwise, the communication could be considered a blast call, written correspondence or conversation between operators within the same responsible entity. We believe that the Reliability Directive definition should be: "A verbal communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority to another responsible entity where action by the recipient is necessary to address an actual or expected emergency and the RC, TOP or BA operator clearly identifies in the communication that this is a Reliability Directive."
NERC Standards Review Subcommittee	No	The combination of the COM-002-3 standard and the definition of Reliability directive do not clearly specify that the communication is verbal and between only two responsible entities. Otherwise, the communication could be considered a blast call, written correspondence or conversation between operators within the same responsible entity. We believe that the Reliability Directive definition should be: "A verbal communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority to another registered entity where action by the recipient is necessary to address an actual or expected emergency and the RC, TOP or BA operator clearly identifies in the communication that this is a Reliability Directive."
Response: The RCSDT thanks you for your comment. First issue: verbal communication: The intent of the definition is to not preclude text or other forms of communication for issuing Reliability Directives. However, entities are still obligated to comply with the requirements of COM-002. Second issue: "to another registered entity": The way that COM-002 is crafted, it focuses on functional entity communication between and among functions. Adding this verbiage is not appropriate. Third issue: By adding "clearly identifies in the communication that this is a Reliability Directive", we would have added a requirement to the definition. This is better included in the requirements rather than the definition.		
We Energies	No	The measures of COM-002-3 imply verbal one-to one communication which needs to be clear within the definition. Recommend replacing "A communication" with the draft defined term "Interpersonal Communication" assuming it gets approved.
Response: The RCSDT thanks you for your comment. The intent of the definition and requirements of COM-002 is to not preclude text or other forms of communication to issue Reliability Directives. However, entities are still obligated to comply with the requirements of COM-002. Interpersonal Communications is a medium rather than a protocol or message.		

Organization	Yes or No	Question 4 Comment
PPL	No	The proposed definition is too open-ended especially since this definition will be used in other standards. Limiting the application of the standard to announced Reliability Directives in the definition itself will ensure only announced Reliability Directives are covered by this standard and other standards.
Response: The RCSDT thanks you for your comment. Including the language that you suggest would impose a requirement within the definition. Potential use of the definition in other requirements would have to be reconciled with COM-002 requirements through the standard development process.		
E.ON U.S.	No	The term “Interoperability Communication” has been proposed and defined in COM-003 (Project 2007-02), but, the term and definition have not been finalized. Is a “Reliability Directive” communication different from, a subset of, or related to Interoperability Communication? The definition of Reliability Directive should recognize and clarify the linkage to Interoperability Communication.
Response: The RCSDT thanks you for your comment. The RCSDT believes that we are addressing the Blackout Recommendation #26 regarding “tighten communications protocols, especially during alert and emergency situations” in our proposed definition and requirements for COM-002. The RCSDT feels that the concept of a Reliability Directive is unique and an important tool for the RC, BA and TOP to maintain reliability. The proposed definition and revisions to COM-002 are consistent with parts of the directives in FERC Order 693. The work of the RCSDT and the OPCPSDT (Project 2007-02) compliment each other and will be coordinated.		
Southern Company Services	No	This definition is not needed with the way that the requirements of the standard are written. This definition used with the definition of Emergency could be interpreted to include such routine operations as turning on capacitor banks and next day planning. Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority to an entity inside their Reliability, Transmission, or Balancing Areas where action outside of normal operating practices by the recipient is necessary to address an actual or expected Emergency or when an action is identified as a reliability directive.
Response: The RCSDT thanks you for your comment. The RCSDT believes that the proposed definition of Reliability Directive, along with the existing definition of Emergency, provides the heightened awareness that is the goal of the standard and it comports with the directives of Order 693.		
Ameren	No	We believe that a reference in the question is to COM-002-3 and not -2. The definition of Reliability directive is not clear to indicate that it only applies to verbal communications. We suggest the definition should be: “A verbal communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority to another responsible entity where action by the recipient is necessary to address an actual or expected emergency and the RC, TOP or BA operator clearly identifies in the communication that this is a Reliability Directive.”

Organization	Yes or No	Question 4 Comment
Response: The RCSDT thanks you for your comment. The question does reference COM-002-3 as suggested. First issue: verbal communication: The intent of the definition is to not preclude text or other forms of communication for issuing Reliability Directives. However, entities are still obligated to comply with the requirements of COM-002. Second issue: “to another registered entity”: The way that COM-002 is crafted, it focuses on functional entity communication between and among functions. Adding this verbiage is not appropriate. Third issue: By adding “clearly identifies in the communication that this is a Reliability Directive”, we would have added a requirement to the definition. This is better included in the requirements rather than the definition.		
Hydro-Québec TransEnergie (HQT)	No	We believe that the Reliability Directive definition as defined in COM-002-3 should be: “A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where action by the recipient is necessary to address an actual or expected emergency and the RC, TOP or BA operator clearly identifies in the communication that this is a Reliability Directive.”
Northeast Power Coordinating Council	No	We believe that the Reliability Directive definition as defined in COM-002-3 should be: “A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where action by the recipient is necessary to address an actual or expected emergency and the RC, TOP or BA operator clearly identifies in the communication that this is a Reliability Directive.”
IRC Standards Review Committee	No	We believe that the Reliability Directive definition should be: “A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where action by the recipient is necessary to address an actual or expected emergency and the RC, TOP or BA operator clearly identifies in the communication that this is a Reliability Directive.”
ISO New England Inc	No	We believe that the Reliability Directive definition should be: “A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where action by the recipient is necessary to address an actual or expected emergency and the RC, TOP or BA operator clearly identifies in the communication that this is a Reliability Directive.”
Response: The RCSDT thanks you for your comment. First issue: verbal communication: The intent of the definition is to not preclude text or other forms of communication for issuing Reliability Directives. However, entities are still obligated to comply with the requirements of COM-002. Second issue: “to another registered entity”: The way that COM-002 is crafted, it focuses on functional entity communication between and among functions. Adding this verbiage is not appropriate. Third issue: By adding “clearly identifies in the communication that this is a Reliability Directive”, we would have added a requirement to the		

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

Organization	Yes or No	Question 4 Comment
definition. This is better included in the requirements rather than the definition.		
FirstEnergy	No	We believe that this standard should be either handed to the OPCPSDT (Project 2007-02) or the OPCPSDT should hand over the COM-003-1 standard to this RCSDT (Project 2006-06); and then COM-002 and COM-003 should be merged. For further explanation of our suggestions, see our comments in Question #8.
Response: The RCSDT thanks you for your comment. The RCSDT feels that the concept of a Reliability Directive is an important tool for RC, BA and TOP to maintain reliability and that the revisions are consistent with parts of the directives in FERC Order 693. The work of the RCSDT along with the OPCPSDT, as currently recognized, will cover the original intent of COM-002 and still provide a “defense in depth strategy” as suggested by the NERC comment. Stakeholder requests and consensus appears to have been achieved with respect to the definition of Reliability Directive and the requirements that the RCSDT have developed for COM-002. This will further the efforts of the OCPC SDT in achieving stakeholder consensus for their proposed requirements in COM-003. Merging of the two standards is a work in progress and will ultimately be decided by stakeholder consensus.		
Independent Electricity System Operator	No	We suggest the Reliability Directive definition be modified as follows to further clarify the communication protocol: “A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority and made clear by the initiating entity that this is a Reliability Directive which requires action by the recipient to address an actual or expected Emergency.”
Response: The RCSDT thanks you for your comment. The RCSDT believes that your suggested revision would impose a requirement within the definition.		
Duke Energy	No	We think that Requirement R1 should be folded into the definition, and R1 deleted. Also delete the Measure and VSL. Suggested rewording of the definition: Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority, and identified as a Reliability Directive to the recipient, where action by the recipient is necessary to address an actual or expected Emergency.
Response: The RCSDT thanks you for your comment. The RCSDT believes that your suggested revision would impose a requirement within the definition.		
Bonneville Power Administration	Yes	
CECD	Yes	
Central Lincoln	Yes	

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Organization	Yes or No	Question 4 Comment
Exelon	Yes	
Florida Municipal Power Agency and Some Members	Yes	
Northeast Utilities	Yes	
OC Standards Review Group	Yes	
PacifiCorp	Yes	
Pepco Holdings, Inc	Yes	
PNGC Power (15 member utilities)	Yes	
Puget Sound Energy	Yes	
South Carolina Electric and Gas	Yes	
US Bureau of Reclamation	Yes	
Xcel Energy	Yes	
American Transmission Company	Yes	Errata comment: It is COM-002-3.
Response: The RCSDT thanks you for your comment. It is COM-002-3.		
ITC Holdings	Yes	None
Response: The RCSDT thanks you for your comment.		
Western Area Power	Yes	Suggested wording to add clarity: “A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority requiring action by the recipient to address an actual or expected

Organization	Yes or No	Question 4 Comment
Administration		Emergency.”
Response: The RCSDT thanks you for your comment. The RCSDT believes that your proposed revision does not materially add clarity to the proposed definition. Stakeholders generally concur with our proposed definition.		
Electric Market Policy	Yes	While I technically agree with the definition, I think it should be expanded to state that a directive that meets this definition must be clearly identified as such by the issuing BA, RC or TOP. In other words, action is mandatory on the recipient’s part only if the issuing party clearly states “this is a Reliability Directive”. In many organized markets, participants (particularly LSE, GOP and PSE) are required to follow instructions only if an Emergency is declared. This concept has historically been used throughout this industry although such use may have been implicit.
Response: The RCSDT thanks you for your comment. Your concerns are covered by the requirement R1 of COM-002 which states: R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. A requirement can not be imposed by a definition.		
ERCOT ISO	No	ERCOT ISO is concerned about defining Reliability Directive in terms of “expected” emergencies. Obviously all relevant entities will operate to avoid emergency situations. However, the term “expected” is vague and ambiguous, and, as such, is open to subjective interpretation thereby creating uncertainty for regulated entities. The definition should put entities on clear notice as to when they have to comply with the relevant requirements. The only way to provide that certainty is to establish a clear, identifiable trigger. To accomplish this, the definition should be limited to actual emergencies. Actual emergencies are specifically defined, not subjective, and lend themselves to demonstration of compliance in an audit. The definition of Emergency lends itself to alignment with specific circumstances that clearly indicate to a regulated entity that it must use Reliability Directives and follow the rules that apply to such directives – “expected emergencies” do not. The requirement should also be revised to clarify that Reliability Directives only apply to communications between separate entities in distinct locations and do not apply to employees of the same company communicating in person in the same location – e.g. a control center.
Response: The RCSDT thanks you for your comment. We have removed the words “actual or expected” from the definition. The way that COM-002 is crafted, it focuses on functional entity communication between and among functions. Face-to-face communication of Reliability Directives are subject to the requirements of COM-002 and can be measured for COM-002 by allowing Operator Logs as possible evidence to support compliance.		

5 Do you agree with the revisions to the Requirements in COM-002-3 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Summary Consideration: The bulk of the comments were about the VSL. The SDT agreed and has deleted the Severe VSL and moved the High VSL to Severe. We believe that there are two possible actions within the requirement and failure to perform either warrants a Severe VSL

Several commenters's expressed concern about three-part communication. The SDT believes that as drafted with the issue, repeat back, and acknowledgement three-part communication is covered.

There was one commenter suggesting the addition of the DP to the applicability The RCSdT notes that, per the Functional Model, a DP may "direct" an LSE to communicate requests for voluntary load curtailment and not reliability situations: Item 9 on page 47 of version 5 of the Functional Model: "Directs Load-Serving Entities to communicate requests for voluntary load curtailment." Furthermore, The RCSdT will forward this comment to the FMWG for their consideration in revising the language.

While outside of the scope of question five, one commenter suggested assigning the COM standard project to either the OPCPRC or RCSdT projects. The SDT explained the close coordination and collaboration between the two projects.

Organization	Yes or No	Question 5 Comment
Calpine Corporation		
North Carolina Municipal Power Agency #1		
Public Service Enterprise Group Companies		
We Energies		
Xcel Energy		

Organization	Yes or No	Question 5 Comment
Operating Personnel Communications Protocols SDT		The OPCP SDT offers the following Requirements language that addresses a Three-Part Communication Protocol. (It is comprised of two primary Requirements and contains a footnote): R_. Each Reliability Coordinator, Balancing Authority, Transmission Operator, and Transmission Owner that issues a Reliability Directive during verbal Operating Communications shall employ three-part Communication Protocol to ensure that the receiving party has repeated the communication, and shall verbally confirm the communication to be correct or reinitiate the communication until a correct response is given by the recipient. An exception is allowed for Reliability Directives that are issued via “All-Call”, during which the initiator shall ensure that all the receiving parties have positively acknowledged receipt of message rather than verbally repeating the message. [Violation Risk Factor: High][Time Horizon: Real-time Operations] R_. Each Reliability Coordinator, Balancing Authority, Transmission Owner, Transmission Operator, Generator Operator, Transmission Service Provider, Load Serving Entity, Distribution Provider and Purchasing-Selling Entity that receives a Reliability Directive during verbal Operating Communications shall employ three-part communication protocol [footnote 1] to repeat the communication back to the initiator and await verbal confirmation from the initiator. An exception is allowed for the recipient of an “All-Call” Reliability Directive to acknowledge receipt of the message and is responsible to contact initiator if message is not understood rather than verbally repeating the message. [Violation Risk Factor: High][Time Horizon: Real time] Footnote 1: A Communication Protocol where information is verbally stated by a party initiating a communication, the information is repeated back correctly (not necessarily verbatim) to the party that initiated the communication by the second party that received the communication, and the same information is verbally confirmed to be correct by the party who initiated the communication.
Response: The RCSDT thanks you for your comment. The RCSDT believes that we are addressing the Blackout Recommendation #26 regarding “tighten communications protocols, especially during alert and emergency situations” in our proposed definition and requirements for COM-002. We have not precluded issuance of Reliability Directives by non-verbal means and the requirements of proposed COM-002 would apply. Respecting the importance of Reliability Directives during Emergency situations, the RCSDT does not believe that exceptions to the clear, concise three part communications indicated in COM-002 are appropriate regardless of the medium used to communicate. In addition, the current format of the requirements provides more effective way to measure compliance.		
Ameren	No	(1) As stated in #4 above, the definition of Reliability Directive is not clear. (2) The VSLs for R3 appear to have some redundancy. (3) Also in R3, the phrase regarding R2 should be changed to “(as described in R2, above)”
Response: The RCSDT thanks you for your comment. 1) Please see response to question 4.		

Organization	Yes or No	Question 5 Comment
2) The RCSDT concurs. We have deleted the Severe VSL and moved the High VSL to the Severe category. 3) We have revised the phrase to be consistent with the verbiage in R2 as follows: “per Requirement R2” which meets the intent of your comment “as described”.		
Southwest Power Pool	No	1) By NERC’s Functional Model the RC, BA, TOP, and DP issues directives. (DP to LSE)COM-002-3 R2... the recipient of a Reliability Directive issued per Requirement R1, shall repeat the intent of the Reliability Directive back to the issuer of the Reliability Directive. 2) COM-003-1 R5... shall use Three-part Communications when issuing a directive during verbal Interoperability Communications. Implementation Plan for COM-002-3 states R2 will stay, for COM-003-1 states that COM_002-3 R2 will go away. The two requirements don’t agree with each other, COM-002-3 R2 wants the Intent repeated back, where COM-003-1 R5 per the Three-part Communication definition “...the information is repeated back correctly to the party that initiated the communication”.
Response: The RCSDT thanks you for your comment. 1) The RCSDT notes that, per the Functional Model, a DP may “direct” an LSE to communicate requests for voluntary load curtailment and not reliability situations: Item 9 on page 47 of version 5 of the Functional Model: “Directs Load-Serving Entities to communicate requests for voluntary load curtailment.” The RCSDT will forward this comment to the FMWG for their consideration in revising the language. 2) The RCSDT believes that we are addressing the Blackout Recommendation #26 regarding “tighten communications protocols, especially during alert and emergency situations” in our proposed definition and requirements for COM-002. The RCSDT feels that the concept of a Reliability Directive is an important tool for RC, BA and TOP to maintain reliability and that the revisions are consistent with parts of the directives in FERC Order 693. The work of the RCSDT along with the OPCPSDT, as currently recognized, will cover the original intent of COM-002 and still provide a “defense in depth strategy” as suggested by the NERC comment. Stakeholder requests and consensus appears to have been achieved with respect to the definition of Reliability Directive and the requirements that the RCSDT have developed for COM-002. This will further the efforts of the OCPC SDT in achieving stakeholder consensus for their proposed requirements in COM-003. Merging of the two standards is a work in progress and will ultimately be decided by stakeholder consensus.		
Central Lincoln	No	Consider the following example. Director calls Directee. Telephone is answered by the Directee’s receptionist. Director states that he has a Reliability Directive, and proceeds to deliver it. Receptionist manages to parrot the directive, but has no clue what is being asked. Director confirms receptionist has parroted the directive accurately. Both parties have met the requirements (avoiding a high risk, severe violation), but the three way conversation only wasted the time of both parties and delayed the performance of the directive. The Director should be required to attempt to reach someone with the authority and understanding needed to carry out the

Organization	Yes or No	Question 5 Comment
		directive.
Response: The RCSDT thanks you for your comment. The requirements of the standard do not consider how staffing at a particular functional entity is achieved. This is covered in the PER standards. It is incumbent on the registered entity to comply with the requirements of the COM-002 standard as well as all other requirements, some of which will likely be violated in the example above.		
CECD	No	For R3, the drafting team should clarify that if a directive is reissued due to a misunderstanding the receiving party should repeat the reissued directive so that the RC, BA or TOP can verify that the directive is understood correctly.
Response: The RCSDT thanks you for your comment. The RCSDT believes that this situation is covered by R2.		
Duke Energy	No	- o It is not clear whether Requirements R2 and R3 are intended to apply to other than verbal Reliability Directives. We have difficulty envisioning how “repeat back” and “acknowledge the response” would be expected to work with electronic communications. - o Delete the phrase “issued per Requirement R1” from R2, since R1 should be deleted per our Comment #4 above. - o Revise R3 as follows, to conform to our proposed revised definition in Comment #4 above: “Each Reliability Coordinator, Transmission Operator, and Balancing Authority that initiates a Reliability Directive shall acknowledge the response from the recipient as correct, or reissue the Reliability Directive to resolve any misunderstandings.” - o We believe that only 2 VSLs are appropriate for R3. o Lower - The responsible entity issued a Reliability Directive, but did not acknowledge that the recipient repeated the intent of the Reliability Directive correctly. - o Severe - The responsible entity issued a Reliability Directive and failed to reissue the Reliability Directive to resolve any misunderstandings when the intent of the Reliability Directive was not repeated correctly by the recipient.
Response: The RCSDT thanks you for your comment. The requirements of COM-002 do not preclude non-verbal issuance of directives. It is incumbent on the entity to ensure compliance with the requirements R2: We have not retired R1 (see response to Q4) and therefore do not feel this is an appropriate revision. R3: See response to question 4. The RCSDT believes that R3 is appropriate as written. VSL: The RCSDT has deleted the Severe VSL and moved the High VSL to Severe. We believe that there are two possible actions within the		

Organization	Yes or No	Question 5 Comment
requirement and failure to perform either warrants a Severe VSL.		
Exelon	No	Please clarify R2 to 'repeat back' a Directive; the definition of Directive does not distinguish between verbal and other methods of communication. Is an electronic response to a verbal or non-verbal Directive allowed?
Response: The RCSDT thanks you for your comment. The requirements of COM-002 do not preclude non-verbal issuance of directives. It is incumbent on the entity to ensure compliance with the requirements.		
Manitoba Hydro	No	R2 requires "recipient to repeat back" and R3 requires "RC, TOP, BA to acknowledge". This procedure is NOT identified as Three Part Communication which in fact is. Three Part Communication should be a common theme for all entities, including RC's. So why not use the same or similar Requirement as used in COM-002-2 R2 Three-Part Communication.
Response: The RCSDT thanks you for your comment. The concept of three part communication is in existing COM-002-2, R2 and a definition for the term is being proposed by the OCPD SDT. The RCSDT feels that the concept of a Reliability Directive is a unique and important tool for RC, BA and TOP to maintain reliability that is separate from that effort. The requirements of COM-002 are explicit for Reliability Directives and are consistent with parts of the directives in FERC Order 693. Stakeholder requests and consensus appears to have been achieved with respect to the definition of Reliability Directive and the requirements that the RCSDT have developed for COM-002. This will further the efforts of the OCPD SDT in achieving stakeholder consensus for their proposed requirements in COM-003. Merging of the two standards is a work in progress and will ultimately be decided by stakeholder consensus.		
E.ON U.S.	No	See comment to question 8.
Response: The RCSDT thanks you for your comment. Please see response to question 8.		
NERC	No	See response to Question 4.
Response: The RCSDT thanks you for your comment. Please see response to question 4.		
PPL	No	Suggest removing Purchasing-Selling Entity from the standard as a PSE does not receive Reliability Directives from a BA, RC, or TOP.
Response: The RCSDT thanks you for your comment. Prior stakeholder comments (during previous postings of this standard) indicated that PSE should be an applicable entity.		

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Organization	Yes or No	Question 5 Comment
Independent Electricity System Operator	No	The High and Severe VSLs for R3 appear to be the same. We suggest to remove the High VSL and change the Severe VSL to: "The responsible entity issued a Reliability Directive, but did not acknowledge that the recipient in R2 repeated the intent of the Reliability Directive correctly OR resolve any misunderstandings when the intent of the Reliability Directive was not repeated correctly by the recipient."
Response: The RCSDT thanks you for your comment. We have deleted the Severe VSL and moved the High VSL to the Severe category. We believe this meets the intent of your comment.		
South Carolina Electric and Gas	No	The SDT needs to evaluate the redundancy associated with COM-003-1 Req 5 and COM-002-3 Req 2&3.
Response: The RCSDT thanks you for your comment. The RSDT does not believe that there is redundancy between the standards. COM-002 relates only to Reliability Directives while COM-003 deals with other forms of communication.		
Hydro-Québec TransEnergie (HQT)	No	The VSLs for R3 appear to have some redundancy. The Severe VSL and the second condition in the High VSL appear to be similar or the same. We suggest remove the High VSL, and revise the Severe VSL to:"The responsible entity issued a Reliability Directive, but did not acknowledge that the recipient in R2 repeated the intent of the Reliability Directive correctly OR resolve any misunderstandings when the intent of the Reliability Directive was not repeated correctly by the recipient."
Northeast Power Coordinating Council	No	The VSLs for R3 appear to have some redundancy. The Severe VSL and the second condition in the High VSL appear to be similar or the same. Suggest removing the High VSL, and revise the Severe VSL to:"The responsible entity issued a Reliability Directive, but did not acknowledge that the recipient in R2 repeated the intent of the Reliability Directive correctly OR resolve any misunderstandings when the intent of the Reliability Directive was not repeated correctly by the recipient."
Response: The RCSDT thanks you for your comment. We have deleted the Severe VSL and moved the High VSL to the Severe category. We believe this meets the intent of your comment.		
PNGC Power (15 member utilities)	No	There is a chance that a reliability directive given to a smaller entity will be taken by a receptionist or answering service. Requirement R2 should be more specific about contacting an operational authority directly to relay reliability directives.
Response: The RCSDT thanks you for your comment. The requirements of the standard do not consider how staffing at a particular functional entity is achieved. This is covered in the PER standards. It is incumbent on the registered entity to comply with the requirements of the COM-002 standard as well as all other requirements, some of which will likely be violated in the example above.		

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

Organization	Yes or No	Question 5 Comment
Midwest ISO Standards Collaborators	No	We agree with most of this standard and the apparent intent. However, there are some specific issues. For instance, measurement of compliance to R1 could be challenging. As the VSL is written, it would appear the compliance auditor could judge if a Reliability Directive should have been issued. The VSL language that is problematic is “The responsible entity that required actions to be executed”. Who determines that actions were required? One could argue that failure to identify a communication as a Reliability Directive means that actions weren’t required but it is doubtful the compliance authorities would take this approach. Thus, there would appear to be great judgment left to the compliance auditor in determining if a Reliability Directive should have been issued. The combination of the COM-002-3 standard and the definition of Reliability directive do not clearly specify that the communication is verbal and between only two responsible entities. Otherwise, the communication could be considered a blast call, written correspondence or conversation between operators within the same responsible entity. We have offered proposed modifications to the definition of Reliability Directive in Q5 to solve this issue. Alternatively, the issue could be addressed by modifying the requirements. The VSLs for R3 appear to have some redundancy. The Severe VSL and the second condition in the High VSL appear to be similar or the same.
NERC Standards Review Subcommittee	No	We agree with most of this standard and the apparent intent. However, there are some specific issues. For instance, measurement of compliance to R1 could be challenging. As the VSL is written, it would appear the compliance auditor could judge if a Reliability Directive should have been issued. The VSL language that is problematic is “The responsible entity that required actions to be executed”. Who determines that actions were required? One could argue that failure to identify a communication as a Reliability Directive means that actions weren’t required but it is doubtful the compliance authorities would take this approach. Thus, there would appear to be great judgment left to the compliance auditor in determining if a Reliability Directive should have been issued. The combination of the COM-002-3 standard and the definition of Reliability directive do not clearly specify that the communication is verbal and between only two responsible entities. Otherwise, the communication could be considered a blast call, written correspondence or conversation between operators within the same responsible entity. We have offered proposed modifications to the definition of Reliability Directive in Q5 to solve this issue. Alternatively, the issue could be addressed by modifying the requirements. The VSLs for R3 appear to have some redundancy. The Severe VSL and the second condition in the High VSL appear to be similar or the same.
Response: The RCSDT thanks you for your comment. R1: The VSL is a compliance tool that is ONLY used after a violation of the requirement has been determined. COM-002 does not provide guidance on when to issue a Reliability Directive, only that, when they issue Reliability Directives, they comply with the requirements of COM-002. Proposed IRO-		

Organization	Yes or No	Question 5 Comment
001-2, R1 covers the issue of conditions that merit issuing a Reliability Directive. Blast Call: The intent of the definition is to not preclude text or other forms of communication for issuing Reliability Directives. However, entities are still obligated to comply with the requirements of COM-002. VSL: We have deleted the Severe VSL and moved the High VSL to the Severe category. We believe this meets the intent of your comment.		
FirstEnergy	No	We believe that this standard should be either handed to the OPCPSDT (Project 2007-02) or the OPCPSDT should hand over the COM-003-1 standard to this RCSDT (Project 2006-06); and then COM-002 and COM-003 should be merged. For further explanation of our suggestions, see our comments in Question #8 .
Response: The RCSDT thanks you for your comment. The RCSDT feels that the concept of a Reliability Directive is an important tool for RC, BA and TOP to maintain reliability and that the revisions are consistent with parts of the directives in FERC Order 693. The work of the RCSDT along with the OPCPSDT, as currently recognized, will cover the original intent of COM-002 and still provide a “defense in depth strategy” as suggested by the NERC comment. Stakeholder requests and consensus appears to have been achieved with respect to the definition of Reliability Directive and the requirements that the RCSDT have developed for COM-002. This will further the efforts of the OCPC SDT in achieving stakeholder consensus for their proposed requirements in COM-003. Merging of the two standards is a work in progress and will ultimately be decided by stakeholder consensus.		
American Transmission Company	Yes	
Bonneville Power Administration	Yes	
Electric Market Policy	Yes	
Florida Municipal Power Agency and Some Members	Yes	
IRC Standards Review Committee	Yes	
ISO New England Inc	Yes	
OC Standards Review Group	Yes	
PacifiCorp	Yes	

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Organization	Yes or No	Question 5 Comment
Pepco Holdings, Inc	Yes	
Southern Company Services	Yes	
US Bureau of Reclamation	Yes	
Western Area Power Administration	Yes	
Western Electricity Coordinating Council	Yes	
Puget Sound Energy	No	Under the current proposed language of R2, it appears possible that a recipient of a Reliability Directive not identified as such may still be held responsible for failing to comply with R2, because the word “per” has several meanings. While those meanings do include “in accordance with”, it would be clearer to simply use that phrase. As a result, recommend the replacement of the phrase “issued per” with “identified as such in accordance with”.
Response: The RCSDT thanks you for your comment. The RCSDT believes that the suggested revision does not provide additional clarity to the requirements.		
ITC Holdings	Yes	None
Northeast Utilities	Yes	Support the intent of the changes. However, it is unclear if the mechanics of R1 require the initiator to actually state “This is a Reliability Directive ...”.
Response: The RCSDT thanks you for your comment. The RCSDT intends for such a statement to be made. Using that exact verbiage in a requirement is too prescriptive and we leave the exact language up to the issuer as long as they identify it as a Reliability Directive.		
American Electric Power	Yes	Why is the term “three part communications” not used in this set of requirements?
Response: The RCSDT thanks you for your comment. While the requirements embody three part communications, the RCSDT believes it is clearer to have explicit requirements for each part of the process that requires a specific action.		
ERCOT ISO	No	R1: ERCOT ISO recommends that the requirement be revised to simply state that the entity has to identify

Organization	Yes or No	Question 5 Comment
		when it is a reliability directive, such that it reads as follows: R1. When applicable, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i> The deleted language introduces subjectivity and is unnecessary. The use of the defined term implicitly determines when Reliability Directives are issued and it is unnecessary to impose the condition precedent of identifying an action as Reliability Directive. This is unnecessary and just creates confusion. R2: ERCOT ISO recommends removal of “the intent” such that it reads as follows: R2. Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat the Reliability Directive back to the issuer of the Reliability Directive. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i> ERCOT ISO believes using “intent” in this requirement was intended to mitigate the practical fact that it is difficult to repeat, verbatim, a directive. However, use of the word intent could introduce confusion. A directive will require certain actions to accomplish a specific purpose or to solve a specific problem. Thus, the intent of a directive has two components to the intent; the first is the specific actions to be taken and the second is the underlying reason for those actions. The recipient will obviously be privy to the former, but perhaps not the latter. To remove any ambiguity as to whether intent means the actions or the issue to be solved by such actions, the word should be removed. ERCOT believes there is little risk that an auditor will issue a violation if a repeated directive is not verbatim, but reflects the actions to be taken pursuant to the directive. Further, ERCOT ISO recommends working closely with the Operating Personnel Communication Protocol SDT to address all-calls as exceptions. It is practically unreasonable to require multiple recipients on the same communication to repeat the directive back. In fact, it is counterproductive because the time it takes to do that would delay the recipients from taking the needed reliability action(s). ERCOT recommends the following language to address “all-calls”: (COM-003) R2. Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive shall repeat the Reliability Directive back to the issuer of the Reliability Directive. An exception is allowed for Reliability Directives that are issued via “All-Call” communications. For All-Calls, the entity issuing the directive shall require recipients to acknowledge receipt of message.

Organization	Yes or No	Question 5 Comment
		R3: ERCOT ISO recommends that R3 be combined with R2. Regardless of whether it is combined with R2, the identification precondition should be removed such that the requirement reads as follows: R3. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a Reliability Directive shall acknowledge the response from the recipient of the Reliability Directive in R2 as correct or reissue the Reliability Directive to resolve any misunderstandings. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i> The identification pre-condition is unnecessary – again, the defined term is self-executing in terms of situational application. Imposition of this superfluous language merely creates the potential for confusion. M1: ERCOT ISO recommends removing “required actions to be taken” language for the same reason this pre-condition does not make sense in the requirement, as described above. M3: ERCOT ISO recommends that “Directive” be replaced with “Reliability Directive” because Directive is not the full defined term.
Response: The RCSDT thanks you for your comment. R1: The RCSDT believes that the requirement, as written is clear and disagrees that it introduces subjectivity. COM-002 does not provide guidance on when to issue a Reliability Directive, only that, when they issue Reliability Directives, they comply with the requirements of COM-002. We feel that adding the phrase “When applicable” adds subjectivity to the requirement. R2: Without the words “the intent”, the requirement could be interpreted to mean a verbatim repeat of the Reliability Directive. The RCSDT does not intend for this to be the case and believes that the requirement, as written, is clear and provides sufficient flexibility to meet the requirement. The requirements of COM-002 do not preclude non-verbal (e.g. “all calls”) issuance of directives regardless of the medium. It is incumbent on the entity to ensure compliance with the requirements. The RCSDT feels that the concept of a Reliability Directive is an important tool for RC, BA and TOP to maintain reliability and that the revisions are consistent with parts of the directives in FERC Order 693. The work of the RCSDT along with the OPCSDT, as currently recognized, will cover the original intent of COM-002 and still provide a “defense in depth strategy” as suggested by the NERC comment. R3: The RCSDT believes that the steps in R2 and R3 are separate and distinct actions that require separate requirements. Otherwise, we would have compound requirements. We concur with your suggested edit to R3. M1: We did not make the revision to R1 and therefore M1 is sufficient as written. M3: We have revised M3 as suggested and to conform to revised R3.		

- 6 Do you agree with the use of the defined term “Reliability Directive” in revisions to the Requirements in IRO-001-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.**

Summary Consideration: The comments regarding question six ranged from small entities being excluded to if regulatory or statutory requirements covers NERC standards. The SDT addressed these by noting registration is not in the SDT scope and NERC’s general council should be contacted for regulatory issues.

A few commenter’s expressed concern with the VSL for R2 and one suggested the words "per Requirement 2," should be added. The SDT believes the phrase “per Requirement 2” is not necessary as a VSL is only applied AFTER a compliance violation is determined.

Value added comments such as a concern of the use of the word “threat” as it can be defined as cyber-related and suggested replacing “Operating Personnel” with “System Operator” were also made. The SDT concurred and removed the word “threat” and replaced it with “condition” and also made the revision to System Operator.

There were numerous comments regarding the definition of Reliability Directive with multiple wording suggestions. While slightly out of scope for question six, the SDT expected and viewed these as attempting to reach middle ground.

Some commenter’s expressed concern over clarify that the RC has three separate actions. The RC can act, direct others to act, or issue Reliability Directives. The SDT modified R1 to read: " Each Reliability Coordinator shall take actions or direct actions, which could include issuing Reliability Directives, of Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts."

Note: Based on discussions with FERC staff, the SDT agreed to make the following changes:

IRO-001-2 Requirements R4, R5 and associated Measures and VSLs are moved to IRO-005-4

IRO-001-2 Requirements R6, R7 and associated Measures and VSLs are moved to IRO-002-2

Organization	Yes or No	Question 6 Comment
Calpine Corporation		

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

Organization	Yes or No	Question 6 Comment
Public Service Enterprise Group Companies		
Operating Personnel Communications Protocols SDT		No Comment
FirstEnergy	No	Although we agree that a clear definition of Reliability Directive should be included in IRO-001-2, the definition should be revised per our comments in Question #8.
Response: The RCSDT thanks you for your comment. Please see response to question 8.		
North Carolina Municipal Power Agency #1	No	For IRO-001-2, the VSL for R2 should retain the words "per Requirement 2," because the requirement itself provides for exceptions to when it is permissible for a directive not to be followed. Requirement 3 then addresses the required action an entity must take in a case where these exceptions apply. Without these words, it appears that a VSL of "Severe" may be assigned if a directive isn't followed under any circumstances.
Response: The RCSDT thanks you for your comment. The phrase "per Requirement 2" is not necessary as a VSL is only applied AFTER a compliance violation is determined. The requirement provides the exceptions and compliance will be judged based on this.		
NERC	No	In principle, NERC staff disagrees with the necessity of defining a term "Reliability Directive." However, the principle involved in the standard is valid. The standard needs to ensure that if the Reliability Coordinator directs an entity to take action that results in an adverse reliability impact, that entity has a chance to raise valid objection to that action. Additional clarification is needed to determine if regulatory or statutory requirements covers NERC standards. One possible solution would be to modify R3 from "its inability to perform" to "its inability or concern to perform." Furthermore, in R4 and R5 the RC is expected to identify "threats" and notify all impacted parties. We have concerns that "threat" can be defined as cyber-related. Was the standard intended to cover all anticipated threats, or just transmission/operating issues? R6 Since Operating Personnel is not a NERC defined term, we suggest replacing "Operating Personnel" with "System Operator."
Response: The RCSDT thanks you for your comment.		

Organization	Yes or No	Question 6 Comment
“Concern”: We believe that your concern is covered by the “unless such actions would violate safety, equipment, or regulatory or statutory requirements” statement in R2. Regulatory: The RCSDT suggests that NERC staff seek input from NERC’s General Counsel in regards to this issue. R4 and R5: The word threat was not intended to be cyber related. The CIP standards cover cyber “threats”. To that end, we have removed the word “threat” and replaced it with “condition”. R4, R5 and associated Measures and VSLs are moved to IRO-005-4. R6: We concur and have made this revision.		
OC Standards Review Group	No	In R1, we suggest adding “direct” in the sentence to read: “Each Reliability Coordinator shall act, “direct” or issue Reliability Directives....” During adverse reliability impact events, system operators should not be bound by a cumbersome three part communications regime that could prevent prompt responses to the event. The suggested change would allow for non reliability directives to be issued to correct adverse reliability impacts.
Response: The RCSDT thanks you for your comment. The RCSDT agrees in principle with adding “direct” to the requirement. In addition, the requirements of COM-002 should be complied with, especially in such situations. We have revised R1 to state: Each Reliability Coordinator shall take actions or direct actions, which could include issuing Reliability Directives, of Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. To address comments received on R1, we have also revised the Purpose Statement to: To establish the capability and authority of Reliability Coordinators to direct other entities to prevent Adverse Reliability Impacts to the Bulk Electric System Conforming revisions to M1 and the VSLs for R1 were also made.		
Southern Company Services	No	Including the requirement of issuing directives every time an action is required by an entity assumes that entities cannot work in a spirit of cooperation to maintain the reliability of the Bulk Electric System.
Response: The RCSDT thanks you for your comment. To address your concern, we have revised R1 to state: “Each Reliability Coordinator shall take actions or direct actions, which could include issuing Reliability Directives, of Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. To address comments received on R1, we have also revised the Purpose Statement to: To establish the capability and authority of Reliability Coordinators to direct other entities to prevent Adverse Reliability Impacts to the Bulk Electric System		

Organization	Yes or No	Question 6 Comment
We Energies	No	IRO-001-2 R1 opens the door for determining if the RC should have issued a Reliability Directive to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts which goes beyond the intention of Emergency. The RC should have any and all options to achieve the required actions, one of which is a Reliability Directive. Agreed if the RC issues a Reliability Directive it needs to be followed or notified why it can't be followed. In IRO-009"the Reliability Coordinator shall have one or more Operating Processes, Procedures, or Plans that identify actions it shall take or actions it shall direct others to take (up to and including load shedding) to mitigate the magnitude and duration of" Recommend "Each Reliability Coordinator, in it's sole discretion, shall take action independently or by others or issue Reliability Directives for actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts. "In addition the measures assume the RC only works through others, and others only act under Directive from the RC and do not allow for operational data to be used to show action was taken like SCADA logs, or system parameter records for any entity. The Data Retention is excessive, RC, BA, TOP are on a 3 yr audit cycle, others on a 6yr cycle this is way too long, recommend one full calendar year plus the current year.
Response: The RCSDT thanks you for your comment. To address your concern, we have revised R1 to state: Each Reliability Coordinator shall take actions or direct actions, which could include issuing Reliability Directives, of Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. To address comments received on R1, we have also revised the Purpose Statement to: To establish the capability and authority of Reliability Coordinators to direct other entities to prevent Adverse Reliability Impacts to the Bulk Electric System - o We have revised the data retention section to: The Reliability Coordinator shall retain its evidence for 90 days for Requirements R1 and Measures M1. - o The Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider, Transmission Service Provider, Purchasing-Selling Entity or Load Serving Entity shall retain its evidence for 90 days for Requirements R2 and R3, Measures M2 and M3.		

Organization	Yes or No	Question 6 Comment
American Electric Power	No	Please refer to our response to question #4.
Hydro-Québec TransEnergie (HQT)	No	Please see our proposed wording change under Q4.
Independent Electricity System Operator	No	Please see our proposed wording change under Q4.
IRC Standards Review Committee	No	Please see our proposed wording change under Q4.
Northeast Power Coordinating Council	No	Please see our proposed wording change under Question 4.
Response: The RCSDT thanks you for your comment. Please see response to Question 4.		
E.ON U.S.	No	See comments to question 4 and question 8.
Response: The RCSDT thanks you for your comment. Please see response to Question 4 and Question 8.		
Ameren	No	See response to #4.
Electric Market Policy	No	See response to Q4
Response: The RCSDT thanks you for your comment. Please see response to Question 4.		
PNGC Power (15 member utilities)	No	Small non 24/7 entities in WECC should be excluded from these requirements. Not doing so will create a financial burden for little discernable effect.
Response: The RCSDT thanks you for your comment. It is beyond the scope of the RCSDT to determine registration or compliance issues.		
Manitoba Hydro	No	The use of this definition in this requirement appears appropriate at this time, but the definition of Reliability Directive issue remain the same as identified on Question 4 of this document.

Organization	Yes or No	Question 6 Comment
Response: The RCSDT thanks you for your comment. Please see response to question 4.		
Central Lincoln	No	These requirements should be waived in the WECC region, where the RC has stated they will not be interacting with most of the registered entities. http://www.bpa.gov/corporate/business/reliability/Docs/2007/PNSC_RE_Data_Letter_2_070723.pdf
Response: The RCSDT thanks you for your comment. It is beyond the scope of the RCSDT to determine registration or compliance issues.		
US Bureau of Reclamation	No	This change is problematic in that any automatic protective element operation that trips a BES element could be construed to be an Adverse Reliability Impact. The modification eliminated the phrase “that affects a widespread area of the Interconnection” which clarified the scope of “uncontrolled separation”. We would need the definition to be adjusted to delete “uncontrolled separation” as it is included in the definition of Cascading.
Response: The RCSDT thanks you for your comment. We concur with your comment and have removed “uncontrolled separation” from the proposed definition revision.		
ISO New England Inc	No	We believe that the Reliability Directive definition should be: “A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where action by the recipient is necessary to address an actual or expected emergency and the RC, TOP or BA operator clearly identifies in the communication that this is a Reliability Directive.”
Response: The RCSDT thanks you for your comment. The RCSDT believes that your suggested revision would impose a requirement within the definition.		
Western Electricity Coordinating Council	No	We do not agree with the definition (see above question 4) but it does clear up when a directive is required.
Response: The RCSDT thanks you for your comment. Please see response to question 4.		
Midwest ISO Standards Collaborators	No	We largely agree with the use of the Reliability Directive term but have some suggested some refinements in the previous questions to the definition and requirements.
NERC Standards Review Subcommittee	No	We largely agree with the use of the Reliability Directive term but have some suggested some refinements in the previous questions to the definition and requirements.

Organization	Yes or No	Question 6 Comment
Response: The RCSDT thanks you for your comment. Please see responses to questions 4 and 5.		
Duke Energy	No	We propose a revised definition of the term “Reliability Directive” in our Comment #4 above. Requirement R1 should be reworded to clarify that the RC has three separate actions. The RC can act, direct others to act, or issue Reliability Directives. Requirements R2 and R3 should be revised to include the fact that the listed entities must comply with RC directions as well as Reliability Directives, or inform the RC of their inability to comply. Measures and VSLs should also be revised accordingly.
Response: The RCSDT thanks you for your comment. Definition: Please see response to question 4 with respect to the definition. R1: To address your comment as well as the comments of other stakeholders, we have revised R1 to state: Each Reliability Coordinator shall take actions or direct actions, which could include issuing Reliability Directives, of Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts.. We have also revised the Purpose Statement to: To establish the capability and authority of Reliability Coordinators to direct other entities to prevent Adverse Reliability Impacts to the Bulk Electric System Conforming revisions to M1 and the VSLs for R1 were also made. R2 and R3: The RCSDT believes that revised R2 and R3 now satisfy your requested revision.		
American Transmission Company	Yes	
Bonneville Power Administration	Yes	
CECD	Yes	
Exelon	Yes	
Florida Municipal Power Agency	Yes	

Organization	Yes or No	Question 6 Comment
and Some Members		
Northeast Utilities	Yes	
PacifiCorp	Yes	
PPL	Yes	
Puget Sound Energy	Yes	
South Carolina Electric and Gas	Yes	
Southwest Power Pool	Yes	
Western Area Power Administration	Yes	
Xcel Energy	Yes	
ITC Holdings	Yes	None
Pepco Holdings, Inc	Yes	Requirement R1 should recognize the RC's option to "direct others to act"
Response: The RCSDT thanks you for your comment. R1: To address your comment as well as the comments of other stakeholders, we have revised R1 to state: Each Reliability Coordinator shall take actions or direct actions, which could include issuing Reliability Directives, of Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. We have also revised the Purpose Statement to: To establish the capability and authority of Reliability Coordinators to direct other entities to prevent Adverse Reliability Impacts to the Bulk Electric System Conforming revisions to M1 and the VSLs for R1 were also made.		
ERCOT ISO	No	As an initial matter, ERCOT ISO disagrees with the definition of Reliability Directive - See response to Question 4.

Organization	Yes or No	Question 6 Comment
		With respect to the use of Reliability Directive in IRO-001-2, ERCOT ISO does not necessarily take issue with using the term in this context. However, by doing so, the Drafting Team should consider whether doing so effectively defines Emergency in terms of the specific conditions that define Adverse Reliability Impact (i.e. instability, uncontrolled separation or cascading), because Reliability Directives, by definition, are only issued during emergencies, and pursuant to R1 of IRO-001-2, the relevant entities issue a Reliability Directive for instances that result in Adverse Reliability Impacts. Accordingly, use of Reliability Directive in this Standard may effectively revise the definition of Emergency (although it is arguable that the relevant specific conditions are clearly Emergency conditions), and ERCOT ISO questions whether this is appropriate. It may be advisable to not use the term here or to revise the definition to explicitly include these conditions. In addition, ERCOT ISO recommends the following non-substantive revisions to R1, R2 and R3. <u>R1</u> SDT PROPOSED LANGUAGE R1. Each Reliability Coordinator shall act or issue Reliability Directives for actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations and Same Day Operations]</i> ERCOT PROPOSED LANGUAGE R1. Each Reliability Coordinator shall act to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts. RC actions pursuant to this requirement may include the issuance of Reliability Directives to Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations and Same Day Operations]</i> <u>R2</u> SDT PROPOSED LANGUAGE R2. Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity shall comply with its Reliability Coordinator's Reliability Directives unless such actions would violate safety, equipment, or regulatory or statutory requirements. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations]</i>

Organization	Yes or No	Question 6 Comment
		ERCOT PROPOSED LANGUAGE R2. Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity shall comply with Reliability Directives issued pursuant to R1 unless such actions would violate safety, equipment, or regulatory or statutory requirements. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations]</i> <u>R3</u> SDT PROPOSED LANGUAGE R3. Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity shall inform its Reliability Coordinator upon recognition of its inability to perform an issued Reliability Directive. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations]</i> ERCOT PROPOSED LANGUAGE R3. Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity shall inform its Reliability Coordinator if it cannot perform a Reliability Directive because it would violate safety, equipment, or regulatory or statutory requirements. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations]</i>
Response: The RCSDT thanks you for your comment. Please see responses to your comments on questions 4 and 5. Definitions: An Emergency is a system condition or event. Adverse Reliability Impact is the result of an Emergency or some other condition or event. To address your comment as well as the comments of other stakeholders, we have revised R1 to state: Each Reliability Coordinator shall take actions or direct actions, which could include issuing Reliability Directives, of Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. We have also revised the Purpose Statement to: To establish the capability and authority of Reliability Coordinators to direct other entities to prevent Adverse Reliability Impacts to the Bulk Electric System Conforming revisions to M1 and the VSLs for R1 were also made. R1, R2, R3: The RCSDT thanks you for your suggested revisions to R1, R2 and R3. Revised wording best reflects stakeholder consensus. The RCSDT developed wording of the requirements provides clear direction for actions of applicable entities and to provide clarity regarding compliance.		

Do you agree with the revisions to the Requirements in IRO-014-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Summary Consideration: Several commenters made suggestions regarding R2. The original requirement was designed to accomplish in one requirement what is proposed by the commenters as three procedural requirements. R2 is worded to focus on defining what a “compliant plan” is. In the current requirement a “proposed plan” is not the same as a “compliant plan”.

The SDT viewed what the commenters are suggesting as follows:

- **The initiating RC would submit its “proposed plan” to the other RCs**
- **The receiving RCs would provide the initiating RC with their responses indicating whether or not they agree with the proposed roles/ actions offered by the initiating RC**
- **If one or more RCs do not agree with the roles/ actions, then the initiating RC would be required to offer an alternative proposal (and go back to the first bullet)**
- **When all RCs acknowledge that the proposed roles/ actions in the revised “proposed plan” are acceptable, then and only then would the “proposed plan” become a “compliant plan”**

A closer reading of the current R2 would show the current R2 accomplishes the exact same result but does so without interjecting the need for documenting the intervening processes. The SDT does not see the need to document why each proposal was or was not accepted; nor does the SDT see the need for document the negotiations that are involved in getting to “an agreed to plan”. For example the comments’ subrequirement to show the RC submitted its plan would require a paper trail for the request; followed by a paper trail for the responses, followed by more paperwork if the RCs are not in agreement. In the end, the only action that matters (in both the SDT version and in the commenters alternative version) is a plan that works, and a plan that if others are involved must have their concurrence that those others will participate.

R2 does not impose a requirement to get agreements; what R2 does is to require that a “compliant plan” be developed. A proposed plan does not solve problems. That proposed plan is NOT compliant with R2 if it only assumes that other RC will effect the actions in the proposal; neither is it compliant if the proposed actions are not acceptable to the other RCs who are required to act. To be compliant the initiating RC must either have the concurrence (i.e. agreement) of the other RCs for their respective part(s) in the proposed plans OR the plan must not include those RCs.

R2 says to be compliant the other RC must agree with the “proposed plan” before that “proposed plan” is acceptable as a “compliant plan”. Having a plan that requires someone else to do an action, but that other entity will not effect that action, will not resolve the problem at hand. Further having documentation that someone refuses to participate in the proposed plan does nothing to solve the problem at hand.

Organization	Yes or No	Question 7 Comment
Ameren		
American Transmission Company		
Calpine Corporation		
CECD		
E.ON U.S.		
Exelon		
North Carolina Municipal Power Agency #1		
Northeast Utilities		
Public Service Enterprise Group Companies		
Puget Sound Energy	Yes	
We Energies		
Operating Personnel Communications Protocols SDT		No Comment
PacifiCorp		No comment
Manitoba Hydro	No	

Organization	Yes or No	Question 7 Comment
Hydro-Québec TransEnergie (HQT)	No	R2 appropriately requires the RC experiencing the Adverse Reliability Impact to distribute its Operating Procedure, Process or Plan to other RCs required to take action. However, Subrequirement R2.1 places a burden to the initiating RC for actions over which it may not have any control, viz. agreeing to the procedures, process or plan by the receiving RCs that are required to take actions. We believe there should be requirements for: a. The initiating RC to seek agreements by the other RCs that are required to take actions; b. The receiving RCs to indicate agreement, or otherwise with a reason; and; c. The initiating RC to revise the procedures, process or plan. These requirements would place the needed responsibilities to the appropriate entities. If the SDT agrees with revising R2 as suggested, then other requirements that may be affected by this change may need to be revised accordingly. (ii) There is an extra “or” in the R8 clause: “unless such actions would violate safety, equipment, or regulatory or statutory requirements”.
IRC Standards Review Committee	No	(i) R2 appropriately requires the RC experiencing the Adverse Reliability Impact to distribute its Operating Procedure, Process or Plan to other RCs required to take action. However, Subrequirements R2.1 places a burden to the initiating RC for actions over which it may not have any control, viz. agreeing to the procedures, process or plan by the receiving RCs that are required to take actions. We believe there should be requirements for: a. The initiating RC to seek agreements by the other RCs that are required to take actions; b. The receiving RCs to indicate agreement, or otherwise with a reason; and; c. The initiating RC to revise the procedures, process or plan. These requirements would place the needed responsibilities to the appropriate entities. If the SDT agrees with revising R2 as suggested, then other requirements that may be affected by this change may need to be revised accordingly. (ii) There is an extra “or” in the R8 clause: “unless such actions would violate safety, equipment, or regulatory or statutory requirements”.
Northeast Power Coordinating Council	No	(i) R2 appropriately requires the RC experiencing the Adverse Reliability Impact to distribute its Operating Procedure, Process or Plan to other RCs required to take action. However, Subrequirement R2.1 places a burden on the initiating RC for actions over which it may not have any control, namely agreeing to the procedures, processes or plans by the receiving RCs that are required to take actions. There should be requirements for: a. The initiating RC to seek agreements by the other RCs that are required to take actions; b. The receiving RCs to indicate agreement, or otherwise with a reason; and; c. The initiating RC to revise the procedures, processes or plans. These requirements would place the needed responsibilities on the appropriate entities. If the SDT agrees with revising R2 as suggested, then other requirements may be affected by this change, and may need to be revised accordingly. (ii) There is an extra “or” in the R8 clause preceding “regulatory”: “unless such actions would violate safety, equipment, or regulatory or statutory requirements”.

Organization	Yes or No	Question 7 Comment
ISO New England Inc	No	R2 appropriately requires the RC experiencing the Adverse Reliability Impact to distribute its Operating Procedure, Process or Plan to other RCs required to take action. However, Subrequirements R2.1 places a burden to the initiating RC for actions over which it may not have any control, viz. agreeing to the procedures, process or plan by the receiving RCs that are required to take actions. We believe there should be requirements for: a. The initiating RC to seek agreements by the other RCs that are required to take actions; b. The receiving RCs to indicate agreement, or otherwise with a reason; and c. The initiating RC to revise the procedures, process or plan These requirements would place the needed responsibilities to the appropriate entities. If the SDT agrees with revising R2 as suggested, then other requirements that may be affected by this change may need to be revised accordingly. Response: The RCSdT thanks you for your comment. The original requirement was designed to accomplish in one requirement what is proposed by the commenters as three procedural requirements. R2 is worded to focus on defining what a “compliant plan” is. In the current requirement a “proposed plan” is not the same as a “compliant plan”. The SDT viewed what the commenters are suggesting as follows: • The initiating RC would submit its “proposed plan” to the other RCs • The receiving RCs would provide the initiating RC with their responses indicating whether or not they agree with the proposed roles/actions offered by the initiating RC • If one or more RCs do not agree with the roles/actions, then the initiating RC would be required to offer an alternative proposal (and go back to the first bullet) • When all RCs acknowledge that the proposed roles/actions in the revised “proposed plan” are acceptable, then and only then would the “proposed plan” become a “compliant plan” A closer reading of the current R2 would show the current R2 accomplishes the exact same result but does so without interjecting the need for documenting the intervening processes. The SDT does not see the need to document why each proposal was or was not accepted; nor does the SDT see the need for document the negotiations that are involved in getting to “an agreed to plan”. For example the comments’ subrequirement to show the RC submitted its plan would require a paper trail for the request; followed by a paper trail for the responses, followed by more paperwork if the RCs are not in agreement. In the end, the only action that matters (in both the SDT version and in the commenters alternative version) is a plan that works, and a plan that if others are involved must have their concurrence that those others will participate. R2 does not impose a requirement to get agreements; what R2 does is to require that a “compliant plan” be developed. A proposed plan does not solve problems. That proposed plan is NOT compliant with R2 if it only assumes that other RC will effect the actions in the proposal; neither is it compliant if the proposed actions are not acceptable to the other RCs who are required to act. To be compliant the initiating RC must either have the concurrence (i.e. agreement) of the other RCs for their respective part(s) in the proposed plans OR the plan must not include those RCs. R2 says to be compliant the other RC must agree with the “proposed plan” before that “proposed plan” is acceptable as a “compliant plan”. Having a plan that requires someone else to do an action, but that other entity will not effect that action, will not resolve the problem at hand. Further having

Organization	Yes or No	Question 7 Comment
documentation that someone refuses to participate in the proposed plan does nothing to solve the problem at hand.		
Midwest ISO Standards Collaborators	No	R2 appropriately requires the RC experiencing the Adverse Reliability Impact to distribute its Operating Procedure, Process or Plan to other RCs required to take action. However, it inappropriately places the burden on the same RC to obtain the agreement of impacted RCs. No RC can be forced to agree. Rather R2 should remove the bullet to require agreement from the impacted RC and a new requirement should be written to require the impacted RC to acknowledge the Operating Procedure, Process or Plan with agreement or disagreement. In the event of disagreement, a reliability or legal reason or failure to implement comparable actions should be given as the reason for not agreeing with the Operating Process, Procedure or Plan. This contributes to reliability by forcing the impacted RC to take action if the action is reasonable. There is an extra “or” in the R8 clause: “unless such actions would violate safety, equipment, or regulatory or statutory requirements”. IRO-014-2 R2 VSLs differentiate violations based on whether the plans, processes, and procedures were distributed or agreed to. How can another RC agree to them if it has not received them? Because it is unlikely that an RC will make notifications without exchanging reliability information or vice versa for IRO-014-2 R3, we suggest a more appropriate delineation for the VSLs would be based on the number of other impacted RCs that were not informed. IRO-014-2 R4 VSLs should be defined based upon the number of conference calls the RC does not participate in. R4 requires each RC to participate in “agreed upon conference calls”. Because the statement “conference calls” is plural, VSLs need to be set based on the aggregate of calls not participated in. Failure to assign VSLs in this way is equivalent to setting the requirement to “agreed upon conference call” and causes the VSLs to be in violation guideline 3 that the Commission established in their June 2008 Order on VSLs. Guideline 3 states that the VSL must be consistent with the requirement and cannot “redefine or undermine the requirement”. Clearly, these VSLs do. R5’s Severe VSL is redundant with the Moderate VSL. Failure to notify one RC meets both VSLs since Severe uses the word any. Based on the SDT’s response to our comment from the last time, we believe instead of any they mean “no impacted”. Unfortunately, “any impacted” could be one or two or higher. If it is one, it matches the Moderate VSL. The VSL for R8 needs to include the “unless such actions would violate safety, equipment, regulatory or statutory requirement” clause. In R1, should “Operating Procedures, Processes, or Plans” be “Operating Procedures, Operating Processes, or Operating Plans” to comport with the definitions in the NERC Glossary of Terms. We believe “Operating” is implied on “Processes” and “Plans” but believe it is more appropriate to make the meaning explicit with this modification since we are dealing with formal definitions.

Organization	Yes or No	Question 7 Comment
NERC Standards Review Subcommittee	No	R2 appropriately requires the RC experiencing the Adverse Reliability Impact to distribute its Operating Procedure, Process or Plan to other RCs required to take action. However, it inappropriately places the burden on the same RC to obtain the agreement of impacted RCs. No RC can be forced to agree. Rather R2 should remove the bullet to require agreement from the impacted RC and a new requirement should be written to require the impacted RC to acknowledge the Operating Procedure, Process or Plan with agreement or disagreement. In the event of disagreement, a reliability or legal reason or failure to implement comparable actions should be given as the reason for not agreeing with the Operating Process, Procedure or Plan. This contributes to reliability by forcing the impacted RC to take action if the action is reasonable. There is an extra “or” in the R8 clause: “unless such actions would violate safety, equipment, or regulatory or statutory requirements”. IRO-014-2 R2 VSLs differentiate violations based on whether the plans, processes, and procedures were distributed or agreed to. How can another RC agree to them if it has not received them? Because it is unlikely that an RC will make notifications without exchanging reliability information or vice versa for IRO-014-2 R3, we suggest a more appropriate delineation for the VSLs would be based on the number of other impacted RCs that were not informed. IRO-014-2 R4 VSLs should be defined based upon the number of conference calls the RC does not participate in. R4 requires each RC to participate in “agreed upon conference calls”. Because the statement “conference calls” is plural, VSLs need to be set based on the aggregate of calls not participated in. Failure to assign VSLs in this way is equivalent to setting the requirement to “agreed upon conference call” and causes the VSLs to be in violation guideline 3 that the Commission established in their June 2008 Order on VSLs. Guideline 3 states that the VSL must be consistent with the requirement and cannot “redefine or undermine the requirement”. Clearly, these VSLs do. R5’s Severe VSL is redundant with the Moderate VSL. Failure to notify one RC meets both VSLs since Severe uses the word any. Based on the SDT’s response to our comment from the last time, we believe instead of any they mean “no impacted”. Unfortunately, “any impacted” could be one or two or higher. If it is one, it matches the Moderate VSL. The VSL for R8 needs to include the “unless such actions would violate safety, equipment, regulatory or statutory requirement” clause.
Independent Electricity System Operator	No	R2 appropriately requires the RC experiencing the Adverse Reliability Impact to distribute its Operating Procedure, Process or Plan to other RCs required to take action. However, Subrequirements R2.1 places a burden to the initiating RC for actions over which it may not have any control, viz. agreeing to the procedures, process or plan by the receiving RCs that are required to take actions. We believe there should be requirements for: a. The initiating RC to seek agreements by the other RCs that are required to take actions; b. The receiving RCs to indicate agreement, or otherwise with a reason; and c. The initiating RC to revise the procedures, process or plan. These requirements would place the needed responsibilities to the appropriate entities. If the SDT agrees with revising R2 as suggested, then other requirements that may be affected by this change may need to be revised accordingly. There is an extra “or” in the R8 clause: “unless such

Organization	Yes or No	Question 7 Comment
		actions would violate safety, equipment, or regulatory or statutory requirements”. IRO-014-2 R2 VSLs differentiate violations based on whether the plans, processes, and procedures were distributed or agreed to. If an intended RC never received the plans, processes and procedures, it would not be aware of the need to agree to them. Hence, if the plans, etc. were not distributed, then the initiating RC will be assigned a Moderate VSL but never any higher VSLs even if no agreements were received (since no other RCs had received the plans to begin with). We suggest the SDT to consider rearranging the VSLs and in accordance with any changes to R2 reflecting our suggested changes summarized under Q7. Because it is unlikely that an RC will make notifications without exchanging reliability information or vice versa for IRO-014-2 R3, we suggest a more appropriate delineation for the VSLs would be based on the number of other impacted RCs that were not informed. IRO-014-2 R4 VSLs should be defined based upon the number of conference calls the RC does not participate in. R4 requires each RC to participate in “agreed upon conference calls”. Because the statement “conference calls” is plural, VSLs need to be set based on the aggregate of calls not participated in. Failure to assign VSLs in this way is equivalent to setting the requirement to “agreed upon conference call” and causes the VSLs to be in violation guideline 3 that the Commission established in their June 2008 Order on VSLs. Guideline 3 states that the VSL must be consistent with the requirement and cannot “redefine or undermine the requirement”. Clearly, these VSLs do. The VSL for R8 needs to include the “unless such actions would violate safety, equipment, regulatory or statutory requirement” clause.
Response: The RCSDT thanks you for your comment. The original requirement was designed to accomplish in one requirement what is proposed by the commenters as three procedural requirements. R2 is worded to focus on defining what a “compliant plan” is. In the current requirement a “proposed plan” is not the same as a “compliant plan”. The SDT viewed what the commenters are suggesting as follows: • The initiating RC would submit its “proposed plan” to the other RCs • The receiving RCs would provide the initiating RC with their responses indicating whether or not they agree with the proposed roles/actions offered by the initiating RC • If one or more RCs do not agree with the roles/actions, then the initiating RC would be required to offer an alternative proposal (and go back to the first bullet) • When all RCs acknowledge that the proposed roles/actions in the revised “proposed plan” are acceptable, then and only then would the “proposed plan” become a “compliant plan” A closer reading of the current R2 would show the the current R2 accomplish the exact same result but does so without interjecting the need for		

Organization	Yes or No	Question 7 Comment
documenting the intervening processes. The SDT does not see the need to document why each proposal was or was not accepted; nor does the SDT see the need for document the negotiations that are involved in getting to “an agreed to plan”. For example the comments’ subrequirement to show the RC submitted its plan would require a paper trail for the request; followed by a paper trail for the responses, followed by more paperwork if the RCs are not in agreement. In the end, the only action that matters (in both the SDT version and in the commenters alternative version) is a plan that works, and a plan that if others are involved must have their concurrence that those others will participate. R2 does not impose a requirement to get agreements; what R2 does is to require that a “compliant plan” be developed. A proposed plan does not solve problems. That proposed plan is NOT compliant with R2 if it only assumes that other RC will effect the actions in the proposal; neither is it compliant if the proposed actions are not acceptable to the other RCs who are required to act. To be compliant the initiating RC must either have the concurrence (i.e. agreement) of the other RCs for their respective part(s) in the proposed plans OR the plan must not include those RCs. R2 says to be compliant the other RC must agree with the “proposed plan” before that “proposed plan” is acceptable as a “compliant plan”. Having a plan that requires someone else to do an action, but that other entity will not effect that action, will not resolve the problem at hand. Further having documentation that someone refuses to participate in the proposed plan does nothing to solve the problem at hand. IRO-014 VSLs: R2: The VSLs are differentiated as you suggest. R3: The RCSDT does not believe that is the correct delineation of the requirement which requires notification of each impacted RC. What if there is only one and there was no notification? R4: The RCSDT contends that the requirement specifies participation in all agreed upon calls. If the RC misses an agreed upon call, it has failed to meet the requirement. R5: The RCSDT disagrees. If there is only one impacted RC and no notification is made, it should be a Severe violation. R8: The phrase does not need to be in the VSL. If a plan was not implemented due to safety reasons, then the requirement was not violated and the VSL would not be considered. R1: We have revised the requirement per your suggestion to R1, R2 and R3.		
Electric Market Policy	No	Agree with most. However, the language proposed for use in IRO-014-2 @ R5 and R6 needs clarity. There needs to be a way to determine who is required to do what depending upon whether the party is a) Reliability Coordinator who has the identified Adverse Reliability Impact) An impacted affected Reliability Coordinator. Suggest revising so that these read similar to R7 and R8.
Response: The RCSDT thanks you for your comment. The RCSDT does not understand your comment. We believe that the requirements are clear as written as to what each entity must do.		

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

Organization	Yes or No	Question 7 Comment
Western Area Power Administration	No	Comments: In R1 & R2, the first sentence is redundant. The phrase which was added “For conditions or activities that impact other RC Areas...” should be removed.
Response: The RCSDT thanks you for your comment. The SDT agrees and has made the suggested revision.		
OC Standards Review Group	No	In R1.6, we suggest adding “BES” before “conditions” such that the sentence reads: “Authority to act to prevent and mitigate “BES” conditions.....”
Response: The RCSDT thanks you for your comment. The SDT disagrees. Adverse Reliability Impact is defined as follows: <i>The impact of an event that results in frequency-related instability; unplanned tripping of load or generation; or uncontrolled separation or cascading outages that affects a widespread area of the Interconnection.</i> If a condition will cause interconnection “cascading, instability, ...” the RC should be mandated to act whether or not the initiating condition is part of the BES.		
Florida Municipal Power Agency and Some Members	No	In requirements R7 and R8, the term mitigation plan is used. Since mitigation plan has another specific meaning (e.g., a mitigation plan for non-compliance with a standard), FMPA suggests using a different term with the same meaning, e.g., ameliorative plan, alleviation plan, abatement plan, to help avoid confusion.
Response: The RCSDT thanks you for your comment. The SDT disagrees. Lower case “mitigation” is a proper English word		
NERC	No	NERC staff believes that the original language in IRO-016-1 was clearer than the proposed requirements R5 through R8. Additionally, we believe that this standard is already covered in the certification process. We recommend that this standard, with the exception of R4, be retired and the certification process be revisited to ensure that IRO-016-1 R1 is covered. Furthermore, operating guidelines should be developed to address the content of R5 through R8.
Response: The RCSDT thanks you for your comment. The RCSDT is not clear how requirements to make notifications, develop and implement mitigations plans belong in the certification process. We are also unclear what constitutes an operating guideline. Based on this, we will retain the requirements in IRO-014 as supported through the stakeholder process. Requirements R5 through R8 were brought into IRO-014 from IRO-016 as you state. These requirements were revised to eliminate compound requirements. The RCSDT feels that requirements are clear as written and stakeholder comments indicate consensus has been achieved.		
Duke Energy	No	R1.6 - We believe that the word “system” should be added before the word “conditions” to provide additional

Organization	Yes or No	Question 7 Comment
		clarity.
Response: The RCSDT thanks you for your comment. We agree and have made the suggested edit.		
US Bureau of Reclamation	No	We would suggest that the language should indicate the plans need to address “neighboring RC areas” to limit the scope of the plans for “other RC areas” and not try to cover the whole NERC footprint.
Response: The RCSDT thanks you for your comment. The requirements deal with those RC that are seen to have an impact on a problem. To the extent that one RC expects another RC to be part of a solution, the requirement allows the initiating RC to “propose” a plan of actions and to seek help. If the other RC disagrees with the proposal, the latter RC would not give agreement.		
Bonneville Power Administration	Yes	
Central Lincoln	Yes	
FirstEnergy	Yes	
Pepco Holdings, Inc	Yes	
PNGC Power (15 member utilities)	Yes	
PPL	Yes	
South Carolina Electric and Gas	Yes	
Southern Company Services	Yes	
Southwest Power Pool	Yes	
Western Electricity Coordinating Council	Yes	
Xcel Energy	Yes	

Organization	Yes or No	Question 7 Comment
ITC Holdings	Yes	None
American Electric Power	Yes	The use of “. . . act and/or issue . . .” may be more descriptive in Requirement 1 rather than “. . . act or issue . . .”
Response: The RCSDT thanks you for your comment.		
ERCOT ISO	No	ERCOT ISO would like to add clarification to the Purpose statement and the following requirements (1-4) to alleviate potential interpretation issues. The remaining requirements in IRO-014 are adequately addressed with respect to “within the Interconnection” if the Adverse Reliability Impact term is modified as identified above in response to Question All the recommendations tie together. Purpose: To ensure that each Reliability Coordinator’s operations are coordinated such that they will not have an Adverse Reliability Impact on other Reliability Coordinator Areas “<u>within its Interconnection</u>” and to preserve the reliability benefits of interconnected operations. R1. For conditions or activities that impact other Reliability Coordinator Areas “<u>within its Interconnection</u>”, each Reliability Coordinator shall have Operating Procedures, Processes, or Plans for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following: R2. Each Reliability Coordinator’s Operating Procedure, Process, or Plan that requires one or more other Reliability Coordinators “<u>within its Interconnection</u>” to take action (e.g., make notifications, exchange information, or coordinate actions) shall be: R3. For conditions or activities that impact other Reliability Coordinator Areas “<u>within its Interconnection</u>”, each Reliability Coordinator shall make notifications and exchange reliability-related information with impacted Reliability Coordinators using its predefined Operating Procedures, Processes, or Plans for conditions that may impact other Reliability Coordinator Areas or other means to accomplish the notifications and exchange of reliability-related information. R4. Each Reliability Coordinator shall participate in agreed upon conference calls, at least weekly, and other communication forums with impacted Reliability Coordinators “<u>within its Interconnection</u>”. Additionally, ERCOT ISO recommends that the weekly minimum be eliminated and such meeting should be pursuant to an “agreed upon schedule” at the discretion of the Reliability Coordinators. The language notes “impacted” Reliability Coordinators. The “impacted” implies that it is relative to a discrete incident or time period, which is consistent with the purpose of the standard. Accordingly, it is unclear on the need for and

Organization	Yes or No	Question 7 Comment
		unbounded ongoing meeting obligation. ERCOT ISO also suggests changing the R4 VSL to allow lower VSL for missing an occasional meeting. The VSL can be elevated based on the number of missed calls or meetings. Severe would seem to be more appropriate if the entity refused to participate or calls were not initiated at all. Furthermore, with respect to R4, It is not clear what value this requirement adds generally. The requirement is related to “impacted” RCs. This implies that the meetings are relative to discrete incidents/time periods, which is consistent with the purpose of the standard. Accordingly, given the apparent temporary, incident specific nature of an “impacted” entity, it doesn’t make sense to impose an unbounded ongoing meeting obligation. Furthermore, the establishment of the general procedures governs the objective actions impacted RCs will take for all situations. If there is an incident where an RC is “impacted”, it will manage the situation by application of the established objective procedures – that is the intent of having those procedures in place under the standard. Accordingly, it is questionable whether the weekly meeting obligation is necessary or serves any purpose. At a minimum, the weekly meeting obligation should be eliminated and such meeting should be pursuant to an “agreed upon schedule” to give discretion to the RCs. Finally, with respect to R1 – 1.6, in order to provide certainty to the regulated community, ERCOT ISO does not support the change to the condition precedent for action under the requirement from actual to potential Adverse Reliability Impacts. Defining an obligation in terms of “potential” situations is vague and ambiguous. This should generally be avoided because it creates ambiguity and uncertainty for both the regulated entity and regulator.
Response: The RCS DT thanks you for your comment. R1-R3: The SDT disagrees. If an RC does not have any other impacted RCs, then no operating processes, procedures or plans would be necessary. This would mean the R1-R3 would not apply to that RC. R4 and VSL- The RCS DT has revised R4 to add the words “within the same Interconnection” to the end of R4. We have revised the VSL accordingly. The RCS DT contends that the requirement specifies participation in all agreed upon calls. If the RC misses an agreed upon call, it has failed to meet the requirement. R1.6 – This refers to studying various system conditions and developing operating processes, plans or procedures to address them. If an entity has run a study and determined that there is an impact on another RC, then a process/plan/procedure should be developed and agree to in order to address the issue.		

7 Do you have any other comment, not expressed in questions above, for the RC SDT?

Summary Consideration: The RC SDT thanks all commenters for their review of these proposed revisions and has incorporated many of the comments in the next revision of these requirements. In general, the RC SDT feels that the concept of a Reliability Directive is an important tool for RC, BA and TOP to maintain reliability and that the revisions are consistent with the applicable parts of the directives in FERC Order 693. The work of the RC SDT along with the OCPD SDT and the RTO SDT, as currently recognized, will cover the original intent of COM-002 and still provide a “defense in depth strategy” as suggested by commenters. Consensus appears to have been achieved with respect to the definition of Reliability Directive and the requirements that the RC SDT have developed for COM-002. This will further the efforts of the OCPD SDT in achieving stakeholder consensus for their proposed requirements in COM-003. The intent of this DT is to preserve a method for RCs, BAs and TOPs to make the determination of “what actions are required” and clearly communicate the importance to the receiver at a heightened method to normal day-to-day operational communications. The trigger of “Reliability Directive” by the issuer highlights these actions as needed to maintain BES reliability and shall be carried out as directed (unless such actions would violate safety, equipment, regulatory or statutory requirement per the language of the requirement) and all parties to the conversation need to be very cognizant of the system conditions that are requiring actions. The DT has attempted to craft clear and specific language that support BES reliability and hopes that this work can support and enhance the development of the OCPD SDT. The DT has also attempted to eliminate redundancy and ambiguity while not creating any reliability gaps. Several comments were received on the RC’s ability to “act”. The RC must “act” (ie. do something, “to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts”. This may include analysis, coordination of cooperative actions or the issuance of “Reliability Directives”. “Act” does not imply solely the manipulation of BES elements.

Several comments on VSL language were received. We have attempted to clarify intent and have revised some in response to comments.

Several comments were received that reference a “performance based initiative” endorsed by the NERC BOT. The DT appreciates this new initiative, and to the extent possible, requirements proposed by this DT reflect that desire. [We have had no official instruction nor direction regarding this initiative in relation to this project.]

RC control of “analysis tools” is critical to maintaining the wide area view. Control by the RC over the tools is imperative and beyond administrative, since it is intended to prevent planned reliability tool outages without the consent or knowledge of operating personnel. Although the DT agrees with the premise that many other requirements may be violated by ineffective communications, the intent of the requirement is to ensure there are effective communications methods in place for communicating BES activity across entities. Effective communication are a cornerstone of BES reliability and the intent of the requirement is to prevent the violation of other more significant performance type standard requirements due to ineffective communications before they

impact the BES. Failure of the RC to control outages of analysis tools was mentioned as a contributing factor in the 2003 blackout.

Overall, it is the intent of the DT to make the requirements flexible and adaptive to new technologies and methods as directed in order 693 and ensure that no matter how many forms of interpersonal communications are available. An entity can select a functional alternative to meet the intent of the requirement. The 60 minute timeframe appears reasonable based on industry comments. The term Interconnection is appropriate as it is.

Effective communications rely on an effective hierarchy. It is crucial for a host TOP or BA to have effective communications with GOs attached to their systems so that BES operations can be coordinated. Much like RCs must be able to communicate effectively with the systems within its footprint, effective communications allows BAs/TOPs to disseminate Interconnection information to DPs/GOPs that are impacted by system conditions outside of their operating visibility. The RCS DT has relied on the authority hierarchy (RC/ BA/ TOP / DP) to ensure accountability with the current performance type requirements, while not over-burdening the standards with prescriptive administrative-type requirements.

Organization	Question 8 Comment
American Transmission Company	
ISO New England Inc	
North Carolina Municipal Power Agency #1	
Pepco Holdings, Inc	
Puget Sound Energy	None additional.
South Carolina Electric and Gas	
US Bureau of Reclamation	
We Energies	

Organization	Question 8 Comment
Western Area Power Administration	
Western Electricity Coordinating Council	
CECD	(1). The 60 minute timeframe should be lengthened if normal interpersonal communication paths are in service. Furthermore, the requirement to take corrective action or identify an alternative interpersonal communication method within 60 minutes should only apply if the registered entity only has a single alternative interpersonal communication method in place. (2). For COM-001 Requirement 4: The use of the term "Interconnection" seems inappropriate when describing communications between the DP/GOP and its BA/TOP and should be deleted. The NERC glossary of terms defines this as any one of the three major electric system networks in North America: Eastern, Western, and ERCOT. The requirement to be able to exchange operating information should be subject to the limitation as requested by the BA or TOP.
Response: The RCSDT thanks you for your comment. 1) It is the intent of the DT to make the requirement flexible and adaptive to new technologies and methods as directed in order 693 and ensure that no matter how many forms of interpersonal communications are available. An entity can select a functional alternative to meet the intent of the requirement. The timeframe has been revised to 2 hours. 2) We concur and have removed "Interconnection" from the requirement.	
Hydro-Québec TransEnergie (HQT)	(i) For IRO-001-2 R1, "act" should be removed. The RC can't act but can only issue Reliability Directives per the functional model. (ii) The NERC BOT recently approved pursuing the Results/Performance Based standards development activity. Based on this recent decision, the BOT has signaled their intent to remove administrative types of requirements from all standards. The IRO-001-2 R6 for the RC to have the authority to veto outages of their analysis tools and the COM-001-2 R3 requirement to use the English language are clearly not results or performance based, but rather administrative. If an operator used non-English, where it has not been agreed to or subject to law, to issue a Reliability Directive they will not be able to satisfy three-part communications in COM-002-3 in addition to many other standards and requirements they could not comply with. Even if an RC has veto authority over analysis tools, failure to exercise it would render the authority meaningless. Furthermore, the RC would not be able to meet other requirements and standards such as operating within IROL because they would not be able to assess the system appropriately.
Response: The RCSDT thanks you for your comments. a. The RC must "act" (ie. do something "to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts". This may include analysis, coordinate cooperative actions or issue "Reliability Directives".	

Organization	Question 8 Comment
b.	R6 is beyond administrative; it is intended to prevent planned reliability tool outages with the consent or knowledge of operating personnel. Although the DT agrees with the premise that many other requirements may be violated by ineffective communications, the intent of the requirement is to ensure there are effective communications methods in place for communicating BES activity across entities. Effective communication is a cornerstone of BES reliability and the intent of the requirement is to prevent the violation of other more significant performance type standard requirements due to ineffective communications before they impact the BES.
Midwest ISO Standards Collaborators	1) For IRO-001-2 R1, “act” should be removed. The RC can’t act but can only issue Reliability Directives per the functional model. 2) IRO-001-2 R4 and R5 Severe VSLs need to have “any or” removed. The VSL should only apply for three or more and “any or” conflicts with this.COM-001-2 R2 Severe VSL conflicts with other VSLs. Specifically, the use of the word “any” in the Severe VSL is problematic. Notifying one entity at 65 minutes fits both the Lower VSL and Severe VSL as well. We suggest deleting the first portion of the Severe VSL that reads, “The responsible entity failed to notify any impacted entities of the failure of its normal Interpersonal Communications capabilities within 60 minutes.” 3) The NERC BOT recently approved the pursuing the Results/Performance Based standards development activity. Based on this recent decision, we believe the BOT has signaled their intent to remove administrative types of requirements from all standards. The IRO-001-2 R6 for the RC to have the authority to veto outages of their analysis tools and the COM-001-2 R3 requirement to use the English language are clearly not result or performance based but rather administrative. If an operator used Portuguese to issue a Reliability Directive they will not be able to satisfy three-part communications in COM-002-3 in addition to many other standards and requirements they could not comply with. Even if an RC has veto authority over analysis tools, failure to exercise it would render the authority meaningless. Furthermore, the RC would not be able to meet a host of other requirements and standards such as operating within IROL because they would not be able to assess the system appropriately.
Response: The RCSDT thanks you for your comments. 1) The RC must “act” (ie. do something “to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts”. This may include analysis, coordinate cooperative actions or issue “Reliability Directives”. 2) The VSL language is intended to accommodate scenarios where only one entity is impacted or several entities are impacted. “The Reliability Coordinator failed to notify any or more than three impacted Transmission Operators, Balancing Authorities...” and provide the same measurability level. 3) R6 is beyond administrative; it is intended to prevent planned reliability tool outages without the consent or knowledge of operating personnel. Although the DT agrees with the premise that many other requirements may be violated by ineffective communications, the intent of the requirement is to ensure there are effective communications methods in place for communicating BES activity across entities. Effective communication is a cornerstone of BES reliability and the intent of the requirement is to prevent the violation of other more significant performance type standard	

Organization	Question 8 Comment
requirements due to ineffective communications before they impact the BES.	
Northeast Power Coordinating Council	(i) For IRO-001-2 R1, “act” should be removed. The RC can’t act but can only issue Reliability Directives as per the functional model. (ii) The NERC BOT recently approved pursuing the Results/Performance Based standards development activity. Based on this recent decision, the BOT has signaled their intent to remove administrative types of requirements from all standards. The IRO-001-2 R6 requirement for the RC to have the authority to veto outages of their analysis tools and the COM-001-2 R3 requirement to use the English language are clearly not results or performance based, but rather administrative. If an operator used non-English to issue a Reliability Directive they will not be able to satisfy three-part communications in COM-002-3, in addition to many other standards and requirements they could not comply with. Even if an RC has veto authority over analysis tools, failure to exercise it would render the authority meaningless. Furthermore, the RC would not be able to meet other requirements and standards such as operating within an IROL because they would not be able to assess the system appropriately.
Response: The RCS DT thanks you for your comments. I) The RC must “act” (ie. do something “to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts”. This may include analysis, coordinate cooperative actions or issue “Reliability Directives”. II) R6 is beyond administrative; it is intended to prevent planned reliability tool outages without the consent or knowledge of operating personnel. Although the DT agrees with the premise that many other requirements may be violated by ineffective communications, the intent of the requirement is to ensure there are effective communications methods in place for communicating BES activity. Effective communication is a cornerstone of BES reliability and the intent of the requirement is to prevent the violation of other more significant performance type standard requirements due to ineffective communications before they impact the BES.	
Independent Electricity System Operator	(i) For IRO-001-2 R1, “act” should be removed. The RC can’t act but can only issue Reliability Directives per the functional model. (ii) The NERC BOT recently approved pursuing the Results/Performance Based standards development activity. Based on this recent decision, the BOT has signaled their intent to remove administrative types of requirements from all standards. The IRO-001-2 R6 for the RC to have the authority to veto outages of their analysis tools and the COM-001-2 R3 requirement to use the English language are clearly not results or performance based, but rather administrative. If an operator used non-English to issue a Reliability Directive they will not be able to satisfy three-part communications in COM-002-3 in addition to many other standards and requirements they could not comply with. Even if an RC has veto authority over analysis tools, failure to exercise it would render the authority meaningless. Furthermore, the RC would not be able to meet other requirements and standards such as operating within IROL because they would not be able to assess the system appropriately.

Organization	Question 8 Comment
	(iii) COM-001-2 R2 Severe VSL conflicts with other VSLs. Specifically, the condition of failing to notify any impacted entities within 60 minutes means that no entities received a notification within 60 minutes. But how about they all received this in 65 minutes? Would this be the same condition as the Low VSL? And if they all received this in 75 minutes, the condition would be the same as the Moderate VSL. We suggest the SDT to review and revise these VSLs to eliminate the duplication/ambiguity.
Response: The RCSDT thanks you for your comments. I) The RC must “act” (ie. do something “to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts”. This may include analysis, coordinate cooperative actions or issue “Reliability Directives”. II) R6 is beyond administrative; it is intended to prevent planned reliability tool outages without the consent or knowledge of operating personnel. Although the DT agrees with the premise that many other requirements may be violated by ineffective communications, the intent of the requirement is to ensure there are effective communications methods in place for communicating BES activity. Effective communication is a cornerstone of BES reliability and the intent of the requirement is to prevent the violation of other more significant performance type standard requirements due to ineffective communications before they impact the BES. III) The DT did not consider R1 and R2 to be parallel requirements, and consequently did not attempt to force parallelism between the VSLs for R1 and R2. The only failure that is severe in this context is the failure to test the Alternative Interpersonal Communications capability on at least a quarterly basis.	
IRC Standards Review Committee	(i) IRO-001-2 R4 and R5 Severe VSLs need to have “any or” removed. The VSL should only apply for three or more and “any or” conflicts with this. (ii) For IRO-001-2 R1, “act” should be removed. The RC can’t act but can only issue Reliability Directives per the functional model. (iii) COM-001-2 R2 Severe VSL conflicts with other VSLs. Specifically, the condition of failing to notify any impacted entities within 60 minutes means that no entities received a notification within 60 minutes. But how about they all received this in 65 minutes? Would this be the same condition as the Low VSL? And if they all received this in 75 minutes, the condition would be the same as the Moderate VSL. We suggest the SDT to review and revise these VSLs to eliminate the duplication/ambiguity. (iv) The NERC BOT recently approved the pursuing the Results/Performance Based standards development activity. Based on this recent decision, we believe the BOT has signaled their intent to remove administrative types of requirements from all standards. The IRO-001-2 R6 for the RC to have the authority to veto outages of their analysis tools and the COM-001-2 R3 requirement to use the English language are clearly not result or performance based but rather administrative. If an operator used Portuguese to issue a Reliability Directive they will not be able to satisfy three-part communications in COM-002-3 in addition to many other standards and requirements they could not comply with. Even if an RC has veto authority over analysis tools, failure to exercise it would render the authority meaningless. Furthermore, the RC would not

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	be able to meet a host of other requirements and standards such as operating within IROL because they would not be able to assess the system appropriately. (v) The VSLs for COM-002-3 R3 appear to have some redundancy. The Severe VSL and the second condition in the High VSL appear to be similar or the same. (vi) Measurement of compliance to COM-002-3 R1 could be challenging. As the VSL is written, it would appear the compliance auditor could judge if a Reliability Directive should have been issued. The VSL language that is problematic is “The responsible entity that required actions to be executed”. Please remove: “required actions to be executed as...”. Who determines that actions were required? One could argue that failure to identify a communication as a Reliability Directive means that actions weren’t required but it is doubtful the compliance authorities would take this approach. Thus, there would appear to be great judgment left to the compliance auditor in determining if a Reliability Directive should have been issued. (vii) IRO-014-2 R2 VSLs differentiate violations based on whether the plans, processes, and procedures were distributed or agreed to. If an intended RC never received the plans, processes and procedures, it would be aware of the need to agree to them. Hence, if the plans, etc. were not distributed, then the initiating RC will be assigned a Moderate VSL but never any higher VSLs even if no agreements were received (since no other RCs had received the plans to begin with). We suggest the SDT to consider rearranging the VSLs and in accordance with any changes to R2 reflecting our suggested changes summarized under Q7. (viii) Because it is unlikely that an RC will make notifications without exchanging reliability information or vice versa for IRO-014-2 R3, we suggest a more appropriate delineation for the VSLs would be based on the number of other impacted RCs that were not informed. (ix) IRO-014-2 R4 VSLs should be defined based upon the number of conference calls the RC does not participate in. R4 requires each RC to participate in “agreed upon conference calls”. Because the statement “conference calls” is plural, VSLs need to be set based on the aggregate of calls not participated in. Failure to assign VSLs in this way is equivalent to setting the requirement to “agreed upon conference call” and causes the VSLs to be in violation guideline 3 that the Commission established in their June 2008 Order on VSLs. Guideline 3 states that the VSL must be consistent with the requirement and cannot “redefine or undermine the requirement”. Clearly, these VSLs do. (x) IRO-014-2 R5’s Severe VSL is redundant with the Moderate VSL. Failure to notify one RC meets both VSLs since Severe uses the word any. Based on the SDT’s response to our comment from the last time, we believe instead of any they mean “no impacted”. Unfortunately, “any impacted” could be one or two or higher. If it is one, it matches the Moderate VSL. (xi) The VSL for IRO-014-2 R8 needs to include the “unless such actions would violate safety, equipment, regulatory or statutory requirement” clause.

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	Response: The RCSDT thanks you for your comments. I) The VSL language is intended to accommodate scenarios where only one entity is impacted or several entities are impacted. “The Reliability Coordinator failed to notify any or more than three impacted Transmission Operators, Balancing Authorities...” and provide the same measurability level. II) The RC must “act” (ie. do something “to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts”. This may include analysis, coordinate cooperative actions or issue “Reliability Directives”. III) The DT does not agree. The Severe VSL has “any impacted entities”, meaning that no entity was notified within 60 minutes. This is intentional. The Lower, Moderate and High VSLs address individual entities that may not have met the standard of 60 minutes. IV) R6 is beyond administrative, it is intended to prevent planned reliability tool outages without the consent or knowledge of operating personnel. Although the DT agrees with the premise that many other requirements may be violated by ineffective communications, the intent of the requirement is to ensure there are effective communications methods in place for communicating BES activity across entities. Effective communication are a cornerstone of BES reliability and the intent of the requirement is to prevent the violation of other more significant performance type standard requirements due to ineffective communications before they impact the BES. V) The VSLs were set to be flexible in measuring cases where an 1) acknowledgement is not made at all to a correctly repeated directive and 2) an acknowledgement is not made at all AND a directive repeated incorrectly was not corrected. VI) The intent of the DT is to allow the issuing entity to make the determination of “what actions are required” to clearly communicate the importance to the receiver. The word “required actions to be executed” are integral to the requirement and cannot be removed to meet the intent. In other words, the trigger of “Reliability Directive” by the issuer highlights these actions as needed to maintain BES reliability and should be carried out as directed (unless such actions would violate safety, equipment, regulatory or statutory requirement etc) and all parties to the conversation need to be very cognizant of the system conditions that are requiring actions. The DT has attempted to craft clear and specific language that support BES reliability and cannot pre-judge the behaviors of compliance auditors. VII) The DT agrees and will make clarifying changes. VIII) The DT agrees and will make clarifying changes. IX) The DT feels this is a core RC responsibility and therefore treated this requirement as binary. RCs must be responsive to other RCs that need to discuss BES reliability. However, we agree to change “calls” to “call(s)” in R4, to read as follows: R4. Each Reliability Coordinator shall participate in agreed upon conference calls, at least weekly (per Requirement 1, Part 1.7) with other Reliability Coordinators within the same Interconnection. <i>[Violation Risk Factor: Lower][Time Horizon: Real-time Operations]</i> X) The DT disagrees. “Failure to notify any” means that none were notified. If there is only a total of one impacted RC, then the VSL would be Severe. XI) If the action plan could not be implemented for such instances, then there would be no violation of the requirement and the VSL would not apply.
OC Standards Review Group	“The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Standards Review group only and should not be construed as the position of SERC Reliability Corporation, its board or

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	its officers.”
Response: The RCSDT thanks you for your comments.	
FirstEnergy	1. We believe that this standard should be either handed to the OPCPSDT (Project 2007-02) or the OPCPSDT should hand over the COM-003-1 standard to this RCSDT (Project 2006-06); and then COM-002 and COM-003 should be merged. Per our comments in Draft 1 of COM-003-1 (OPCPSDT Project 2007-02) we believe that the Reliability Directive definition should be broadened to include communications associated with BES related information (similar to the proposed definition of Interoperability Communication from the OPCPSDT). The following are specifics: a. For better project coordination, since the plan of the OPCPSDT (2007-02) is to eventually incorporate the COM-002-3 requirements into the new COM-003-1 standard, we believe this should be done now by one SDT. b. The definition of Reliability Directive should be broadened to include any actions that affect the BES reliability. We suggest the following change to the term Reliability Directive: "A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where the recipient is directed to change the state or report the status of an Element or Facility of the Bulk Electric System." c. Per our suggestion to broaden the definition of Reliability Directive in "b" above, the proposed definition of Interoperability Communication proposed by the OPCPSDT can be eliminated. d. With respect to the proposed R2 and R3 of COM-002-3 and requirement R5 of COM-003-1 which all which essentially discuss three-part communication, could be combined and covered by COM-002-3. e. R1 of COM-003-1 that requires communication protocols procedures can be covered in COM-002-3.2. Implementation Plan - The proposed timeline for implementing these standards changes is the 1st day of the 1st quarter after applicable regulatory approvals. We believe that since there are numerous changes to and retirement of requirements, this will place a significant compliance burden on industry and warrants more time to adjust compliance evidence and tracking. Furthermore, standard COM-001-2 is adding the Distribution Provider and Generator Operator as applicable entities which will cause these entities to show compliance with a requirement they previously were not responsible for. Therefore, we believe that a minimum of two calendar quarters for implementing these changes is appropriate.
Response: The RC SDT thanks you for your comment. The RC SDT feels that the Reliability Directive is an important tool for RC, BA and TOP to maintain reliability and that the revisions are consistent with parts of the directives in FERC Order 693. The work of the RC SDT along with the OPCP SDT, as currently recognized, will cover the original intent of COM-002 and still provide a “defense in depth strategy” as suggested by the NERC comment. Consensus appears to have been achieved with respect to the definition of Reliability Directive and the requirements that the RC SDT have developed for COM-002. This will further the efforts of the OCPC SDT in achieving stakeholder consensus for their proposed requirements in COM-003. The intent of the DT is to preserve a method for RCs, BAs and TOP to make the determination of “what actions are required” and clearly communicate the importance to the receiver above normal day-to-day operational communications. The trigger of “Reliability Directive” by the issuer highlights these actions as needed to maintain BES reliability and should be carried out as directed (unless such actions would violate safety, equipment, regulatory or statutory requirement per the language of the requirement) and all parties to the conversation need to be very cognizant of the system conditions that are requiring actions. The DT has attempted to craft clear and specific language that support BES reliability and hopes that this work can support and enhance the development of the OPCP SDT.	

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Ameren	1.In COM-001 R2, this “impacted entities’ language is unworkable. Some entities might be impacted because they get information from the RC, i.e indirectly from the entity with the loss. Team should address direct relationships somehow.2.In COM-001,R4, does the team consider the need for this for the AIC?3.The team should note that there is no requirement to even have AIC. Thus R1 would only apply if you have one.
Response: The RCSDT thanks you for your comment. The DT feels that impacted adds clarity to the requirement by limiting the obligation appropriately. Industry consensus appears to support that “impacted” is a reasonable clarification.	
NERC	As stated in the response to Question 1, the scope of COM-001-2 is unclear as to whether it applies to both verbal and data communication. We believe that it should.
Response: The RCSDT thanks you for your comment. The RCSDT believes that data communication is covered under IRO-010, R3 which states: Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner <i>shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship.</i> (Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations)	
Central Lincoln	COM-001 M3, M4, COM-002 M2, and IRO-001 M1, and M2 all require evidence of DPs and/or LSEs “which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation. ”While we appreciate the inclusion of “equivalent documentation”, we are unsure what might qualify and who determines what qualifies as equivalent. We still believe COM-001 should not apply to DPs and LSEs, since these entities do not own or operate BES assets. Please consider this stakeholder input as well. While CIP-001 M4 can show that documented communication proves capability for R4, an entity has no way of proving capability if such communications did not take place during the audit period. We are unsure if the SDT realizes that not all of the entities subject to these standards maintain 24/7 dispatch desks. Much effort will go into complying with standards dealing with afterhour’s directives that will never come, because the issuing entity will realize any action requested will not be timely enough and plan accordingly.
Response: The RCSDT thanks you for your comment. DP and LSE were included in this standard per FERC Order 693 Directive. “Equivalent” documentation is included to provide potential alternatives for entities to provide to prove compliance with the requirement. Compliance audit personnel will review all documentation to determine compliance with a requirement.	
Exelon	COM-001-2 R2. Please consider in place of “impacted entities”, substitute “all applicable entities”.
Response: The RCSDT thanks you for your comment. The proposed substitute language has the same net effect as the current language and	

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therefore no change was made.	
ITC Holdings	Comments: IRO-001-2 R4 has an errant comma after the first occurrence of the word “Impacts”. IRO-014-2 R8 should have the first occurrence of the word “or” removed. Also, a new R9 (and associated M9) should be added requiring the RC who cannot agree on the mitigation plan due to safety, equipment, regulatory, or statutory requirements to notify the RC experiencing the Adverse Reliability Impact of the reason for the inability to implement the mitigation plan.
Response: The RCSDT thanks you for your comment. The comma in IRO-001-2 R4 has been removed. The first “or” in IRO-014-2 R8 has been removed. The suggested R9/M9 are unnecessary. Any RC that claims that a mitigation plan would violate safety, equipment, regulatory or statutory requirements would have to document that as part of complying with R8.	
Northeast Utilities	For IRO-001-2, the VSL language for R1, R4, and R5 is not clear. Specifically, for the R1 VSL the text appears to be reversed between High and Severe; and for R4 and R5, please clarify what is meant by “any or more than three”.
Response: The RCSDT thanks you for your comment. The High VSL and Severe VSL language is not reversed. The failure to act to mitigate existing Adverse Reliability Impacts is more negatively-impactful to BES reliability than the failure to prevent future Adverse Reliability Impacts. “Any or more than three” means that if no TOPs or BAs were notified or, in the case of an RC having four or more TOPs and BAs in its area, more than 3 of them were not notified.	
Bonneville Power Administration	In most proposed NERC standards, it seems the tried and true method of writing a requirement is to list the entities required to implement the action, list the required action, and then list any exceptions to the required action. In proposed standard COM-001-2, Requirement R3, the SDT lists the exceptions before the rule. In proposed standard COM-001-2, Measure M1, when it is discussing quarterly testing, it uses the term, “alternative Interpersonal Communications.” The word “alternative” should be capitalized. (Please see our comment on question #2 regarding the overall use of the term ‘Alternative Interpersonal Communications.’) we agree and made the change In proposed standard COM-001-2, Measure M1, after the word, “substitute,” the word “Alternative” should be added in order to use similar language in both Requirement R1 and in Measure M1. (Again, please see my comment on question #2 regarding the overall use of the term ‘Alternative Interpersonal Communications.’) we agree and made the change In proposed standard COM-001-2, Measure M2, it uses the wording “normal communications capabilities.” If our comment on question #1 is acceptable in its entirety, and the SDT decides not to use the term, ‘Interpersonal Communication,’ then the wording of Measure M2 is also acceptable. However, if the SDT decides to continue with their use of that term, then this phrase should be replaced with “normal Interpersonal Communications capabilities” in order to use similar language in both

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	Requirement R2 and in Measure M2. we agree and made the change In proposed standard COM-001-2, VSL for R2, the Lower VSL uses the word “failed” to describe notifying the impacted entities within the tight bounds of a time frame, in this case, “more than 60 minutes but less than or equal to 70 minutes”. According to the given wording, every entity that is fully compliant with this standard would have “failed” to notify the impacted entities within the narrow bounds of the Lower VSL’s time constraint! A similar comment could be made for the Moderate, High and Severe VSL descriptions also. The wording “failed to notify” needs to be taken out and replaced with “notified.” Related to this, in the Moderate VSL, the description of a responsible entity notifying at least one, but not all impacted entities within 60-minutes would tend to negate the Lower VSL. If the SDT were trying to force a responsible entity into making at least one phone call of notification to one of the impacted entities within 60-minutes, the Severe VSL’s description accomplishes this feat all by itself. However, if the SDT were insistent on all impacted entities being notified within 60-minutes or a Moderate VSL will result, then that action makes the Lower VSL rather useless. VSLs are only applied when there is a violation. The time bounds are appropriate for a violation of the requirement In proposed standard COM-002-3, Measure M3, it uses the term “Directive” by itself. It seems appropriate for what is being discussed that the term “Reliability Directive” should have been used. We added Reliability In proposed standard COM-002-3, VSL for R3, the High VSL describes the responsible entity failing to respond appropriately, either by acknowledging the recipient when they repeated the intent correctly or by failing to reissue when the recipient did not repeat the intent correctly. This would seem to take care of the options...either the recipient was correct or they were incorrect, but not both. However, the Severe VSL, by using the word “AND” connects the two thoughts and provides for the recipient to be both correct and incorrect at the same time. Therefore, the Severe VSL seems to contradict itself, while the spirit of the VSL seems to be handled quite nicely by the High VSL by itself. It is therefore suggested that the SDT consider replacing the Severe VSL with the High VSL. The rcsdt believes that the VSLs are appropriate as written In proposed standard IRO-001-2, Measure M3, on the second to the last line, the measure repeats the wording “that it,” making it redundant. We have made the edit In proposed standard IRO-001-2, Data Retention (Part D, Section 1.3), on the first bullet, the word “operator” (following “Generator”) should be capitalized. We have made the edit In proposed standard IRO-001-2, High and Severe VSLs for Requirement R1, we don’t really see the utility of separating the parts of failing to prevent Adverse Reliability Impacts and failing to mitigate the magnitude or duration of such impacts. Maybe the SDT could give some examples, because we would be just as fine combining the two into one VSL and therefore simplifying the VSL part of the standard. VSL drafting guidelines indicate that multiple VSLs should be written for a requirement when feasible. It is feasible for this requirement. In proposed standard IRO-001-2, Severe VSL for Requirement R2, the VSL should include wording to indicate that an

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	exception can be granted to the responsible entity failing to comply with the given Reliability Directive due to safety, equipment, or regulatory or statutory requirements. Otherwise, the responsible entity will be given a Severe VSL every time one of these exceptions comes up. If an entity did not comply with a directive for a safety issue, then the entity did not violate the requirement. The VSL only applies when a requirement is violated. In proposed standard IRO-001-2, Severe VSL for Requirement R4, we are not entirely sure what the SDT was trying to say, but the spirit of the VSL would seem to be captured if the SDT removed the wording “any or” and left the VSL to say in part, “...failed to issue an alert to more than three...”In a related way, for the Severe VSL for Requirement R5, the spirit of the VSL would seem to be captured if the SDT removed the wording “any or” and left the VSL to say in part “...failed to notify more than three...” The intent of the wording is to allow multiple VSLs for the requirement. The word “any” indicates that there were no notifications made when there were less than three notifications to be made.
Response: The RCSDT thanks you for your comment. See responses above.	
Florida Municipal Power Agency and Some Members	IRO-001-2, R5 refers to only transmission problems being mitigated and not to other types of issues that could result in a threat of an Adverse Reliability Impacts, such as a large supply / demand imbalance (capacity or energy Emergency). IRO-001-2, R6 FMPA does not quite understand the requirement, is the intent to allow Operating Personnel the authority to veto planned outages "in" its own analysis tools, rather than "to"?
Response: The RCSDT thanks you for your comment. We have removed the word “transmission” from the requirement. R5: Each Reliability Coordinator that identifies an expected or actual threat with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when the problem has been mitigated. <i>[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i> Regarding IRO-001-2, R6, the planned outages mentioned are actual outages of the analysis tools themselves, not planned outages of transmission elements. No changes made.	
PPL	No additional comments.
Operating Personnel Communications Protocols SDT	No Comment

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PacifiCorp	No comment.
American Electric Power	Nothing additional at this time.
PNGC Power (15 member utilities)	PNGC (15 members) would like to associate itself with Steve Alexanderson's (Central Lincoln PUD) comments re 2006-06:"COM-001 M3, M4, COM-002 M2, and IRO-001 M1, and M2 all require evidence of DPs and/or LSEs "which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation. "While we appreciate the inclusion of "equivalent documentation", we are unsure what might qualify and who determines what qualifies as equivalent. We still believe COM-001 should not apply to DPs and LSEs, since these entities do not own or operate BES assets. Please consider this stakeholder input as well. While CIP-001 M4 can show that documented communication proves capability for R4, an entity has no way of proving capability if such communications did not take place during the audit period. We are unsure if the SDT realizes that not all of the entities subject to these standards maintain 24/7 dispatch desks. Much effort will go into complying with standards dealing with afterhour's directives that will never come, because the issuing entity will realize any action requested will not be timely enough and plan accordingly."
Response: The RCSDT thanks you for your comment. The DT included DPs and LSEs per FERC Order 693. The DT believes your comment regarding "CIP-001 M4" is actually in reference to COM-001-2 M4". While the DT is concerned that any proposed requirements must be clear and reasonably simple for which to document compliance, in this instance, a simple test phone call at a regular interval would prove capability (assuming it were recorded.)	
Manitoba Hydro	R2 2.1 If these actions are required as real time action, "Agreed to" should be opened up to "Acknowledged by". "Agreed to" in this requirement would be acceptable when there is time for impacted RC to study the other RC plans to determine impact on their system. To further justify this suggestion, R3 says "make notifications . . . with impacted RC". This statement indicates no commitment to the notifications and therefore presumes "acknowledgement".R7. Move this requirement to R2 and label as R2.3. R2 is "Agreed to" and R7 is "Not Agreed to". R8 covers the action required when "Not agreed to"R8. The only suggested addition to this is "When an RC with the identified Adverse Reliability Impact has created and implemented a plan with other affected RC", there should be an R8.1 stating "No RC shall place a burden on other RC's" and or/and an R8.2 stating, that "Reliability will override economics". The addition of these two sub requirements would also enhance R7 by removing all other reasoning that an impacted RC may dwell on to "not agree to".
Response: The RCSDT thanks you for your comment. We assume that this comment is in reference to IRO-014-2. The RCSDT does not agree with your proposed revision. The intent of the requirements is to have the parties agree to the course of action required to maintain reliability.	
Calpine Corporation	Regarding COM-001-2 R4. Many PURPA Qualifying Facilities and tolled Facilities communicate only with a scheduling

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	coordinator or similar entity, not necessarily directly with the Transmission Operator and/or Host Balancing Authority. The standard should be rewritten to clarify that direct communications between these Generator Operators and their Transmission Operator and/or Host Balancing Authority is either not required or that communications through their established paths of communication meets the requirement.
Response: The RCSDT thanks you for your comments. Effective communications rely on an effective hierarchy. It is crucial for a host TOP or BA to have effective communications with GOs attached to their systems so that BES operations can be coordinated, much like RCs must be able to communicate effectively with the system within its footprint. PURPA qualifying facilities can impact BES reliability, and, as such, are included here.	
Duke Energy	Requirement R6 of IRO-001-2 contains the capitalized term “Operating Personnel”. This is not a NERC-defined term and should not be capitalized. As a general comment on new and revised NERC-defined terms, we believe that when such terms are introduced in a project with multiple standards, the terms should be included in the “Definitions of Terms Used in Standard” section of each standard. For example, in this project the term “Adverse Reliability Impact” is revised in IRO-001-2, but while it is also used in IRO-014-2, it no longer appears in the “Definitions of Terms Used in Standard” section of IRO-014-2.
Response: The RCSDT thanks you for your comment and has changed “Operating Personnel” to “System Operator”.	
Southwest Power Pool	SPP has also worked collaboratively with the IRC SRC on the comments submitted by that group on this standard and we fully support those. However, SPP found additional concerns at the last minute which could not be included in the SRC set due to the submittal deadline and has chosen to submit these separately. There are 10 other standards where the word “Directive” is used. Will the term Reliability Directive replace them, or will we get a different definition for Directive, or will both terms be the same?
The RC SDT believes that “directive” is lowercase in the other instances in NERC standards. The RTO SDT, OCP SDT and RC SDT have attempted to move toward “Reliability Directive” in concert so as to remove the remaining ambiguity from NERC standards. The intent of the DT is to preserve a method for RCs, BAs and TOP to make the determination of “what actions are required” and clearly communicate the importance to the receiver above normal day-to-day operational communications. The trigger of “Reliability Directive” by the issuer highlights these actions as needed to maintain BES reliability and should be carried out as directed (unless such actions would violate safety, equipment, regulatory or statutory requirement per the language of the requirement) and all parties to the conversation need to be very cognizant of the system conditions that are requiring actions. The DT has attempted to craft clear and specific language that support BES reliability and hopes that this work can support and enhance the development of the OCP SDT and subsequent expansion of the term “Reliability Directive”.	
E.ON U.S.	The definition of Reliability Directive should be incorporated into COM-003-1 with an associated single requirement that requires the use of Three-part Communication during the communication of a Reliability Directive.

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Response: The RCSDT thanks you for your comment. The DT has attempted to craft clear and specific language that support BES reliability and hopes that this work can support and enhance the development of the OPCSDT and subsequent expansion of the term “Reliability Directive”.COM-003 is outside the scope of the RCSDT project.	
Public Service Enterprise Group Companies	The PSEG Companies are generally in agreement with the proposal.
Response: The RCSDT thanks you for your comment.	
Southern Company Services	These standards are more restrictive and prescriptive each time that a revision is issued for comments. It appears that the SDT does not believe that entities operating the Bulk Electric System cannot operate the system in a reliable manner using cooperation between parties.
Response: The RCSDT thanks you for your comment. The DT feels that these standard requirements have been improved to benefit reliability and act as a “backstop” to prevent the breakdown of cooperation between parties and incent effective communications between operators of the BES.	
NERC Standards Review Subcommittee	1) This standard could be boiled down to one requirement and that is to maintain the continuous ability to communicate with other appropriate registered entities regardless of the need for a backup system. 2) For IRO-001-2 R1, “act” should be removed. The RC can’t act but can only issue Reliability Directives per the functional model. 3) IRO-001-2 R4 and R5 Severe VSLs need to have “any or” removed. The VSL should only apply for three or more and “any or” conflicts with this.COM-001-2 R2 Severe VSL conflicts with other VSLs. Specifically, the use of the word “any” in the Severe VSL is problematic. Notifying one entity at 65 minutes fits both the Lower VSL and Severe VSL as well. We suggest deleting the first portion of the Severe VSL that reads, “The responsible entity failed to notify any impacted entities of the failure of its normal Interpersonal Communications capabilities within 60 minutes.” 4) COM-001-2 R2 needs to be coordinated with EOP-008-1 since EOP-008-1 R1.5 is requiring 2 hours. COM-001-2 R1 should be clarified to remove 60 minutes. Perhaps the specific time frame is too administrative and too dependent on the circumstances and doesn’t purport to directly impact reliability of the backup functionality. If a time frame is desired perhaps the registered entity which knows their backup functionality capabilities and their plan to actuate these capabilities could be the best entity to define a reasonable immediate time frame. 5) The NERC BOT recently approved the pursuing the Results/Performance Based standards development activity. Based on this recent decision, we believe the BOT has signaled their intent to remove administrative types of requirements from all standards. The IRO-001-2 R6 for the RC to have the authority to veto outages of their analysis tools and the COM-001-2 R3 requirement to use the English language are clearly not result or performance based but

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	rather administrative. If an operator used Portuguese to issue a Reliability Directive they will not be able to satisfy three-part communications in COM-002-3 in addition to many other standards and requirements they could not comply with. Even if an RC has veto authority over analysis tools, failure to exercise it would render the authority meaningless. Furthermore, the RC would not be able to meet a host of other requirements and standards such as operating within IROL because they would not be able to assess the system appropriately.
Response: The RCSDT thanks you for your comments. - The DT has attempted to eliminate redundancy and ambiguity while not creating any reliability gaps. As written, the requirements are geared to incent folks to have effective communications in-place at all times while flexible enough to accommodate technology changes and process improvements by the industry. - The RC must “act” (ie. do something “to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts”. This may include analysis, coordinate cooperative actions or issue “Reliability Directives”. “Act” does not imply solely the manipulation of BES elements. - The VSL language is intended to accommodate scenarios where only one entity is impacted or several entities are impacted. “The Reliability Coordinator failed to notify any or more than three impacted Transmission Operators, Balancing Authorities...” and provide the same measurability level. - The RCSDT notes that EOP-008-1 is a proposed standard that has not been approved for enforcement. Also, EOP-008-1 deals with an entire control center where COM-001 deals with Interpersonal Communications capability with another entity. We will retain the original 60 minute timeframe. - R6 is beyond administrative, it is intended to prevent planned reliability tool outages without the consent or knowledge of operating personnel. Although the DT agrees with the premise that many other requirements may be violated by ineffective communications, the intent of the requirement is to ensure there are effective communications methods in place for communicating BES activity across entities. Effective communication are a cornerstone of BES reliability and the intent of the requirement is to prevent the violation of other more significant performance type standard requirements due to ineffective communications before they impact the BES.	
Xcel Energy	We would like to restate our belief that the Standard should explicitly state the requirement for RCs, TOPs and BAs to have both primary and alternate means of communication. To “imply” a required element within a Standard is inconsistent with the NERC Reliability Standards Development Procedure, which states “All mandatory requirements of a reliability standard shall be within an element of the standard.” We would suggest a requirement language that simply states “Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall maintain a means for both primary Interpersonal Communication as well as Alternative Interpersonal Communication used to communication real-time operating information.”
Response: The RCSDT thanks you for your comment. The RCSDT has crafted the latest versions (as supported by stakeholder comments) to support reliable communications by better describing how industry communicates and providing flexibility for the adoption of alternative communication media. The RCSDT also tried to minimize over-prescriptive requirements that result in no value to reliability and impose an	

Organization	Question 8 Comment
administrative burden.	
Electric Market Policy	We would like to thank, AND highly commend this SDT for their effort. This is the type of effort that every SDT should strive for. Elimination of requirements that are either redundant or unnecessary, and therefore distract entities, is every bit as important to the standards process as is the creation of new standards where reliability gaps are found. The proliferation of new and revised standards is becoming a concern for many in this industry and many of us feel the effort going into the review and compliance documentation is reducing the focus on monitoring and otherwise insuring that reliable operations can be maintained.
Response: The RCSDT thanks you for your comments and agrees reducing redundancy and ambiguity in the standards improves industry focus and therefore reliability of the BES.	
ERCOT ISO	ERCOT ISO offers the following additional comments: <u>COM-001-2</u> 1) The SDT should consider coordinating their efforts with the OPCP drafting team efforts (COM-003) to ensure consistency across the standards. 2) For R4 – ERCOT ISO recommends considering adding Load-Serving Entity to the applicability due to their role in capacity and energy emergencies. 3) With respect to the Measures, “alternative” needs to be capitalized in M1. Also, if the intent is to include items such as regular phones or data links that are daily use items then Measures should reflect this. 4) ERCOT ISO suggests the following change to the terms Adverse Reliability Impact and Emergency. We think these simple changes will tie all the terms together.
Response: The RC SDT thanks you for your comments. 1) The RC SDT feels that the concept of a Reliability Directive is an important tool for RC, BA and TOP to maintain reliability and that the revisions are consistent with parts of the directives in FERC Order 693. The work of the RC SDT along with the OPCP SDT, as currently recognized, will cover the original intent of COM-002 and still provide a “defense in depth strategy” as suggested by the NERC comment. Stakeholder requests and consensus appears to have been achieved with respect to the definition of Reliability Directive and the requirements that the RC SDT have developed for COM-002. This will further the efforts of the OCPD SDT in achieving stakeholder consensus for their proposed requirements in COM-003. 2) The RCSDT has relied on the authority hierarchy (RC/ BA/ TOP / DP) to ensure accountability with the current FM, while not over-prescribing requirements. The RC SDT notes that, per the Functional Model, a DP may “direct” an LSE to communicate <i>requests</i> for voluntary load curtailment and not reliability situations: Item 9 on page 47 of version 5 of the Functional Model: “Directs Load-Serving Entities to communicate requests for voluntary load curtailment.”	

Organization	Question 8 Comment
	The RCSDT will forward this comment to the FMWG for their consideration in revising the language. 3) & 4) Please see previous responses to your comments assuming those are the referenced comments.

Consideration of Comments on Reliability Coordination — Project 2006-06

The Reliability Coordination Drafting Team thanks all commenters who submitted comments on the proposed revisions to COM-001-2, IRO-001-2, IRO-002-2 and IRO-005-4. These standards were posted for a 30-day public comment period from February 25, 2011 through March 7, 2011. The stakeholders were asked to provide feedback on the standards through a special Electronic Comment Form. There were 41 sets of comments, including comments from more than 168 different people from approximately 112 companies representing 9 of the 10 Industry Segments as shown in the table on the following pages.

http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Herb Schrayshuen, at 609-452-8060 or at herb.schrayshuen@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.¹

Summary Consideration:

The RCSDT thanks all stakeholders for their comments. Many stakeholders provided comments suggesting revisions to the standards. Many of these suggestions were incorporated into the standards. As a result of the revisions, the RCSDT is moving COM-001-2, COM-002-3 and IRO-001-2 to a successive ballot. The RCSDT made a few clarifying edits to the remaining standards based on stakeholder comments. Therefore, IRO-002-3, IRO-005-4 and IRO-014-2 are being moved to recirculation ballot. Because of this approach, the SDT will be proposing an interim change to IRO-001: the elimination of Requirement R7, as it is duplicative of one of the requirements in IRO-014-2.

For the COM-001 standard, several commenters had suggestions for improvements to the requirement language and applicability. The RCSDT believes the standard correctly and adequately requires each applicable entity that would have capability to receive Interconnection and operating information to have Interpersonal Communications and Alternative Interpersonal Communications to be used when the Interpersonal Communication is not available. The RCSDT has addressed the applicability of the standards and implementation plans by aligning COM-001-2, and COM-002-3 to include the same entities and by removing LSE, PSE and TSP from the COM standards.

Many comments were concerned about both the medium (e.g. cellular, satellite, etc.) and media (e.g. voice, email, etc.) used for Interpersonal Communications. The current language avoids being prescriptive and allows each entity to determine what is suitable. Interpersonal Communication and Alternative Interpersonal Communication is between the applicable entities which may include multiple locations (e.g. a primary and back-up control center).

The RCSDT added the following Requirement Parts at the suggestion of stakeholders:

- 3.5 Adjacent Transmission Operators synchronously connected within the same Interconnection
- 4.3 Adjacent Transmission Operators synchronously connected within the same Interconnection
- 5.6 Adjacent Balancing Authorities
- 6.3 Adjacent Balancing Authorities

The RCSDT agrees with the many industry comments and removed the phrase "to exchange Interconnection and operating information" in requirements R1 through R8. This removal clarifies that the intent of this capability is NOT for the exchange of data.

¹ The appeals process is in the Reliability Standards Development Procedures:
<http://www.nerc.com/standards/newstandardsprocess.html>.

A few commenters also expressed concerns about the frequency of testing Alternative Interpersonal Communications capability. The RCSDT believes that the proposed testing frequency is supported by the majority of stakeholders and is not overly burdensome.

Several commenters suggested that VSLs should be written based on the percent of entities rather than by an occurrence of a violation. VSLs must be written on a violation occurrence basis in accordance with FERC guidelines. The requirements specify which entities must be included in communications capabilities. If a single entity is missing, this is a violation of the requirement. According to VSL guidelines, if missing any part of the requirement could have the same reliability outcome as missing the entire requirement, the requirement is binary and the VSL must be severe.

A new requirement was added to COM-001 for clarity regarding responsibilities of the Distribution Provider and the Generator Operator when either entity experiences a failure of its Interpersonal Communication capability:

R11. Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities shall consult with its Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability. *[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]*

This requirement requires collaboration between entities to restore a failed communications capability.

The RCSDT asked stakeholders if they believed that the requirements of TOP-001-1 obviate the need to develop additional requirements to address Xcel's comment as directed in FERC Order 693. The original justification that the RCSDT posited for not adding a requirement to directly address Xcel Energy's comments in paragraph 516 and FERC's related recommendation in paragraph 523 was that TOP-001-1 R3 was considered to address this concern. Since that time, the RTO SDT has proposed to retire TOP-001-1 R3. However, NERC has since retired IRO-004-1 R3 and R5 along with IRO-005-3 R5. Because these are retired, there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency. Therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered "would violate safety, equipment, regulatory, or statutory requirements," the TOP may respond to the RC that it cannot comply.

Stakeholders were asked if they agree with the revision to IRO-001, R1 for certifying Reliability Coordinators. Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.

A significant revision to IRO-001-2 was made by removing the Interchange Coordinator from the standard. The RCSDT made this revision because the Balancing Function is responsible for implementing interchange (see NERC Reliability Functional Model, version 5, page 32, item 7) and to operate the Balancing Authority Area to maintain load-interchange-generation balance (item 3).

The RCSDT asked stakeholders if they agree with moving two requirements from IRO-001 back to IRO-002 relating to Analysis Tool outages. All stakeholders that responded agreed and there were no comments received.

The RCSDT asked stakeholders if they agree with moving two requirements from IRO-001 back to IRO-005 relating to Reliability Coordinator notifications. Several commenters noted a typographical error in R1 which was corrected to read:

When the results of an Operational Planning Analysis or Real-time Assessment indicate an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify ~~issue an alert to~~ all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

One commenter also asked that an errant yellow text box be removed from Page 1, which was also done.

The RCSDT received a number of comments regarding the applicability of COM-001, and COM-002. The RCSDT agrees with these comments and has removed PSE and LSE from the COM-001-2 implementation plan. The RCSDT also addressed minor issues involving typos, formatting and style.

The RCSDT received comments suggesting clarification of COM-002-3. The RCSDT intends the communication of Reliability Directives to be person-to-person and in such a manner that the Reliability Directive is understood and not necessarily repeated verbatim. COM-002-3 is not intended to be prescriptive on how the Reliability Directive is issued. Spoken or written communications are valid methods (i.e. using the telephone, radio, electronic texting, email, etc.). The purpose of COM-002-3 is to ensure emergency communications between operating personnel are effective. There is no proxy requirement for 24/7 operating personnel regarding small entities. Only “capability” as provided for in COM-001-2 is applicable. The RCSDT agrees that the use of Blast Calls to issue Reliability Directives, in mass, is efficient and effective. The RCSDT believes Reliability Directives issued in mass should be defined by procedure, and that the procedure would establish a method of affirmation and notice of implementation. As envisioned, communications protocols would be addressed in the COM-003 standard being developed in Project 2007-02.

Some commenters suggested revisions to IRO-014, requirement R8 to conform to similar requirements R6 and R7. The RCSDT made the suggested revision by re-ordering R8:

R8. During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, each Reliability Coordinator shall implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact unless such actions would violate safety, equipment, regulatory or statutory requirements. [Violation Risk Factor: High][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

IRO-014-2, requirement R4 is applicable to those Reliability Coordinators engaged in activities related to requirement R1 and part 1.7. It is unlikely that Reliability Coordinators geographically and electrically distant from one another will have mutually agreed upon operating procedures (per requirement R1), and therefore requirement R4 would not be applicable. The RCSDT believes IRO-014-2, requirement R4 (which requires weekly communication) provides reasonable contact and flexibility – and this requirement is in effect today.

The RCSDT coordinated the use of the NERC Glossary term “Adverse Reliability Impact” with the Real-Time Operations team and continues the practice of informing all RCs of Adverse Reliability Impacts in requirement R5.

The RCSDT has revised IRO-014-2, requirements R6-R8 to clarify that when one RC identified a problem and presents an action plan for another RC, the second RC is obligated to implement the action plan. The RCSDT will forward the concern about RC’s identifying themselves and the receiver to establish authority to the Project 2007-02, Operating Personnel Communications Protocols SDT. The Project 2007-02 team is developing a standard that includes requirements for use of specific communications protocols.

Index to Questions, Comments, and Responses

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Consideration of Comments on Reliability Coordination — Project 2006-06

The Industry Segments are:

- 1 — Transmission Owners
- 2 — RTOs, ISOs
- 3 — Load-serving Entities
- 4 — Transmission-dependent Utilities
- 5 — Electric Generators
- 6 — Electricity Brokers, Aggregators, and Marketers
- 7 — Large Electricity End Users
- 8 — Small Electricity End Users
- 9 — Federal, State, Provincial Regulatory or other Government Entities
- 10 — Regional Reliability Organizations, Regional Entities

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
1.	Group	Guy Zito	Northeast Power Coordinating Council										X
Additional Member		Additional Organization	Region	Segment Selection									
1.	Alan Adamson	New York State Reliability Council, LLC	NPCC	10									
2.	Gregory Campoli	New York Independent System Operator	NPCC	2									
3.	Kurtis Chong	Independent Electricity System Operator	NPCC	2									
4.	Sylvain Clermont	Hydro-Quebec TransEnergie	NPCC	1									
5.	Bohdan M. Dackow	US Power Generating Company (USPG)	NPCC	NA									
6.	Chris de Graffenried	Consolidated Edison Co. of New York, Inc.	NPCC	1									
7.	Gerry Dunbar	Northeast Power Coordinating Council	NPCC	10									
8.	Dean Ellis	Dynegy Generation	NPCC	5									
9.	Brian Evans-Mongeon	Utility Services	NPCC	8									
10.	Mike Garton	Dominion Resources Services, Inc.	NPCC	5									
11.	Brian L. Gooder	Ontario Power Generation Incorporated	NPCC	5									
12.	Kathleen Goodman	ISO - New England	NPCC	2									
13.	Chantel Haswell	FPL Group, Inc.	NPCC	5									
14.	David Kiguel	Hydro One Networks Inc.	NPCC	1									
15.	Michale R. Lombardi	Northeast Utilities	NPCC	1									

Consideration of Comments on Reliability Coordination — Project 2006-06

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
16.	Rnady MacDonald	New Brunswick System Operator	NPCC	2									
17.	Bruce Metruck	New York Power Authority	NPCC	6									
18.	Lee Pedowicz	Northeast Power Coordinating Council	NPCC	10									
19.	Robert Pellegrini	The United Illuminating Company	NPCC	1									
20.	Si Truc Phan	Hydro-Quebec TransEnergie	NPCC	1									
21.	Saurabh Saksena	National Grid	NPCC	1									
22.	Michael Schiavone	National Grid	NPCC	1									
23.	Peter Yost	Consolidated Edison co. of New York, Inc.	NPCC	3									
24.	Ben Wu	Orange and Rockland Utilities	NPCC	1									
2.	Group	Ron Sporseen	PNGC Power member owners		X		X					X	
	Additional Member	Additional Organization	Region	Segment Selection									
1.	Bud Tracy	Blachly-Lane Electric Cooperative	WECC	3									
2.	Dave Markham	Central Electric Cooperative	WECC	3									
3.	Dave Hagen	Clearwater Power	WECC	3									
4.	Roman Gillen	Consumer's Power Inc.	WECC	1, 3									
5.	Roger Meader	Coos-Curry Electric Cooperative	WECC	3									
6.	Dave Sabala	Douglas Electric Cooperative	WECC	8									
7.	Bryan Case	Fall River Electric Cooperative	WECC	3									
8.	Rick Crinklaw	Lane Electric Cooperative	WECC	3									
9.	Michael Henry	Lincoln Electric Cooperative	WECC	3									
10.	Richard Reynolds	Lost River Electric Cooperative	WECC	8									
11.	Jon Shelby	Northern Lights	WECC	3									
12.	Ray Ellis	Okanogan Electric Cooperative	WECC	8									
13.	PNGC Power	Rick Paschall	WECC	8									
14.	Heber Carpenter	Raft River Electric Cooperative	WECC	3									
15.	Ken Dizes	Salmon River Electric Cooperative	WECC	1, 3									
16.	Steve Eldrige	Umatilla Electric Cooperative	WECC	1, 3									
17.	Marc Farmer	West Oregon Electric Cooperative	WECC	8									

Consideration of Comments on Reliability Coordination — Project 2006-06

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
3.	Group	Denise Koehn	Bonneville Power Administration	X		X		X	X				
		Additional Member	Additional Organization	Region	Segment Selection								
1.	Paul Blake	BPA, Transmission Control Center	PSC	WECC	1								
2.	Tedd Snodgrass	BPA, Transmission Dispatch		WECC	1								
4.	Group	Brenda Truhe	PPL	X									
		Additional Member	Additional Organization	Region	Segment Selection								
1.	Annette Bannon	PPL Generation		RFC	5								
2.	Annette Bannon	PPL Generation		WECC	5								
3.	Mark Heimbach	PPL EnergyPlus		MRO	6								
4.	Mark Heimbach	PPL EnergyPlus		NPCC	6								
5.	Mark Heimbach	PPL EnergyPlus		RFC	6								
6.	Mark Heimbach	PPL EnergyPlus		SERC	6								
7.	Mark Heimbach	PPL EnergyPlus		SPP	6								
8.	Mark Heimbach	PPL EnergyPlus		WECC	6								
5.	Group	Patricia Hervochon	PSEG	X		X		X	X				
		Additional Member	Additional Organization	Region	Segment Selection								
1.	Kenneth Brown	PSE&G		RFC	1								
2.	Jeffrey Mueller	PSE&G		RFC	3								
3.	Kenneth Petroff	PSEG Nuclear		RFC	5								
4.	Peter Dolan	PSEG ER&T		RFC	6								
6.	Group	Louis Slade	Dominion	X		X		X	X				
		Additional Member	Additional Organization	Region	Segment Selection								
1.	Mike Garton			MRO									
2.	Connie Lowe			SERC									
3.	Michael Gildea			ERCOT									

Consideration of Comments on Reliability Coordination — Project 2006-06

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7.	Group	Jim Case	SERC OC Standards Review Group		X		X																																																																																																																					
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21.	John Troha	SERC	SERC	10																																																																																																																								
8.	Group	Albert DiCaprio	IRC Standards Review Committee			X																																																																																																																						
<table><tr><th colspan="2">Additional Member</th><th>Additional Organization</th><th>Region</th><th>Segment Selection</th></tr><tr><td>1.</td><td>Patrick Brown</td><td>PJM</td><td>RFC</td><td>2</td></tr><tr><td>2.</td><td>Matt Goldberg</td><td>ISO-NE</td><td>NPCC</td><td>2</td></tr></table>															Additional Member		Additional Organization	Region	Segment Selection	1.	Patrick Brown	PJM	RFC	2	2.	Matt Goldberg	ISO-NE	NPCC	2																																																																																															
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Consideration of Comments on Reliability Coordination — Project 2006-06

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
3.		Dan Rochester	IESO NPCC	2									
4.		Steve Myers	ERCOT ERCOT	2									
5.		Mark Thompson	AESO WECC	2									
6.		Greg Van Pelt	CAISO WECC	2									
7.		Charles Yeung	SPP SPP	2									
8.		Terry Bilke	MISO RFC	2									
9.		Greg Campoli	NYISO NPCC	2									
10.		Kathleen Goodman	ISO-NE NPCC	2									
11.		Ben Li	IESO NPCC	2									
12.		Jason Marshall	MISO RFC	2									
13.		Don Weaver	NBSO NPCC	2									
9.	Group	Carol Gerou	MRO's NERC Standards Review Subcommittee										X
	Additional Member	Additional Organization	Region	Segment Selection									
1.	Mahmood Safi	Omaha Public Utility District	MRO	1, 3, 5, 6									
2.	Chuck Lawrence	American Transmission Company	MRO	1									
3.	Tom Webb	Wisconsin Public Service Corporation	MRO	3, 4, 5, 6									
4.	Jason Marshall	Midwest ISO Inc.	MRO	2									
5.	Jodi Jenson	Western Area Power Administration	MRO	1, 6									
6.	Ken Goldsmith	Alliant Energy	MRO	4									
7.	Alice Ireland	Xcel Energy	MRO	1, 3, 5, 6									
8.	Dave Rudolph	Basin Electric Power Cooperative	MRO	1, 3, 5, 6									
9.	Eric Ruskamp	Lincoln Electric System	MRO	1, 3, 5, 6									
10.	Joseph Knight	Great River Energy	MRO	1, 3, 5, 6									
11.	Joe DePoorter	Madison Gas & Electric	MRO	3, 4, 5, 6									
12.	Scott Nickels	Rochester Public Utilities	MRO	4									
13.	Terry Harbour	MidAmerican Energy Company	MRO	1, 3, 5, 6									
14.	Richard Burt	Minnkota Power Cooperative, Inc.	MRO	1, 3, 5, 6									

Consideration of Comments on Reliability Coordination — Project 2006-06

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
10.	Group	Sam Ciccone	FirstEnergy	X		X	X	X	X				
Additional Member Additional Organization Region Segment Selection 1. Dave Folk FE RFC 1, 3, 4, 5, 6 2. Doug Hohlbaugh FE RFC 1, 3, 4, 5, 6 3. Brian Orians FE RFC 5 4. John Reed FE RFC 1 5. Andy Hunter FE RFC 1 6. Bil Duge FE RFC 5													
11.	Group	Jason Marshall	Midwest ISO Standards Collaborators		X								
Additional Member Additional Organization Region Segment Selection 1. Robert Thomasson Big Rivers Electric Cooperative SERC 1, 3 2. Joe O'Brien NIPSCo RFC 1, 3, 5, 6 3. Bob Thomas Illinois Municipal Electric Agency RFC 4 4. Kirit Shah Ameren SERC 1 5. Joe Knight Great River Energy MRO 1, 3, 5, 6 6. Mike Moltane ITC Holdings MRO 1													
12.	Group	Robert Rhodes	SPP Standards Development	X	X	X	X	X					
Additional Member Additional Organization Region Segment Selection 1. Fred Meyer Empire District Electric SPP 1 2. Gregory McAuley Oklahoma Gas & Electric SPP 1, 3, 5 3. John Allen City Utilities of Springfield, MO SPP 1, 4 4. Kyle McMenamin Xcel Energy SPP 1, 3, 5 5. Michelle Corley Cleco SPP 1, 3, 5 6. Rick Brennehan Xcel Energy SPP 1, 3, 5 7. Sean Simpson Board of Public Utilities of Kansas City, KS SPP 1, 3, 5 8. Forrest Brock Western Farmers Electric Cooperative SPP 1, 3, 5													

Consideration of Comments on Reliability Coordination — Project 2006-06

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
9.		Jim Useldinger	Kansas City Power & Light	SPP	1, 3, 5								
13.	Group	Michael Gammon	Kansas City Power & Light		X		X		X	X			
Additional Member Additional Organization Region Segment Selection 1. Jennifer Flandermeyer Kansas City Power & Light SPP 1, 3, 5, 6													
14.	Individual	Jack Cashin	Competitive Suppliers					X					
15.	Individual	John Bee	Exelon	X		X		X	X				
16.	Individual	Sandra Shaffer	PacifiCorp	X		X		X	X				
17.	Individual	Janet Smith	Arizona Public Service Company	X		X		X	X				
18.	Individual	Brent Ingebrigtsen	LG&E and KU Energy			X							
19.	Individual	Cindy Martin	Southern Company	X		X							
20.	Individual	Greg Froehling	Green Country Energy, Green Country Operating Services					X					
21.	Individual	Steve Alexanderson	Central Lincoln			X	X						
22.	Individual	Mace Hunter	Lakeland Electric	X		X		X					
23.	Individual	Joe Petaski	Manitoba Hydro	X		X		X	X				
24.	Individual	Brian J Murphy	NextEra Energy, Inc.	X		X		X	X				
25.	Individual	Jonathan Appelbaum	United Illuminating Company	X									

Consideration of Comments on Reliability Coordination — Project 2006-06

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
26.	Individual	Paul Kerr	Shell Energy North America (US), L.P.						X				
27.	Individual	Thad Ness	American Electric Power	X		X		X	X				
28.	Individual	David Thorne	Pepco Holdings Inc	X		X							
29.	Individual	Andrew Pusztai	American Transmission Company	X									
30.	Individual	Kathleen Goodman	ISO New England		X								
31.	Individual	Steve Myers	ERCOT ISO		X								
32.	Individual	Steve Rueckert	WECC										X
33.	Individual	Bill Keagle	BGE	X									
34.	Individual	Brenda Powell	Constellation Energy Commodities Group						X				
35.	Individual	Greg Rowland	Duke Energy	X		X		X					
36.	Individual	CJ Ingersoll	CECD			X							
37.	Individual	Rex A Roehl	Indeck Energy Services					X					
38.	Individual	Shaun Anders	City of Springfield, IL - City Water Light and Power (CWLP)	X		X		X					
39.	Individual	RoLynda Shumpert	South Carolina Electric and Gas	X		X		X	X				
40.	Individual	Dan Rochester	Independent Electricity System Operator		X								

Consideration of Comments on Reliability Coordination — Project 2006-06

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
41.	Individual	Alice Ireland	Xcel Energy	X		X		X	X				

1. Do you agree with COM-001 requirements for Interpersonal Communications capability and Alternative Interpersonal Communications capability (R1-R8)? If not, please explain in the comment area below.

Summary Consideration:

For the COM-001 standard, several commenters had suggestions for improvements to the requirement language and applicability. The RCSDT believes the standard correctly and adequately requires each applicable entity that would have capability to receive Interconnection and operating information to have Interpersonal Communications and Alternative Interpersonal Communications to be used when the Interpersonal Communication is not available. The RCSDT has addressed the applicability of the standards and implementation plans by aligning COM-001-2, and COM-002-3 to include the same entities and by removing LSE, PSE and TSP from the COM standards.

Many comments were concerned about both the medium (e.g. cellular, satellite, etc.) and media (e.g. voice, email, etc.) used for Interpersonal Communications. The current language avoids being prescriptive and allows each entity to determine what is suitable. Interpersonal Communication and Alternative Interpersonal Communication is between the applicable entities which may include multiple locations (e.g. a primary and back-up control center).

The RCSDT added the following Requirement Parts at the suggestion of stakeholders:

3.5 Adjacent Transmission Operators synchronously connected within the same Interconnection

4.3 Adjacent Transmission Operators synchronously connected within the same Interconnection

5.6 Adjacent Balancing Authorities

6.3 Adjacent Balancing Authorities

The RCSDT agrees with the many industry comments and removed the phrase "to exchange Interconnection and operating information" in requirements R1 through R8. This removal clarifies that the intent of this capability is NOT for the exchange of data.

A few commenters also expressed concerns about the frequency of testing Alternative Interpersonal Communications capability. The RCSDT believes that the proposed testing frequency is supported by the majority of stakeholders and is not overly burdensome.

Several commenters suggested that VSLs should be written based on the percent of entities rather than by an occurrence of a violation. VSLs must be written on a violation occurrence basis in accordance with FERC guidelines. The requirements specify which entities must be included in communications capabilities. If a single entity is missing, this is a violation of the requirement. According to VSL guidelines, if missing any part of the requirement could have the same reliability outcome as missing the entire requirement, the requirement is binary and the VSL must be severe.

A new requirement was added for clarity regarding responsibilities of the Distribution Provider and the Generator Operator when either entity experiences a failure of its Interpersonal Communication capability:

R11. Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities shall consult with its Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability. *[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]*

This requirement requires collaboration between entities to restore a failed communications capability.

Organization	Yes or No	Question 1 Comment
ERCOT ISO	No	We expressed in the last posting that we felt the definition of Interpersonal Communications might inadvertently include data. The SDT responded that it does not by referring to Interpersonal in the name of the definition. Clearly, you cannot refer to the word you are defining in order to define it. However, it is possible “allows two or more individuals to ...” may solve this problem. Clarity should be sought in the next posting, if possible. This standard does not comport with the informational filing that NERC submitted to FERC on August 10, 2009 regarding its discontinued use of sub-requirements in standards development activities. We request the sub-requirements be modified into bulleted lists. Consider striking “to exchange Interconnection and operating information” in R1, R3, R5, R7, and R8. It is redundant to the use of Interpersonal Communications “to interact, consult, or exchange information” in the definition. Consider striking “to exchange Interconnection and operating information” in R2, R4, R6. It is redundant to the use of Alternative Interpersonal Communications which uses Interpersonal Communications in its definition. Interpersonal Communications includes “to interact, consult, or exchange information” in its definition. For R2, why is Interchange Coordinator excluded? It is included in the Requirement R1 which deals with the Interpersonal Communications. Communications would need to be maintained with the Interchange Coordinator in the event of a failure of the Interpersonal Communications. For R3, affected neighboring Transmission Operators should be included. For R4 and R6, the sub-requirement list is different than for than for the associated Interpersonal Communications requirements R3 and R5 respectively. We believe these should be duplicate. That is the sub-requirement list for R4 should match R3 and the R6 should match R5. In the event of a failure of the Interpersonal Communications, the Transmission Operator and Balancing Authority both would need to maintain communications to the same entities as in the requirement to have Interpersonal Communications. Again, we would suggest replacing sub-requirements with bulleted lists. For R5, why are neighboring Balancing Authorities not included? Additionally R5 should only read Contact with Interchange Coordinator within same Interconnection. They certainly need to be able to contact one another to identify discrepancies in scheduling and sources of meter error that could lead to deviations in ACE. Should R2, R4 and R6 be constructed parallel to R1, R3, and R5? In R1, R3 and R5, the requirement is “shall have” while in R2, R4, and R6, the requirement is “shall designate”. Since one is for the Interpersonal Communications and the other is for the Alternative Interpersonal Communications, it seems the same wording should be used. We do not believe R2.2 and R1.2 should be limited to Reliability Coordinators in the same Interconnection only. We suggest modifying “within the same Interconnection” to “within the same Interconnection, and, as appropriate, between a-synchronously connected RCs which are not precluded by law from scheduling interchange energy (for schedule changes, curtailments, etc.)” since reliability coordination may be required among the RCs on both sides of an Interconnection boundary. The VSLs for R1 through R8 should be expanded to include multiple levels based on the number of entities that the functional entity does not have Interpersonal Communications or Alternative Interpersonal

Organization	Yes or No	Question 1 Comment
		Communications. FERC specified their general preference for gradated in paragraph 27 of their June 19, 2008 order on VSLs. The second half of the Severe VSL for R9 is almost a duplicate to the Lower VSL. There are some small changes in the wording but both situations deal with the case where there is a problem that has been identified with the Interpersonal Communications system and it takes more than two hours to initiate repair.
ISO New England	No	We expressed in the last posting that we felt the definition of Interpersonal Communications might inadvertently include data. The SDT responded that it does not by referring to Interpersonal in the name of the definition. Clearly, you cannot refer to the word you are defining in order to define it. However, it is possible “allows two or more individuals to ...” may solve this problem. Clarity should be sought in the next posting, if possible. This standard does not comport with the informational filing that NERC submitted to FERC on August 10, 2009 regarding its discontinued use of sub-requirements in standards development activities. We request the sub-requirements be modified into bulleted lists. Consider striking “to exchange Interconnection and operating information” in R1, R3, R5, R7, and R8. It is redundant to the use of Interpersonal Communications “to interact, consult, or exchange information” in the definition. Consider striking “to exchange Interconnection and operating information” in R2, R4, R6. It is redundant to the use of Alternative Interpersonal Communications which uses Interpersonal Communications in its definition. Interpersonal Communications includes “to interact, consult, or exchange information” in its definition. For R2, why is Interchange Coordinator excluded? It is included in the Requirement R1 which deals with the Interpersonal Communications. Communications would need to be maintained with the Interchange Coordinator in the event of a failure of the Interpersonal Communications. For R3, affected neighboring Transmission Operators should be included. For R4 and R6, the sub-requirement list is different than for than for the associated Interpersonal Communications requirements R3 and R5 respectively. We believe these should be duplicate. That is the sub-requirement list for R4 should match R3 and the R6 should match R5. In the event of a failure of the Interpersonal Communications, the Transmission Operator and Balancing Authority both would need to maintain communications to the same entities as in the requirement to have Interpersonal Communications. Again, we would suggest replacing sub-requirements with bulleted lists. For R5, why are neighboring Balancing Authorities not included? Additionally R5 should only read Contact with Interchange Coordinator within same Interconnection. They certainly need to be able to contact one another to identify discrepancies in scheduling and sources of meter error that could lead to deviations in ACE. Should R2, R4 and R6 be constructed parallel to R1, R3, and R5? In R1, R3 and R5, the requirement is “shall have” while in R2, R4, and R6, the requirement is “shall designate”. Since one is for the Interpersonal Communications and the other is for the Alternative Interpersonal Communications, it seems the same wording should be used. We do not believe R2.2 and R1.2 should be limited to Reliability Coordinators in the same Interconnection only. We suggest modifying “within the same Interconnection” to “within the same Interconnection, and, as appropriate, between a-synchronously connected RCs which are not precluded by law from scheduling interchange energy (for schedule changes, curtailments, etc.)” since reliability

Organization	Yes or No	Question 1 Comment
		coordination may be required among the RCs on both sides of an Interconnection boundary. The VSLs for R1 through R8 should be expanded to include multiple levels based on the number of entities that the functional entity does not have Interpersonal Communications or Alternative Interpersonal Communications. FERC specified their general preference for gradated in paragraph 27 of their June 19, 2008 order on VSLs. The second half of the Severe VSL for R9 is almost a duplicate to the Lower VSL. There are some small changes in the wording but both situations deal with the case where there is a problem that has been identified with the Interpersonal Communications system and it takes more than two hours to initiate repair.
IRC Standards Review Committee	No	We expressed in the last posting that we felt the definition of Interpersonal Communications might inadvertently include data. The SDT responded that it does not by referring to Interpersonal in the name of the definition. Clearly, you cannot refer to the word you are defining in order to define it. However, it is possible “allows two or more individuals to ...” may solve this problem. Clarity should be sought in the next posting, if possible. This standard does not comport with the informational filing that NERC submitted to FERC on August 10, 2009 regarding its discontinued use of sub-requirements in standards development activities. We request the sub-requirements be modified into bulleted lists. Consider striking “to exchange Interconnection and operating information” in R1, R3, R5, R7, and R8. It is redundant to the use of Interpersonal Communications “to interact, consult, or exchange information” in the definition. Consider striking “to exchange Interconnection and operating information” in R2, R4, R6. It is redundant to the use of Alternative Interpersonal Communications which uses Interpersonal Communications in its definition. Interpersonal Communications includes “to interact, consult, or exchange information” in its definition. For R2, why is Interchange Coordinator excluded? It is included in the Requirement R1 which deals with the Interpersonal Communications. Communications would need to be maintained with the Interchange Coordinator in the event of a failure of the Interpersonal Communications. For R3, affected neighboring Transmission Operators should be included. For R4 and R6, the sub-requirement list is different than for than for the associated Interpersonal Communications requirements R3 and R5 respectively. We believe these should be duplicate. That is the sub-requirement list for R4 should match R3 and the R6 should match R5. In the event of a failure of the Interpersonal Communications, the Transmission Operator and Balancing Authority both would need to maintain communications to the same entities as in the requirement to have Interpersonal Communications. Again, we would suggest replacing sub-requirements with bulleted lists. For R5, why are neighboring Balancing Authorities not included? Additionally R5 should only read Contact with Interchange Coordinator within same Interconnection. They certainly need to be able to contact one another to identify discrepancies in scheduling and sources of meter error that could lead to deviations in ACE. Should R2, R4 and R6 be constructed parallel to R1, R3, and R5? In R1, R3 and R5, the requirement is “shall have” while in R2, R4, and R6, the requirement is “shall designate”. Since one is for the Interpersonal Communications and the other is for the Alternative Interpersonal Communications, it seems the same wording should be used. We do not believe R2.2 and R1.2 should be limited to Reliability Coordinators in the same Interconnection only. We suggest modifying “within the same Interconnection” to “within the same

Organization	Yes or No	Question 1 Comment
		Interconnection, and, as appropriate, between a-synchronously connected RCs which are not precluded by law from scheduling interchange energy (for schedule changes, curtailments, etc.)” since reliability coordination may be required among the RCs on both sides of an Interconnection boundary. The VSLs for R1 through R8 should be expanded to include multiple levels based on the number of entities that the functional entity does not have Interpersonal Communications or Alternative Interpersonal Communications. FERC specified their general preference for gradated in paragraph 27 of their June 19, 2008 order on VSLs. The second half of the Severe VSL for R9 is almost a duplicate to the Lower VSL. There are some small changes in the wording but both situations deal with the case where there is a problem that has been identified with the Interpersonal Communications system and it takes more than two hours to initiate repair.
Midwest ISO Standards Collaborators	No	We expressed in the last posting that we felt the definition of Interpersonal Communications might inadvertently include data. The drafting team responded that it does not by referring to Interpersonal in the name of the definition. Clearly, you cannot refer the word you are defining to define it. However, it is possible “allows two or more individuals to ...” may solve this problem. What are the drafting team’s thoughts on this issue? This standard does not comport with the informational filing that NERC submitted to FERC on August 10, 2009 regarding its discontinued use of sub-requirements in standards development activities. Consider striking “to exchange Interconnection and operating information” in R1, R3, R5, R7, and R8. It is redundant to the use of Interpersonal Communications “to interact, consult, or exchange information” in the definition. Consider striking “to exchange Interconnection and operating information” in R2, R4, R6. It is redundant to the use of Alternative Interpersonal Communications which uses Interpersonal Communications in its definition. Interpersonal Communications includes “to interact, consult, or exchange information” in its definition. For R2, why is Interchange Coordinator excluded? It is included in the Requirement R1 which deals with the Interpersonal Communications. Communications would need to be maintained with the Interchange Coordinator in the event of a failure of the Interpersonal Communications. For R3, neighboring Transmission Operators should be included. For R4 and R6, the sub-requirement list is different than for than for the associated Interpersonal Communications requirements R3 and R5 respectively. They should be duplicate. That is the sub-requirement list for R4 should match R3 and the R6 should match R5. In the event of a failure of the Interpersonal Communications, the Transmission Operator and Balancing Authority both would need to maintain communications to the same entities as in the requirement to have Interpersonal Communications. For R5, why are neighboring Balancing Authorities not included? They certainly need to be able to contact one another to identify discrepancies in scheduling and sources of meter error that could lead to deviations in ACE. Should R2, R4 and R6 be constructed parallel to R1, R3, and R5? In R1, R3 and R5, the requirement is “shall have” while in R2, R4, and R6, the requirement is “shall designate”. Since one is for the Interpersonal Communications and the other is for the Alternative Interpersonal Communications, it seems the same wording should be used. Should R2.2 and R1.2 be limited to Reliability Coordinators in the same Interconnection only? The VSLs for R1 through R8 should be expanded to include multiple levels based on the number of entities that the functional entity does not have Interpersonal Communications or

Organization	Yes or No	Question 1 Comment
		Alternative Interpersonal Communications. FERC specified their general preference for gradated in paragraph 27 of their June 19, 2008 order on VSLs. The second half of the Severe VSL for R9 is almost duplicate to the Lower VSL. There are some small changes in the wording but both situations deal with the case where there is a problem that has been identified with the Interpersonal Communications system and it takes more than two hours to initiate repair.
Northeast Power Coordinating Council	No	It was expressed in the last posting that the definition of Interpersonal Communications might inadvertently include data. The SDT responded that it does not by referring to Interpersonal in the wording of the definition. The word being defined shouldn't be in the definition. However, incorporating "allows two or more individuals to ..." is an option that may solve this problem. The next posting should clarify this. Response: The RCSDT has clarified in previous responses to comments that the requirements of COM-001 do not apply to data. The current proposed definition of Interpersonal Communications includes the phrase "allows two or more individuals to...". In an effort to make this more clear, the RCSDT has revised Requirements R1-R8 to remove the phrase "to exchange Interconnection and operating information" as you and others have suggested. This will provide the needed clarity for stakeholders that COM-001 does not include "data exchange." This standard does not comport with the informational filing that NERC submitted to FERC on August 10, 2009 regarding its discontinued use of sub-requirements in standards development activities. The sub-requirements should be modified into bulleted lists. Response: The information filing did not propose to eliminate the use of numbered items altogether, but proposed changing the manner in which they were numbered. Bulleted lists are used to indicate sets of options; numbered lists are used when each of the listed items are required. Consider striking "to exchange Interconnection and operating information" in R1, R3, R5, R7, and R8. It is redundant to the use of Interpersonal Communications "to interact, consult, or exchange information" in the definition. Response: The RCSDT agrees and we have removed the phrase "to exchange Interconnection and operating information" from R1-R8. This helps clarify the intent that the capability is NOT for data exchange as data is covered under the provisions of the recently approved IRO-010-1a. Consider striking "to exchange Interconnection and operating information" in R2, R4, R6. It is redundant to the use of Alternative Interpersonal Communications which uses Interpersonal Communications in its definition. Interpersonal Communications includes "to interact, consult, or exchange information" in its definition. Response: The RCSDT agrees and we have removed the phrase "to exchange Interconnection and

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		operating information from R1-R8. This helps clarify the intent that the capability is NOT for data exchange as data is covered under the provisions of the recently approved IRO-010-1a. For R2, why is Interchange Coordinator excluded? It is included in the Requirement R1 which deals with the Interpersonal Communications. Communications would need to be maintained with the Interchange Coordinator in the event of a failure of the Interpersonal Communications. Response: R1 is dealing with the “normal” communications. R2 deals with the default reliability needs. The normal communications include Interchange Coordinators because they are part of the administration of Interchange. The SDT predicated R2 on being in an unusual situation in which only the basic reliability functions were needed. In such times, the Interchange Function is seen as sacrificial because the BA itself could operate reliably (not necessarily efficiently) by simply dealing with it is adjacent BAs and “scheduling” interchange on a BA to BA basis (as opposed to a PSE to PSE basis). The Interchange Coordinator is only needed to ensure all of the commercial arrangements are validated by all parties. In stressed conditions those checkouts can be by-passed and dealt with after-the-fact. That <u>does not mean</u> that when an entity goes to backup is expected to bypass the Interchange Coordinator. The requirement R2 merely focused on the worst case situation. This requirement is not meant to define the alternate backup system; it is merely mandating the lowest mandatory requirements on the backup system. For example during the Y2K operations backup systems included satellite phones which did not cover all entities involved in normal operations. The SDT wrote the requirements to assure that such an event would not cause all RCs, BAs and TOPs to be non-compliant. For R3, affected neighboring Transmission Operators should be included. Response: The SDT has included the following Part 3.5 of Requirement R3: 3.5 Adjacent Transmission Operators synchronously connected within the same Interconnection For R4 and R6, the sub-requirement list is different from the associated Interpersonal Communications requirements R3 and R5 respectively. These should be duplicate. The sub-requirement list for R4 should match R3, and the sub-requirement list for R6 should match R5. In the event of a failure of the Interpersonal Communications, the Transmission Operator and Balancing Authority both would need to maintain communications to the same entities as in the requirement to have Interpersonal Communications. Response: The SDT has included the following Part 4.3 of Requirement R4: 4.3 Adjacent Transmission Operators synchronously connected within the same Interconnection The SDT has included the following Part 6.3 of Requirement R6: 6.3 Adjacent Balancing Authorities

Organization	Yes or No	Question 1 Comment
		The RCSDT asserts the standard meets FERC Order 693 regarding DP and GOP entities by requiring these entities to have Interpersonal Communication capability. Not requiring DP and GOP entities to have Alternative Interpersonal Communication capability meets FERC's intention as stated here: "We (FERC) clarify that the NOPR did not propose to require redundancy on generator operators' or distribution providers' telecommunication facilities..." (Order 693, RM06-16-000, Paragraph 487). The sub-requirements should be bulleted lists. Response: Bulleted lists are used to indicate sets of options; numbered lists are used when each of the listed items are required. For R5, why are neighboring Balancing Authorities not included? Response: The SDT has included the following Part 5.6 of Requirement R5: 5.6 Adjacent Balancing Authorities Note that this is a defined term in the glossary: "A Balancing Authority Area that is interconnected (to) another Balancing Authority Area either directly or via a multi-party agreement or transmission tariff." Additionally, R5 should only read Contact with Interchange Coordinator within the same Interconnection. They need to be able to contact one another to identify discrepancies in scheduling and sources of meter error that could lead to deviations in ACE. Response: The RCSDT has removed the Interchange Coordinator from the standard (R1 and R5) as the BA is responsible for the reliability implications of Interchange. The reliability relationship lies between BA's. Should R2, R4 and R6 be constructed parallel to R1, R3, and R5? In R1, R3 and R5, the requirement is "shall have" while in R2, R4, and R6, the requirement is "shall designate". Since one is for the Interpersonal Communications and the other is for the Alternative Interpersonal Communications, the same wording should be used. Response: The SDT inserted the different terminology because there may be more than one type backup system. Some entities have land lines; cell phones; satellite phones; voice over internet; and/or teleconferencing. The language is intended to provide flexibility to allow entities to have one or more types of backup while designating one for Alternative Interpersonal Communications. R2.2 and R1.2 should not be limited to Reliability Coordinators in the same Interconnection only. Modify "within the same Interconnection" to "within the same Interconnection, and, as appropriate, between a-synchronously connected RCs which are not precluded by law from scheduling interchange energy (for schedule changes, curtailments, etc.)" since reliability coordination may be required among the RCs on both sides of an Interconnection boundary.

Organization	Yes or No	Question 1 Comment
		Response: The requirement proposed by NPCC is predicated on “as appropriate.” Such subjective phrases cannot be used in a standard. The issue of asynchronous entities is not germane to the requirement but the requirement does not preclude additional coordination to meet the specifics of ERCOT, HQ and WECC. A regional variance may be an option for you to consider. The VSLs for R1 through R8 should be expanded to include multiple levels based on the number of entities that the functional entity does not have Interpersonal Communications or Alternative Interpersonal Communications with. FERC specified their general preference for gradated in paragraph 27 of their June 19, 2008 order on VSLs. Response: Each entity listed in Requirements R1-R8 is required to meet the contents with respect to each other entity listed in the requirement. Failure to have the capability with a single entity is a single violation of the requirement. For example, if an RC has 5 BA’s within it Area and fails to have Interpersonal Communications with two of them, then the RC has violated the requirement twice. The VSLs are written to address each violation of the Requirement. We have removed the words “or more” from the VSLs. The second half of the Severe VSL for R9 is almost a duplicate of the Lower VSL. There are some small changes in the wording but both situations deal with the case where there is a problem that has been identified with the Interpersonal Communications system and it takes more than two hours to initiate repair. Response: The R9 Severe VSL was revised to remove “within 2 hours”. It now reads: “The responsible entity tested the Alternative Interpersonal Communications capability and identified a problem but didn’t initiate action to repair or designate a replacement Alternative Interpersonal Communications.”
Response: The RCSDT thanks you for your comment. Please see responses embedded above.		
PNGC Power member owners	No	Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications

Organization	Yes or No	Question 1 Comment
		requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window."Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of Communication capabilities impacted entities will be notified of the past loss and current status of Communication."We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.
Response: The RCSDT thanks you for your comment. There is no requirement for 24/7 support, the requirement is to have communications capability. The type of system (i.e. On-Call) is not prescribed in the standard and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is "To ensure emergency communications between operating personnel are <u>effective</u>." It is not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication, in many cases this may be via a receptionist, or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.		
PPL	Yes	
PSEG	No	Com-001-2 implementation plan lists that this is applicable to PSE's and LSE's however, PSE's and LSE's were removed from the actual standard. The implementation plan should be revised.
Response: The RCSDT thanks you for your comment. We have revised as you suggested.		
Dominion	No	The monthly testing requirement for Alternative Interpersonal Communications is overly burdensome without any evidence to support that it is necessary to insure reliability. We believe that an entity will take necessary

Organization	Yes or No	Question 1 Comment
		steps to insure the Alternative Interpersonal Communications is functioning properly, especially if it experiences problems with its Interpersonal Communications, it. We can support quarterly testing as we believe it strikes a reasonable balance.
Response: The RCSDT thanks you for your comment. The drafting team has not received a large number of comments that suggest that the frequency of the testing is burdensome and believes that the testing could occur in the normal course of daily activities. Therefore, the SDT believes the frequency of testing will not be burdensome.		
South Carolina Electric and Gas	No	Each sub-requirement should not have an “R” in front of the number in order to be consistent with NERC’s August 10, 2009 filing at FERC on this subject. Requirement R3 and R4 should include adjacent TOPs as a sub-requirement. Requirements R5 and R6 should include adjacent BAs as a sub-requirement. “to exchange Interconnection and operating information” should be deleted from requirements R1 through R8 as it is redundant with the definition of Interpersonal Communications. The last page of the Implementation Plan includes LSEs, PSE, and TSPs as being responsible entities under this standard, yet the standard does not include them. Please correct the implementation plan.
SERC OC Standards Review Group	No	Each sub-requirement should not have an “R” in front of the number in order to be consistent with NERC’s August 10, 2009 filing at FERC on this subject. Response: The RCSDT agrees and this change has been made. Requirement R3 and R4 should include adjacent TOPs as a sub-requirement. Response: The SDT has included the following Part 3.5 of Requirement R3 and 4.3 of R4: Adjacent Transmission Operators synchronously connected within the same Interconnection Requirements R5 and R6 should include adjacent BAs as a sub-requirement. Response: The SDT has included the following Part 5.6 of Requirement R5 and Part 6.3 of R6: Adjacent Balancing Authorities Note that this is a defined term in the glossary: “A Balancing Authority Area that is interconnected to another Balancing Authority Area either directly or via a multi-party agreement or transmission tariff.” ”to exchange Interconnection and operating information” should be deleted from requirements R1 through R8 as it is redundant with the definition of Interpersonal Communications. Response: The RCSDT agrees and we have removed the phrase “to exchange Interconnection and operating information from R1-R8.

Organization	Yes or No	Question 1 Comment
		The last page of the Implementation Plan includes LSEs, PSE, and TSPs as being responsible entities under this standard, yet the standard does not include them. Please correct the implementation plan. Response: The RCSDT agrees and we have made the revision.
Response: The RCSDT thanks you for your comment. Please see responses above.		
MRO's NERC Standards Review Subcommittee	No	A. R5.5 states a BA shall have Interpersonal Communications with each Interchange Coordinator within its BA area and adjacent Interchange Coordinators. NERC Registry Criteria (v5) uses the term "Interchange Authority" not Interchange Coordinator, please clarify. Response: The RCSDT has removed the Interchange Coordinator from the standard based on stakeholder feedback. B. Upon review of the NERC Compliance Registry, there are only 56 BA's that are also registered as an IA but 138 total BA's within the registry. R5.5 is not clearly written because many BA's do not have an IA within their BA area. Though a BA will use an IA to schedule interchange, a possible rewrite of R5.5 may be "Each Interchange Authority that the BA actively uses to arrange Interchange". Response: The RCSDT has removed the Interchange Coordinator from the standard based on stakeholder feedback. C. R10 states that the RC, TOP, BA, DP and GOP shall notify "impacted entities" within 60 minutes... Please clarify if the SDT means the entities within the applicability section or is this to be determined by the entity. A possible rewrite may be; "Each RC shall notify TOP's, BA's, and IA's within its RC area along with adjacent RC's within the same Interconnection". This break down would need to be required for each affected entity and would provide clarity to the industry. Response: R10 specifies only "impacted entities". That phrase is used to limit the scope of the requirement. If an entity has a failure of its Interpersonal Communications capability with only one entity, then <i>that</i> entity is the "impacted entity" and they should be notified of the failure. D. We do not agree with a DP and GOP need to be held to the same level of compliance as a RC, BA or TOP. FERC Order 693 (paragraph 487) directed the DP and GOP to be included in this standard by stating: "We expect the telecommunication requirements for all applicable entities will vary according to their roles and that these requirements will be developed under the Reliability Standards development process". A DP and GOP may not be staffed 24 hours a day like a BA or TOP and the SDT did not take this into consideration. Response: There is no requirement that requires identical communications systems. The requirement is to have "a" communication capability. The RCSDT asserts the standard meets FERC Order 693 regarding DP and GOP entities by requiring these entities to have Interpersonal Communication capability. Not requiring DP

Organization	Yes or No	Question 1 Comment
		and GOP entities to have Alternative Interpersonal Communication capability meets FERC's intention as stated here: "We (FERC) clarify that the NOPR did not propose to require redundancy on generator operators' or distribution providers' telecommunication facilities..." (Order 693, RM06-16-000, Paragraph 487). A new requirement was also added concerning the failure of a DP or GOP Interpersonal Communications capability: R11 Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities shall consult with its Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i> E. We understand that the DP and GOP need a means of communicating with their BA and TOP (R7 and R8) but would this not be the same Interpersonal Communications capability that as stated in R3 and R5 for the TOP and BA? Example: If the BA uses a phone line as their Interpersonal Communication medium to contact the DP wouldn't the DP also use the same medium to communicate with their BA? Yes, there could be different mediums but 99% of the time it will be the same medium. Response: The RCSDT agrees with your assumption; however a reciprocal requirement is necessary. Without R7 and R8, there would be no requirement for the DP or GOP. F. R10 could mean that if there is a logging system that detects an Interpersonal Communication failure, then all applicable entities will need to monitor that monitoring device. Since this requirement applies to all applicable entities, and Interpersonal Communication mediums will most likely be the same, there will always be two entities found non compliant if the 60 minute threshold is passed. Response: There is no requirement to monitor or log Interpersonal Communications capability, only to test. R10 requires the entity to notify the impacted entities upon a failed test or the detection of a failure.
Response: The RCSDT thanks you for your comment. Please see responses above.		
FirstEnergy	No	It is not clear from the definition of Interpersonal Communications if certain communications "mediums" such as email, instant messaging, etc. are included. Response: The requirements are for communications between two or more persons. Mediums are not listed to avoid being prescriptive in the requirement. The measures provide examples of mediums. Furthermore, the Measures for these requirements all include "electronic communications" as acceptable evidence. If the drafting team does not intend these mediums be included, then it should be clarified in the

Organization	Yes or No	Question 1 Comment
		definition. We suggest the following wording of the definition: Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information. This interaction consists of verbal, spoken words exchanged in Real-time. Response: The use of verbal communication only is not the intent of the requirement. Written communication is also an acceptable form of Interpersonal Communication.
Response: The RCSDT thanks you for your comment. Please see responses above.		
SPP Standards Development	No	We would suggest that the applicability of COM-001-2 be expanded to that listed in COM-002-3. How can the directives to be issued in COM-002 be delivered and confirmed without having Interpersonal Communications capability? Response: The RCSDT has revised the applicability of COM-001 and COM-002 such that they contain the same functional entities. These are: RC, TOP, BA, GOP, and DP. All of the functional entities listed in R1.1 should also be listed in R2.1. Similarly the sub-requirements of R3 should also be applied to R4. The same holds true for R5 and R6. Response: The requirements for Alternative Interpersonal Communications are different than for Interpersonal Communications. There is not necessarily a reliability need to have redundant capability with each and every entity such as DP and GOP. If the SDT intends to exclude data communications from Interpersonal Communications and Alternative Interpersonal Communications, we suggest the SDT be more specific in the definition to specifically exclude data communications in the definition. It is not readily apparent that these terms do not apply to data communications and without a clarification, confusion exists. Consider Response: The RCSDT agrees and have removed the phrase “to exchange Interconnection and operating information from R1-R8. This helps clarify the intent that the capability is NOT for data exchange, as data is covered under the provisions of the recently approved IRO-010-1a.
Response: The RCSDT thanks you for your comment. Please see responses above.		
Kansas City Power & Light	No	These requirements require TOP's, BA's, and GOP's to establish alternative means of “interpersonal” communications with other BA's, GOP's, and BA's respectively without regard to the reliability impact each TOP, BA or GOP has on the interconnection. Why would it be necessary for a TOP with one 161kv transmission line or a BA with 100 MW of total load, or one GOP with a 30MW unit to realize additional costs

Organization	Yes or No	Question 1 Comment
		when the facilities they operate have little reliability impact? Response: The RCSDT believes that any NERC Registered Entity capable of issuing or receiving a directive is an applicable party to COM-001. In addition, most RC's have established satellite telephone systems as back-up communication with TOP's. RC's may have to establish additional communication systems with BA's as these requirements impose to avoid Standards of Conduct issues. Response: It is unclear how this scenario would present Standards of Conduct issues for communication between reliability entities. The requirements pertain to reliability functions, not commercial functions or the way in which entities are structured internally. R9 - considering the reliability of communication systems, a 2 hour response to a problem with the alternative means of communication is over sensitive. Allowing for sometime in an operating shift would be more in line, such as 8 hours. Response: The requirement is to initiate action within 2 hours, not complete it. The two hour time reference aligns with the timing shown in EOP-008 for back-up facilities.
Response: The RCSDT thanks you for your comment. Please see responses above.		
Competitive Suppliers		
Exelon	No	1. COM-001-2, 4.4 - Distribution Providers and 4.5, Generation Operators should be highlighted and communicated as a substantive change since entities may not be aware that they are being added to the applicability section of the standard. Response: These revisions were done based on FERC Order 693 directives. They have been widely distributed in redline form. NERC will ensure that the change in applicability is highlighted in the announcement of the next posting. 2. COM-001-2, R10 - should have the following underlined clarifying text added, shall notify impacted entities within 60 minutes of the detection of a failure "of all primary and alternative " Interpersonal Communications capabilities that lasts 30 minutes or longer. Exelon believes that the intent of R10 is for complete loss of communication ability and should not be applied to facilities that have multiple backups. Response: The RCSDT developed R10 based on R3 of COM-001-1. The intent is to ensure that entities know not to use the primary and to use the alternative. 3. COM-001-2, M1 thru 9 - Suggest that network diagrams and / or communications schematics be added as

Organization	Yes or No	Question 1 Comment
		suggested evidence. Response: The measure only provides examples of the types of evidence that may be used for compliance and the list is not all inclusive. The term "...evidence that could include, but is not limited to..." addresses your suggestion. 4. COM-001-2, VSL for R9 - Regarding failure to test the Alternative Interpersonal Communication, the Severity Level does not align with the potential impact to the BES. The Severity Level for simply missing a test should be revised to a High VSL. Response: The VSL does not relate to risk to the BES (this is covered in the Violation Risk Factor). The VSL only indicates how badly an entity missed the mark with respect to the requirement. A Severe VSL is appropriate.
Response: The RCSDT thanks you for your comment. Please see responses above.		
PacifiCorp	Yes	
Arizona Public Service Company	Yes	
Southern Company	No	Comments: Standard COM-001-2R10. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider, and Generator Operator shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer. Comment: It is not clear whether the notification requirements identified in R10 apply to failure of ALL available Interpersonal Communications or ANY Interpersonal Communications. We suggest that the existence of functioning Alternative Interpersonal Communications precludes the requirement for notification of impacted entities. Response: The intent of R10 is to ensure that entities know not to use the primary and to use the alternative. Notification is required for the failure of the primary capability. D. Compliance 1. Compliance Monitoring Process 1.3 Data Retention Each Generator Operator shall keep the most recent twelve months of historical data (evidence) for Requirements R8 and R10, Measures M8 and M10. Comment: The data retention requirements specified for the Generator Operator in Para. 1.3 (above) are not consistent with the 3-year audit interval for the GOP. Question: When audited on this Standard is the expectation that the GOP will have 12 months of evidence or 36 months of evidence? Response: The Data Retention section of the standard conforms to the NERC guidelines. The RCSDT has also added the following to the data retention section:

Organization	Yes or No	Question 1 Comment
		The following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit. Standard COM-002-3R2. Each Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message has been confirmed. Comment: The term "Reliability Directive" is currently not defined in the NERC Glossary of Terms. However, in the Implementation Plan for COM-002-3 the RC SDT proposes a definition for Reliability Directive. It is implied in the standard that the Reliability Directive is issued as a voice command which precludes the use of our preferred method of Interpersonal Communication. However, this is not definitively stated in either the standard or the proposed definition. I think this needs to be made clearer if the Reliability Directive must be issued as a voice command. Response: The RCSDT disagrees with your assumption that the requirement implies that a Reliability Directive must be issued verbally. In a previous version of the draft standard, the RCSDT had included "verbal" issuance of directives. This was removed to allow the use of other than voice capability to issue a Reliability Directive.
Response: The RCSDT thanks you for your comment. Please see responses above.		
Green Country Energy, Green Country Operating Services	No	COM-001 General question/comment. The reference to infrastructure should be removed and just keep the word "medium". Here's why: What communication medium (infrastructure) does not use satellite at some point unless entities are within a close geographical proximity? How likely is it to have 2 different mediums? o Local phone and fax hard-wire likely. o Long distance phone and fax - satellite o Cell phone - satellite o Internet - satellite o Radio - antenna The reason for mentioning this is, if all we have is satellite then the reference to infrastructure should be removed and just keep the word "medium".
Response: The RCSDT thanks you for your comment. The RCSDT believes that the language of the definition is clearer with the existing verbiage.		
Central Lincoln	No	See Q 6 below.
Response: The RCSDT thanks you for your comment. Please see responses to Q6.		

Organization	Yes or No	Question 1 Comment
Lakeland Electric	Yes	
Manitoba Hydro	Yes	
NextEra Energy, Inc.	No	As drafted, COM-001 is not clear or complete. At this stage in the evolution of compliance with the mandatory Reliability Standards, it is important that any new or revised Reliability Standard clearly articulate all compliance obligations and tasks consistent with Sections 302 (6) and (8) of the NERC Rules of Procedure. Thus, NextEra Energy Inc. (NextEra) has numerous recommended corrections to provide clarity and completeness to COM-001. For example, the requirement to designate an Alternative Interpersonal Communication capability is not clear. Does the designator solely designate for the designator's knowledge or does the designator need to inform the entity on the other end of the connection. In R2, for instance, the Reliability Coordinator must designate, but it is also not clear whether the Reliability Coordinator must inform the Balancing Authorities or Transmission Operators. It is further unclear whether the designation must be documented, or if any informing of the Balancing Authorities or Transmission Operators must be documented. Thus, it is recommended that the drafters decide what was intended regarding the designation and clearly state the requirements. Response: The Requirement R2 is for the RC to designate an Alternative Interpersonal Communication and inform the other entity (BA, TOP, etc.) as to what that Alternative Interpersonal Communication is. The Measure M2 provides examples of the types of evidence which may be used to prove compliance with the requirement. In R9 it states that “. . . on at least a monthly basis.” There are two issues to consider here. If the sentence stays, grammatically it should read “. . . on, at least, a monthly basis. . . However, from a compliance and technical perspective, the term “at least” has no significance and should be deleted. The requirement is to test on a monthly basis - the phrase “at least” only introduces ambiguity and implies that the party should consider every two or three weeks. If the drafting team believes a best practice is less than a month, there are other NERC educational tools to explain a best practice. Response: The RCSDT used this term to allow more frequent testing to be performed. In R10, it states “. . . shall notify the impacted entity . . .” It would be clearer to state: “. . . shall notify the impacted Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider or Generator Operator . . .” Response: The RCSDT believes your suggestion adds unnecessary verbiage to the requirement and does not provide additional clarity.

Organization	Yes or No	Question 1 Comment
Response: The RCSDT thanks you for your comment. Please see responses above.		
United Illuminating Company	No	COM-001-2 does not specify the amount of time a DP has to reestablish the Interpersonal Communication Capability after the capability fails before it is assessed non-compliance for not having the communication. Is an entity non-compliant the minute the communication capability is unavailable? If so, then to be compliant a tertiary (or secondary capability for DP) must be installed by the entity. Something similar was discussed with EOP-008 R3: "To avoid requiring a tertiary facility, a backup facility is not required during: o Planned outages of the primary or backup facilities of two weeks or less o Unplanned outages of the primary or backup facilities". UI suggests the drafting team incorporate something similar. Response: The RCSDT is proposing a new requirement to address your concerns for the DP. We have included the GOP as well: R11. Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i> The VSL for R7 is severe only and states: "The Distribution Provider failed to have Interpersonal Communications capability with one or more of the entities listed in Parts 7.1 or 7.2".I believe there should be a time component to the VSL and the VSL staged. For example, failure to have communication established for less than 60 minutes would be Lower, anything over 1 hour severe. Also needed is a phrase to state when the violation begins. Does the violation begin when the loss of Communication Capability is detected or when it occurred? In other words, does the violation start when the operator attempts to use the phone and it is not functional, or did it occur when the phone line functionality failed but was not yet detected because no attempt to use the phone was made. So the VSL for R7 would follow a format of: "The Distribution Provider failed to have Interpersonal Communication Capability with one or more entities listed in Parts 7.1 or 7.2 for a continual 60 minutes period as measured from the time the ICC failure was detected". An alternative remedy is to alter the language of R7 to allow for unplanned outage. Response: The VSL represents a single violation of the requirement. For this requirement, the DP must have Interpersonal Communication with its TOP and BA. The VSL was revised to remove "or more" to conform to the requirement. NERC does not have a Reliability Requirement for a DP to staff a control room 24/7. COM-0001 can be interpreted to imply that a DP needs to be staffed 24/7 to facilitate interpersonal communications. If NERC wants to extend the requirement for a 24/7 staffed operating position at the DP then the appropriate method is

Organization	Yes or No	Question 1 Comment
		thru a SAR to PER-002. Response: COM-001 is not intended to imply a 24/7 requirement. COM-001 R7 should have a sub-requirement added recognizing that DP's are not required to staff 24/7 and many do not staff overnight. UI suggests adding R7.3: DP's will notify their TOP and/or BA when it is not staffing an operating desk. Response: While the SDT does not disagree this would be good practice, other methods of addressing this situation (e.g., having an answering service, an on –call staff, or something similar) would be valid as well. The SDT does not believe it would be appropriate to limit this to only one method. R7: Should address the instance if the DP is not required to have communication with the BA, because the BA communicates thru the TOP. Response: The intent of the standard is that the DP will have communication with their BA. Ti is not prescriptive as to how that communication will be implemented.
Response: The RCSDT thanks you for your comment. Please see responses above.		
American Electric Power	No	The applicability of COM-001 and COM-002 appear to be at odds with each other. The requirements may need to be re-written so that they are in sync.
Response: The RCSDT thanks you for your comment. The RCSDT has made revisions to COM-001 and COM-002 such that the applicability is compatible.		
Pepco Holdings Inc	Yes	
American Transmission Company	Yes	ATC agrees with the understanding that the line of demarcation is up to the point where ATC owns the equipment.
Response: The RCSDT thanks you for your comment.		
WECC	Yes	
BGE	Yes	BGE has no additional comments.
Constellation Energy Commodities Group	Yes	

Organization	Yes or No	Question 1 Comment
Duke Energy	No	o We question how far the definition of Alternative Interpersonal Communication goes in requiring separate infrastructure from Interpersonal Communication. For example, wireless communications sometime utilize fiber optic networks. Response: The definition requires the use of different infrastructure (medium) than the Interpersonal Communication used for day to day ops. The RCSDT cannot be prescriptive regarding the specific medium to be employed. This is intended to apply to assets and access to media that is within the control of the entity responsible for complying with the Requirement. For example, the way cell phone signals are routed is not within your control. o We question why the requirements state that entities must “have” Interpersonal Communications capability, but must “designate” Alternative Interpersonal Communications capability? Response: Many entities have multiple Alternative Interpersonal Communication capabilities. Allowing them to designate which one they want to employ allows for flexibility in which one they use for AIC. o R1.2 and R2.2 - Why is this limited to the same interconnection? Response: The phrase “within the same interconnection” is added for the case of ERCOT, which has only DC tie lines with the Eastern Interconnection and has minimal interchange. o R3 - need to add neighboring TOPs. Response: Agreed. o R5 - need to add adjacent BAs. Response: Agreed. o Interchange Coordinator - Add IC to the Applicability Section, and add a requirement that the IC have Interpersonal Communication capability with its BA and adjacent BAs. Response: The RCSDT has eliminated the Interchange Coordinator from COM-001-2 based on other stakeholder comments.. o Requirements to “designate” Alternative Interpersonal Communication should carry a “Medium” VRF instead of “High”, because they are a backup capability. The word “designate” carries the connotation that these are documentation requirements. Response: The requirement to designate is for the entity to have an Alternative Interpersonal Communications capability and to designate what that is. In many cases, an entity will have multiple

Organization	Yes or No	Question 1 Comment
		alternatives and neighboring entities need to know how to contact them in case of a failure of the primary. If an entity does not designate its AIC, in an emergency it may not be able to issue or comply with directions or instructions which could directly contribute to BES instability, separation, or cascading failure.” The VRF should remain as high. o R9 requires a monthly test of Alternative Interpersonal Communications capability. This was quarterly in the last draft. We question how these requirements for “Alternative Interpersonal Communications” capability are related to requirements for “backup functionality” in EOP-008-1, which requires an annual test of backup functionality. Clarity on the relationship between “Interpersonal Communications”, “Alternative Interpersonal Communications”, “primary control center functionality” and “backup control center functionality” would be appreciated. Response: Interpersonal Communication and Alternative Interpersonal Communication should be in both the primary and back up control center. IC and AIC are between entities as well. These capabilities are in the primary and back up control centers. The requirement applies to the primary control center. EOP-008 applies to the back up control center. An entity may test its AIC in the normal course of daily activities. o R11 - is this requirement being moved to COM-003? Response: The OSCP SDT is vetting this requirement and it will be in COM-003. o Data Retention - Is data retention really going to be just 12 months? Most auditors seem to be asking for everything since the last audit. Response: The Data Retention section of the standard conforms to the NERC guidelines. The RCSDT has also added the following to the data retention section: The following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.
Response: The RCSDT thanks you for your comment. Please see responses above.		
CECD	No	Based on the drafting teams response that the definition of Interpersonal" clarifies the exclusion of media dedicated to Telemetry or other data exchange, the term Interpersonal Communication should be replaced with verbal communication capabilities. The term Alternative Interpersonal Communication should be replaced with alternative verbal communication capability that is able to serve as a substitute for and does not

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Organization	Yes or No	Question 1 Comment
		utilize the same infrastructure (medium) as verbal communications capabilities used for day-to-day operations.
Response: The RCSDT thanks you for your comment. The RCSDT wrote the definitions to include verbal as well as written communication, and the Measures provide examples of person to person communications.		
Indeck Energy Services	No	
City of Springfield, IL - City Water Light and Power (CWLP)	No	The definition of “Interpersonal Communications” is overly broad and does not address the functional needs of reliability coordination. The definition should be limited to systems utilized for essential reliability functions. While the Purpose statement in the standard does address this intent, the explicit inclusion in the definition removes all ambiguity. Further, the definition of “Alternative Interpersonal Communications” without corresponding explicit definition of Primary Interpersonal Communications may lead to confusion and unnecessary duplication of efforts in testing and maintenance.
Response: The RCSDT thanks you for your comment. The overall mission of reliability standards is for entities to address essential reliability functions.		
Independent Electricity System Operator	No	(1) NERC filed with FERC on August 10, 2009 indicating that it would discontinue the use of sub-requirements in standards. All draft standards posted since have the format of Part Numbers within each main Requirement. Please revise the standards in this project accordingly. Response: The RCSDT agrees and this revision will be made. (2) Having defined the terms Interpersonal Communication and Alternative Interpersonal Communication, the phrase “to exchange Interconnection and operating information” in a number of requirements is redundant and can be removed. Further, for R1, we suggest removing the phrase “within the same Interconnection since there RCs between two Interconnections still need to communication with each other for reliability coordination (e.g. curtailment of interchange transactions crossing Interconnection boundary, as stipulated in IRO-006). Response: The RCSDT agrees and have removed the phrase “to exchange Interconnection and operating information” from R1-R8. This helps clarify the intent that the capability is NOT for data exchange, as data is covered under the provisions of the recently approved IRO-010-1a. The phrase “within the same interconnection” is added for the case of ERCOT which has only DC tie lines with the Eastern Interconnection and has minimal interchange. (3) R2: Suggest to add Purchasing-Selling Entity and Interchange Authority (INT-004 and INT-005 have requirements for communication between the RC and the PSE and IA), and remove the phrase “within the

Organization	Yes or No	Question 1 Comment
		same Interconnection since there RCs between two Interconnections still need to communication with each other for reliability coordination (e.g. curtailment of interchange transactions crossing Interconnection boundary, as stipulated in IRO-006). Response: The applicability of COM-001 and COM-002 were revised to include the same reliability entities: RC, TOP, BA, DP and GOP. LSE, PSE and TSP were removed from the applicability of these standards per stakeholder suggestion. The phrase “within the same interconnection” is added for the case of ERCOT which has only DC tie lines with the Eastern Interconnection and has minimal interchange. (4) R3: Suggest to add adjacent Transmission Operator and Purchasing-Selling Entity (the latter needed for meeting INT-004 requirements). Response: The SDT has included the following Part 3.5 of Requirement R3: 3.5 Adjacent Transmission Operators synchronously connected within the same Interconnection The applicability of COM-001 and COM-002 were revised to include the same reliability entities: RC, TOP, BA, DP and GOP. LSE, PSE and TSP were removed from the applicability of these standards per stakeholder suggestion. (5) The list of entities in R4 and R6 is different from those in R3 and R5. They should be the same for having Alternative Interpersonal Communication capability. Response: The RCSDT asserts the standard meets FERC Order 693 regarding DP and GOP entities by requiring these entities to have Interpersonal Communication capability. Additionally requiring DP and GOP entities to have Alternative Interpersonal Communication capability only imposes more cost on smaller DP and GOP entities that have little or no risk impact to the bulk electric system. (6) R5: Suggest to add adjacent Balancing Authority as adjoining BAs need to communication with each to check schedules and other balancing information. Response: The SDT has included the following Part 5.6 of Requirement R5: 5.6 Adjacent Balancing Authorities Note that this is a defined term in the glossary: “A Balancing Authority Area that is interconnected (to) another Balancing Authority Area either directly or via a multi-party agreement or transmission tariff.” (7) There are a number of parts in Requirements R1 to R8 each of which must be complied with. However, the VSLs for R1 to R8 are binary which do not provide any distinction in partial failure of each of these requirements. We suggest the SDT to apply the VSL guideline and re-establish the various levels of violation

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Organization	Yes or No	Question 1 Comment
		severity for these requirements. Response: Each entity listed in Requirements R1-R8 is required to meet the contents with respect to each other entity listed in the requirement. Failure to have the capability with a single entity is a single violation of the requirement. For example, if an RC has 5 BA's within it Area and fails to have Interpersonal Communications with two of them, then the RC has violated the requirement twice. The VSLs are written to address each violation of the Requirement. We have removed the words "or more" from the VSLs.
Response: The RCSDT thanks you for your comment. Please see responses above.		
Bonneville Power Administration	Yes	
Xcel Energy	No	We feel that either the definitions, or the requirements, should make it clear whether data is included.
Response: The RCSDT thanks you for your comment. The SDT has made modifications to attempt to make this as clear as possible.		

2. The RCSDT believes that the requirements of TOP-001-1 obviate the need to develop additional requirements to address Xcel's comment. Do you agree? If not, please explain in the comment area below.

Summary Consideration:

The original justification that the RCSDT posited for not adding a requirement to directly address Xcel Energy's comments in paragraph 516 and FERC's related recommendation in paragraph 523 was that TOP-001-1 R3 was considered to address this concern. Since that time, the RTO SDT has proposed to retire TOP-001-1 R3. However, FERC has since retired IRO-004-1 R3 and R5 along with IRO-005-3 R5. Because these are retired, there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered "would violate safety, equipment, regulatory, or statutory requirements," the TOP may respond to the RC that it cannot comply.

Organization	Yes or No	Question 2 Comment
Northeast Power Coordinating Council	No	If the requirement were going to remain, but the Project 2007-03 Real-Time Operations SDT proposed to retire that requirement during their last posting. There needs to be better coordination with that SDT.
Response: The RCSDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered "would violate safety, equipment, regulatory, or statutory requirement," the TOP may respond to the RC that it cannot comply.		
Bonneville Power Administration	Yes	
PPL	Yes	
Dominion	Yes	
SERC OC Standards Review Group	No	Top-001-1, Requirement R3, which is what the SDT appears to be using as its justification for not adding a requirement here is proposed to be deleted by the RTO-SDT on Project 2007-03.
Response: The SDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered "would violate safety, equipment, regulatory, or statutory requirement," the TOP may respond to the RC that it cannot comply.		

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Organization	Yes or No	Question 2 Comment
IRC Standards Review Committee	No	It might if the requirement were going to remain but the Project 2007-03 Real-Time Operations SDT proposed to retire that requirement during their last posting. We believe there needs to be better coordination with that SDT.
Response: The SDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered “would violate safety, equipment, regulatory, or statutory requirement,” the TOP may respond to the RC that it cannot comply.		
MRO's NERC Standards Review Subcommittee	No	A. Agree that a receiving entity should not be held accountable until such time that they are required to take such action. B. It might if the requirement were going to remain but the Project 2007-03 (“Real-Time Operations SDT”) proposed to retire that requirement during their last posting. This needs to be coordinated with that SDT.
Response: The SDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered “would violate safety, equipment, regulatory, or statutory requirement,” the TOP may respond to the RC that it cannot comply.		
FirstEnergy	Yes	
Midwest ISO Standards Collaborators	No	It might if the requirement were going to remain but the Project 2007-03 Real-Time Operations SDT proposed to retire that requirement during their last posting. This needs to be coordinated with that SDT.
Response: The SDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered “would violate safety, equipment, regulatory, or statutory requirement,” the TOP may respond to the RC that it cannot comply.		
SPP Standards Development	Yes	In fact, we believe that R1, R2 and R5 more specifically put that requirement on the TOP. The TOP doesn't have to wait for the RC and any directive that may be associated with R3 prior to taking action to mitigate an emergency condition.
Response: The SDT thanks you for your comment.		

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Organization	Yes or No	Question 2 Comment
Kansas City Power & Light	Yes	
Exelon	Yes	
PacifiCorp	Yes	
Arizona Public Service Company	Yes	
Southern Company	No	Comments: I see no connection between XCEL's comment on COM-001-1. The requirements of COM-001-1 require the RCs, TOPs, and BAs to have a primary interpersonal communications method and to designate an alternative. I believe that if the requirements for the entity to have both primary and alternative methods of interpersonal communications this objection could be cleared. For example, R2 Each Reliability Coordinator shall designate have an Alternative Interpersonal Communications capability with the following entities to exchange Interconnection and operating information
Response: Thank you for your comment. We agree that there is no connection between Xcel's concern and COM-001-1.		
Green Country Energy, Green Country Operating Services		No Comment
Manitoba Hydro	Yes	
NextEra Energy, Inc.	No	As stated in response to number 1, Reliability Standards are to be clear and complete. If a Transmission Operator is not responsible for a delay caused by a Reliability Coordinator, the Standard should specifically state that the Transmission Operator does not need to wait for an assessment or approval of a Reliability Coordinator to take actions pursuant to TOP-001-1 R3. Since the Reliability Coordinator is atop the reliability hierarchy, such a statement provides clarity and completeness to understanding a Transmission Operators rights. Thus, TOP-001-1 R3 should be revised to lead with: "Without any obligation to first seek and obtain an assessment or approval from its Reliability Coordinator, each Transmission Operator"
Response: The SDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered "would violate safety, equipment, regulatory, or statutory requirement," the TOP may respond to the RC that it cannot comply.		

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Organization	Yes or No	Question 2 Comment
United Illuminating Company	Yes	
American Electric Power	Yes	
Pepco Holdings Inc	Yes	
American Transmission Company	Yes	
ISO New England	No	It might if the requirement were going to remain but the Project 2007-03 Real-Time Operations SDT proposed to retire that requirement during their last posting. We believe there needs to be better coordination with that SDT.
Response: The SDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered “would violate safety, equipment, regulatory, or statutory requirement,” the TOP may respond to the RC that it cannot comply.		
ERCOT ISO	No	It might if the requirement were going to remain but the Project 2007-03 Real-Time Operations SDT proposed to retire that requirement during their last posting. We believe there needs to be better coordination with that SDT.
Response: The SDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered “would violate safety, equipment, regulatory, or statutory requirement,” the TOP may respond to the RC that it cannot comply.		
WECC	Yes	
BGE	Yes	BGE has no additional comments.
Response: Thank you for your comment.		
Constellation Energy Commodities Group	Yes	

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Organization	Yes or No	Question 2 Comment
Duke Energy	No	Requirements of TOP-001-1 are being revised under Project 2007-03, which may not continue to adequately address Xcel's concern.
Response: The SDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered "would violate safety, equipment, regulatory, or statutory requirement," the TOP may respond to the RC that it cannot comply.		
Indeck Energy Services	Yes	
City of Springfield, IL - City Water Light and Power (CWLP)	No	TOP-001 is in the process of being substantially modified by Project 2007-03. These changes may conflict with the matter addressed by Xcel's comment. Thus, Xcel's concern should be addressed independently but in the context of the TOP-001-2 revisions proposed by Project 2007-03.
Response: The SDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered "would violate safety, equipment, regulatory, or statutory requirement," the TOP may respond to the RC that it cannot comply.		
South Carolina Electric and Gas	No	Top-001-1, Requirement R3, which is what the SDT appears to be using as its justification for not adding a requirement here is proposed to be deleted by the RTO-SDT on Project 2007-03.
Response: The SDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered "would violate safety, equipment, regulatory, or statutory requirement," the TOP may respond to the RC that it cannot comply.		
Independent Electricity System Operator	No	TOP-001 is being revised and some of the requirements that fulfill this need may have been removed. We suggest the SDT check with the latest draft version of TOP-001 and coordinate with the Real-time Operation SDT to ensure there are not gaps.
Response: The SDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered "would violate safety, equipment, regulatory, or statutory requirement," the TOP may respond to the RC that it cannot comply.		

Organization	Yes or No	Question 2 Comment
Xcel Energy	No	We are concerned that the drafting team may not have understood Xcel Energy's comments and FERC's directive in Order 693. FERC had asked that NERC consider Xcel Energy's suggestion. This consideration does not necessarily equate to the development of additional requirements, however that may be the solution. We recognize that R1 and R2 of TOP-001-1 give the TOP authority to take immediate actions necessary to alleviate operating emergencies. We were concerned with the potential situation where the RC's directive (R3 of IRO-001-2) may conflict with actions the TOP has ALREADY taken. In this situation, we do not feel the TOP should be held at fault for the actions it took prior to the RC's directive. (R3 of IRO-001-2 is currently in effect under TOP-001-1 R3.) Additionally, R1 and R2 of TOP-001-1 have been removed from the latest draft of version 2. So, if TOP-001-2 and IRO-001-2 are approved as drafted, it would appear that all rights and protections of the TOP to take immediate actions will be removed and our initial issue, as detailed in Order 693, still exists.
Response: The SDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered "would violate safety, equipment, regulatory, or statutory requirement," the TOP may respond to the RC that it cannot comply. The SDT appreciates this clarification by Xcel Energy. At any time in the future, Reliability Directives may be received that, based on the best available information at the time, change or reverse operating actions taken in the past, even the immediate past. The TOP is not held at fault for past actions that it took to protect the BES by any current or proposed NERC requirements. As written in TOP-001-2 R1, R3 and R4 as proposed by the RTO SDT, the TOP is not prevented from acting or telling the RC that for specific safety, equipment, regulatory or statutory reasons, it cannot comply.		

3. Do you agree with the revision to IRO-001, R1 for certifying Reliability Coordinators? If not, please explain in the comment area below.

Summary Consideration: Stakeholders were asked if they agree with the revision to IRO-001, R1 for certifying Reliability Coordinators. Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSdT concurs and has removed R1 from IRO-001-2.

Organization	Yes or No	Question 3 Comment
ERCOT ISO	No	The language “to continuously assess transmission reliability” should be changed to “to continuously assess Bulk Electric System reliability” to reflect what the enforceability of the standards are meant to be. The requirement on the ERO should also be expanded similar to BAL-005-0.1b R1 to ensure that all operating entities and the entire BES is covered under a Reliability Coordinator. In R2, should “of” be “to”? Reliability Directives are issued to TOPs, BA, etc. The VSL for R1 is not consistent with the requirement. The requirement applies to the ERO but the VSL applies to the Regional Entity.
ISO New England	No	The language “to continuously assess transmission reliability” should be changed to “to continuously assess Bulk Electric System reliability” to reflect what the enforceability of the standards are meant to be. The requirement on the ERO should also be expanded similar to BAL-005-0.1b R1 to ensure that all operating entities and the entire BES is covered under a Reliability Coordinator. In R2, should “of” be “to”? Reliability Directives are issued to TOPs, BA, etc. The VSL for R1 is not consistent with the requirement. The requirement applies to the ERO but the VSL applies to the Regional Entity.
IRC Standards Review Committee	No	The language “to continuously assess transmission reliability” should be changed to “to continuously assess Bulk Electric System reliability” to reflect what the enforceability of the standards are meant to be. The requirement on the ERO should also be expanded similar to BAL-005-0.1b R1 to ensure that all operating entities and the entire BES is covered under a Reliability Coordinator. In R2, should “of” be “to”? Reliability Directives are issued to TOPs, BA, etc. The VSL for R1 is not consistent with the requirement. The requirement applies to the ERO but the VSL applies to the Regional Entity.

Organization	Yes or No	Question 3 Comment
Northeast Power Coordinating Council	No	The language “to continuously assess transmission reliability” should be changed to “to continuously assess Bulk Electric System reliability” to reflect what the enforceability of the standards are meant to be. Response: Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2. The requirement on the ERO should also be expanded similar to BAL-005-0.1b R1 to ensure that all operating entities and the entire BES are covered under a Reliability Coordinator. Response: R1 has been removed from the standard based on stakeholder comments. In R2, should “of” be “to”? Reliability Directives are issued to TOPs, BA, etc. Response: The requirement was rewritten for clarity as follows: R2. Each Reliability Coordinator shall take actions or direct actions (which could include issuing Reliability Directives) by Transmission Operators, Balancing Authorities, Generator Operators, and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. The VSL for R1 is not consistent with the requirement. The requirement applies to the ERO but the VSL applies to the Regional Entity. Response: R1 has been removed from the standard based on stakeholder comments.
Response: The RCSDT thanks you for your comment.		
Bonneville Power Administration	Yes	
PPL	Yes	
SERC OC Standards Review Group	No	We think you are attempting to create a requirement similar to BAL-005, R1. That language copied here is clear and concise - All generation, transmission, and load operating within an Interconnection must be included within the metered boundaries of a Balancing Authority Area.
Response: The RCSDT thanks you for your comment. Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.		
MRO's NERC Standards Review	No	A. R1, As written it is unclear what level of certification this will entail? Presently written within the NERC Reliability Standards, responsibility is given to RC's to manage the reliability of their areas. Recommend

Organization	Yes or No	Question 3 Comment
Subcommittee		deleting this requirement. The ERO has pushed back in other Standards to having a responsibility for any NERC Requirements, since they are not a user, owner, or operator of the BES (see EOP-004-2). Response: Many commenters also suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2. If this does move forward and an RC is certified by the ERO and then the RC is found non-compliant by a Regional Entity, for an associated certified item, will the ERO be held responsible, too? Response: The RCSDT has removed R1 from IRO-001-2. If the SDT selects to keep R1, there are some issues with how the requirement is written. The requirement places emphasis on regions and regional boundaries when no emphasis should be placed there. There are multiple Reliability Coordinators the span multiple regions. Response: The RCSDT has removed R1 from IRO-001-2. The language “to continuously assess transmission reliability” should be changed to “to continuously assess Bulk Electric System reliability” to reflect on what the standards are enforceable. The requirement on the ERO should also be expanded similar to BAL-005-0.1b R1 to ensure that all operating entities and the entire BES is covered under a Reliability Coordinator. B. In R2, should “of” be “to”. Reliability Directives are issued to TOPs, BA, etc. C. The VSL for R1 is not consistent with the requirement. The requirement applies to the ERO but the VSL applies to the Regional Entity. Response: Please see the response to the comments from NPCC above on these same topics..
Response: The RCSDT thanks you for your comment.		
FirstEnergy	Yes	
Midwest ISO Standards Collaborators	No	In general, we are not opposed to the concept of the ERO certifying the Reliability Coordinators; however, there are some issues with how the requirement is written. Response: Thank you. The requirement places emphasis on regions and regional boundaries when no emphasis should be placed

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Organization	Yes or No	Question 3 Comment
		there. There are multiple Reliability Coordinators that span multiple regions. Response: Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2. The language “to continuously assess transmission reliability” should be changed to “to continuously assess Bulk Electric System reliability” to reflect on what the standards are enforceable. The requirement on the ERO should also be expanded similar to BAL-005-0.1b R1 to ensure that all operating entities and the entire BES is covered under a Reliability Coordinator Area. In R2, should “of” be “to”. Reliability Directives are issued to TOPs, BA, etc. The VSL for R1 is not consistent with the requirement. The requirement applies to the ERO but the VSL applies to the Regional Entity. Response: Please see the response to the comments from NPCC above on these same topics..
Response: The RCSDT thanks you for your comment.		
SPP Standards Development	No	Is this more of a registry question than a standards issue? While we agree that there needs to be a requirement somewhere that establishes the need for Reliability Coordinators, isn't there also a similar need for other functional entities such as Transmission Operators, Balancing Authorities, etc? Should these be captured in standards or in the certification/registration process?
Response: The RCSDT thanks you for your comment. Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.		
Kansas City Power & Light	Yes	
Exelon		No comment - only applicable to RC
PacifiCorp	Yes	
Southern Company	No	Comments: This would allow NERC to designate one entity to be the Reliability Coordinator for an entire interconnection or the entire continent. This would reduce the Regional Reliability Organizations to

Consideration of Comments on Reliability Coordination — Project 2006-06

Organization	Yes or No	Question 3 Comment
		compliance entities.
Response: The RCSDT thanks you for your comment. Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.		
Green Country Energy, Green Country Operating Services		No Comment
Manitoba Hydro	Yes	
United Illuminating Company	Yes	
American Electric Power	No	This is out of scope with the standard, as it is currently addressed through the NERC certification process that the NERC reliability coordinators are subject to.
Response: The RCSDT thanks you for your comment. Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.		
Pepco Holdings Inc	Yes	
American Transmission Company	Yes	
WECC	Yes	
BGE	Yes	BGE has no additional comments.
Constellation Energy Commodities Group	Yes	
Duke Energy	No	How is NERC going to certify the RCs? Response: R1 is a revision of an existing requirement in IRO-001-1.1. Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2. The NERC Rules of Procedure define the certification process and the level of certification.

Consideration of Comments on Reliability Coordination — Project 2006-06

Organization	Yes or No	Question 3 Comment
		Also, we believe the word “all” should be inserted after the word “among”, so that it is clear that all generation, transmission and load must be included. Response: Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.
Response: The RCSDT thanks you for your comment.		
CECD	Yes	
Indeck Energy Services	No	
City of Springfield, IL - City Water Light and Power (CWLP)	Yes	
South Carolina Electric and Gas	No	We think you are attempting to create a requirement similar to BAL-005, R1. That language copied here is clear and concise - All generation, transmission, and load operating within an Interconnection must be included within the metered boundaries of a Balancing Authority Area.
Response: The RCSDT thanks you for your comment. Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.		
Independent Electricity System Operator	No	1. R2: The word “of” before Transmission Operators should be “to”. Response: The requirement was rewritten for clarity as follows: R2. Each Reliability Coordinator shall take actions or direct actions (which could include issuing Reliability Directives) by Transmission Operators, Balancing Authorities, Generator Operators, and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. 2. The VSL for R1 should be revised to replace Regional Entities with ERO. Response: Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.
Response: The RCSDT thanks you for your comment.		

4.

Consideration of Comments on Reliability Coordination — Project 2006-06

Do you agree with moving two requirements from IRO-001 back to IRO-002 relating to Analysis Tool outages? If not, please explain in the comment area below.

Summary Consideration: There were no comments on this question. The SDT thanks you for your consideration of and agreement with this position.

Organization	Yes or No	Question 4 Comment
Northeast Power Coordinating Council	Yes	
Bonneville Power Administration	Yes	
PPL	Yes	
SERC OC Standards Review Group	Yes	
IRC Standards Review Committee	Yes	
MRO's NERC Standards Review Subcommittee	Yes	
FirstEnergy	Yes	
Midwest ISO Standards Collaborators	Yes	
SPP Standards Development	Yes	
Kansas City Power & Light	Yes	
Exelon		Comments: No comment - only applicable to RC
PacifiCorp	Yes	

Consideration of Comments on Reliability Coordination — Project 2006-06

Organization	Yes or No	Question 4 Comment
Arizona Public Service Company	Yes	
Southern Company	Yes	
Green Country Energy, Green Country Operating Services		No Comment
Manitoba Hydro	Yes	
United Illuminating Company	Yes	
Pepco Holdings Inc	Yes	
American Transmission Company	Yes	
ISO New England	Yes	
ERCOT ISO	Yes	
WECC	Yes	
BGE	Yes	BGE has no additional comments.
Constellation Energy Commodities Group	Yes	
Duke Energy	Yes	
CECD	Yes	
Indeck Energy Services	Yes	
South Carolina Electric and Gas	Yes	

Consideration of Comments on Reliability Coordination — Project 2006-06

Organization	Yes or No	Question 4 Comment
Independent Electricity System Operator	Yes	

5. Do you agree with moving two requirements from IRO-001 back to IRO-005 relating to Reliability Coordinator notifications? If not, please explain in the comment area below.

Summary Consideration: Commenters noted a typographical error in R1 which was corrected to read

R1. When the results of an Operational Planning Analysis or Real-time Assessment indicate an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify ~~issue an alert to~~ all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

One commenter also asked that an errant yellow text box be removed from Page 1, which was also done.

Organization	Yes or No	Question 5 Comment
Northeast Power Coordinating Council	No	R1 states “When the results of an Operational Planning Analysis or Real-time Assessment indicate an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.” The word “notify” should be struck.
Response: The SDT thanks you for your comment and will correct this typographical error to remove the words “issue an alert.”		
Bonneville Power Administration	Yes	
PPL	Yes	
SERC OC Standards Review Group	Yes	Please remove the yellow box on page 1 indicating this standard will be retired.
Response: The SDT thanks you for your comment and will remove the yellow box on page 1.		
IRC Standards Review Committee	Yes	R1 states “When the results of an Operational Planning Analysis or Real-time Assessment indicate an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.” The word “notify” should be struck.
Response: The SDT thanks you for your comment and will correct this typographical error to remove the words “issue an alert.”		

Consideration of Comments on Reliability Coordination — Project 2006-06

Organization	Yes or No	Question 5 Comment
MRO's NERC Standards Review Subcommittee	Yes	
FirstEnergy	Yes	
Midwest ISO Standards Collaborators	Yes	
SPP Standards Development	Yes	
Kansas City Power & Light	Yes	
Exelon		Comments: No comment - only applicable to RC
PacifiCorp	Yes	
Arizona Public Service Company	Yes	
Southern Company	Yes	
Green Country Energy, Green Country Operating Services		No Comment
Manitoba Hydro	Yes	
United Illuminating Company	Yes	
Pepco Holdings Inc	Yes	
American Transmission Company	Yes	
ISO New England	Yes	R1 states "When the results of an Operational Planning Analysis or Real-time Assessment indicate an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify issue an alert to all impacted Transmission Operators and Balancing

Consideration of Comments on Reliability Coordination — Project 2006-06

Organization	Yes or No	Question 5 Comment
		Authorities in its Reliability Coordinator Area.” The word “notify” should be struck.
Response: The SDT thanks you for your comment and will correct this typographical error to remove the words “issue an alert.”		
ERCOT ISO	Yes	R1 states “When the results of an Operational Planning Analysis or Real-time Assessment indicate an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.” The word “notify” should be struck.
Response: The SDT thanks you for your comment and will correct this typographical error to remove the words “issue an alert.”		
WECC	Yes	
BGE	Yes	BGE has no additional comments.
Constellation Energy Commodities Group	Yes	
Duke Energy	Yes	
CECD	Yes	
Indeck Energy Services	Yes	
South Carolina Electric and Gas	Yes	
Independent Electricity System Operator	Yes	

6. Do you have any other comment, not expressed in questions above, for the RC SDT?

Summary Consideration:

The RCSDT received comments suggesting clarification of COM-002-3. The RCSDT intends the communication of Reliability Directives to be person-to-person and in such a manner that the Reliability Directive is understood and not necessarily repeated verbatim. COM-002-3 is not intended to be prescriptive on how the Reliability Directive is issued. Spoken or written communications are valid methods (i.e. using the telephone, radio, electronic texting, email, etc.). The purpose of COM-002-3 is to ensure emergency communications between operating personnel are effective. There is no proxy requirement for 24/7 operating personnel regarding small entities. Only “capability” as provided for in COM-001-2 is applicable. The RCSDT agrees that the use of Blast Calls to issue Reliability Directives, in mass, is efficient and effective. The RCSDT believes Reliability Directives issued in mass should be defined by procedure, and that the procedure would establish a method of affirmation and notice of implementation. As envisioned, communications protocols would be addressed in the COM-003 standard being developed in Project 2007-02.

Some commenters suggested revisions to IRO-014, requirement R8 to conform to similar requirements R6 and R7. The RCSDT made the suggested revision by re-ordering R8:

R8. During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, each Reliability Coordinator shall implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact unless such actions would violate safety, equipment, regulatory or statutory requirements. [Violation Risk Factor: High][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

IRO-014-2, requirement R4 is applicable to those Reliability Coordinators engaged in activities related to requirement R1 and part 1.7, it is unlikely that Reliability Coordinators geographically and electrically distant from one another will have mutually agreed upon operating procedures (per requirement R1), and therefore requirement R4 would not be applicable. The RCSDT believes IRO-014-2, requirement R4 which requires weekly communication provides reasonable contact and flexibility – and this requirement is in effect today. The RCSDT coordinated the use of the NERC Glossary term “Adverse Reliability Impact” with the Real-Time Operations team and continues the practice of informing all RCs of Adverse Reliability Impacts in requirement R5. The RCSDT has revised IRO-014-2, requirements R6-R8 to clarify that when one RC identified a problem and presents an action plan for another RC, the second RC is obligated to implement the action plan. The RCSDT will forward the concern about RC's identifying themselves and the receiver to establish authority to the Project 2007-02, Operating Personnel Communications Protocols SDT. The Project 2007-02 team is developing a standard that includes requirements for use of specific communications protocols.

Organization	Yes or No	Question 6 Comment
Northeast Power Coordinating		The SDT did not address all concerns with COM-002-3 from the last posting. For entities registered as multiple functions, the combination of the definition of Reliability Directive and Requirement R1 could be

Organization	Yes or No	Question 6 Comment
Council		confused to require a company to issue directives to itself. There are several organizations registered as a Reliability Coordinator, Transmission Operator and Balancing Authority. In these companies, it is not uncommon for those responsibilities to be distributed across multiple desks. Thus, for certain situations, a single System Operator may actually be the Reliability Coordinator and the Transmission Operator. In other situations, the System Operator serving the Reliability Coordinator function may be adjacent to the System Operator serving as the Transmission Operator or Balancing Authority. It should never be necessary for these System Operators to issue Reliability Directives to themselves in the first example or to their co-worker in the second example to demonstrate compliance to NERC standards. How the entity coordinates its actions among its Reliability Coordinator, Balancing Authority and Transmission Operator roles is a corporate governance issue that should not be confused or complicated by the NERC standards. Thus, standards should be made clear that the Reliability Directive is directed to another company. In place of requiring an operator, in real-time, to state “this is a Reliability Directive,” there should be an allowance for an entity to develop procedures indicating, in advance, their expectations for three-part communications to their sub-operating entities. Therefore, we suggest modifying R1 to be “When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action, either verbally, when the communication is issued, or in advance through documented procedures, as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time.]” Response: COM-002 does not preclude text or other forms of communication for issuing Reliability Directives. However, entities still must comply with the requirements of COM-002. Further, the RCS DT believes it to be equally imperative that each NERC registered function hold the authority to issue Reliability Directives, and the ability to receive Reliability Directives, whether those Reliability Directives are issued to subordinate registered functions within a vertically integrated utility, or to registered entities that are corporately separate. The RCS DT believes the following response to draft 3 comments still holds true: “The way that COM-002 is crafted, it focuses on functional entity communication between and among functions. Face-to-face communication of Reliability Directives are subject to the requirements of COM-002 and can be measured for COM-002 by allowing Operator Logs as possible evidence to support compliance”. The use of operator logs to memorialize and provide evidence of compliance is directly specific to those Reliability Directives issued and received within the same control room or operations center. The RCS DT believes that any Registered Entity or person operating as such must understand the intent of the issued Reliability Directive, and that the issuer of the Reliability Directive believe that the Reliability Directive was correctly received. COM-002 should not be construed to mean that an individual serving in two functions be

Organization	Yes or No	Question 6 Comment
		required to issue a Reliability Directive to himself, but rather it is expected that such an individual would appropriately address the reliability issues as required by the function they are serving and its subsequent responsibilities. Also, the definition of Emergency as currently cited in these draft Standards and included in the existing NERC Glossary should be modified to include the NERC Glossary term Adverse Reliability Impact to make the Standards more crisp, clear and enforceable. Because the Project 2007-03 Real-Time Operations SDT proposed to utilize the definition of Adverse Reliability Impact in TOP-001-2 R5 during the last posting, the change to the definition should be coordinated with that team. Response: With respect to the suggestion of modifying the definition of Emergency. The RCSDT believes that the term Emergency relates to the actual state of the system, including local and wide area, while an Adverse Reliability Impact is the impact resulting from an event resulting in instability or cascading that affects a widespread area of an Interconnection. There could be an Emergency that is local, or that threatens equipment but which does not necessarily result in cascading or instability; it is in this regard that the RCSDT believes that the definition of Emergency should not be dependent upon or pertain only to Adverse Reliability Impact events. The RCSDT coordinated the use of Adverse Reliability Impacts with the Real-Time Operations team. There is a text box in IRO-005-4 that indicates this standard will be retired. Yet, there still remain requirements in the standard and various other associated documentation that indicates requirements are being move to this standard. Delete the text box. Response: We have deleted the text box. Strike IRO-014-2 Part 1.7. There is no need to have a weekly conference to discuss every Operating Procedure, Operating Process and Operating Plan. As this requirement is written, a conference call would be necessary for each. Furthermore, IRO-014-2 R4 already includes a requirement to have weekly conference calls that should suffice. IRO-014-2 R2 seems to recognize that these Operating Procedures, Processes and Plans likely will not need to be discussed weekly as it only requires an annual update. Response: The intent of R1 is for Reliability Coordinators to coordinate specific activities with other impacted Reliability Coordinators. These activities are listed as sub requirements. R1.7 requires you to have a procedure relating to weekly conference calls while R4 requires participation in weekly calls. Further, the RCSDT believes that it is prudent that Reliability Coordinators talk at least once a week to verify viability of mutual plans, procedures or processes. With respect to the relation of IRO-14-2 R1.7 and R4. R1.7 is requires you to have a procedure relating to

Organization	Yes or No	Question 6 Comment
		weekly conference calls while R4 requires participation in weekly calls. Requirement R2 in IRO-001 contains the words “which could include issuing Reliability Directives”, but Reliability Directives are not referenced anywhere else in the standard. This inclusion seems unnecessary since without it, R2 already requires that the RC take actions or direct actions by others to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. Whether or not a Reliability Directive is issued is irrelevant in this requirement. These words should be removed. Note that COM-002 already stipulates the requirement for 3-part communication when a Reliability Directive is issued. The inclusion of “which could include issuing Reliability Directives” in IRO-001 is unnecessary. Response: R2 requires the Reliability Coordinator to act. These actions could include Reliability Directives in the case of an Emergency; however, issuing Reliability Directives might not always be necessary, as the Reliability Coordinator may be acting proactively well in advance of an emergency. R2 promotes this proactive approach, but reserves the use of Reliability Directives for circumstances that require its use.
Response: The RCS DT thanks you for your comments.		
PPL		We are providing the following comments for the Standards Drafting Team to consider. 1) Consider changing R1 to ‘Each RC shall have the capability for Interpersonal Communications with the following entities to exchange Interconnection and operating information...’ for clarity as Interpersonal Communications and capability are both nouns. Response: Thank you for your suggestion to modify the sentence structure into a noun phrase, however the RCS DT believes the current form is unambiguous. 2) We feel changing the applicability of the standard is important to the accuracy of the standard. The purpose of COM-002 is ‘To ensure emergency communications between operating personnel are effective’. Since operating personnel are covered by the applicability of RC, BA, TOP and GOP, we suggest the applicability to TSP, LSE, and PSE be removed from COM-002-3. Response: We agree and have removed those entities 3) Additionally, we would like to bring to the attention of the Standards Drafting Team, that the implementation plan for COM-001-2 and IRO-001-2 still includes TSP, LSE, and PSE although the revised standard does not include these entities in the Applicability Section. For COM-001-2 refer to the implementation plan, page 1. For IRO-001-2 refer to the implementation plan for new R2, new R3, new R4

Consideration of Comments on Reliability Coordination — Project 2006-06

Organization	Yes or No	Question 6 Comment
		and the chart on the last page. Thank you for your consideration in addressing these comments. Response: The RCSDT has revised the applicability of COM-001, COM-002 and IRO-001 to align with each other. TSP, LSE and PSE are no longer in either standard.
Response: The RCSDT thanks you for your comments.		
PSEG		IRO COM-002-3 standard continues to include PSE. PSE's do not play an active role and have no authority or ability to perform reliability coordination. PSE's should be removed from the standard.-001-2 references PSE's in the implementation for R2, R3, R4 and "Functions that must comply with the requirements in this standard" table. PSE's were removed from the standard and should be removed from the implementation plan.
Response: The RCSDT thanks you for your comments. The RCSDT has revised the applicability of COM-001 and COM-002 to align with each other. TSP, LSE and PSE are no longer in either standard.		
Dominion		We do not agree with the addition of weekly conference calls as required in R4. We believe that RCs should schedule calls as needed but do not agree that a weekly scheduled call improves reliability.
Response: The RCSDT thanks you for your comments. The requirement for weekly conference calls exists in IRO-015-1. The RCSDT has revised the requirement and incorporated it into proposed IRO-014-2. R2. The Reliability Coordinator shall participate in agreed upon conference calls and other communication forums with adjacent Reliability Coordinators. R2.1. The frequency of these conference calls shall be agreed upon by all involved Reliability Coordinators and shall be at least weekly.		
SERC OC Standards Review Group		Reliability Directives may be issued by blast calls from Reliability Coordinators. It is inefficient and may be a hindrance to reliability to require 3-part communications in these instances. Response: The RCSDT agrees that the use of Blast Calls to issue Reliability Directives, in mass, is efficient and effective. However the essence of accurately implementing Reliability Directives is accomplished by use of 3-part communications. The RCSDT believes Reliability Directives issued in mass should be defined by procedure, and that the procedure would establish a method of affirmation and notice of implementation. There are several organizations registered as BAs, RCs and TOPs. It is not uncommon for those entities to be distributed across multiple desks in the same control room without regard to how an entity is registered.

Organization	Yes or No	Question 6 Comment
		Thus, a single System Operator may perform functions that are categorized under two or more of those functional entities. The drafting team should clarify that under no circumstances should that System Operator be required to issue a Reliability Directive to himself. This is a corporate governance issue. Response: COM-002 does not preclude text or other forms of communication for issuing Reliability Directives. However, entities still must comply with the requirements of COM-002. Further, the RCS DT believes it to be equally imperative that each NERC registered function hold the authority to issue Reliability Directives, and the ability to receive Reliability Directives, whether those Reliability Directives are issued to subordinate registered functions within a vertically integrated utility, or to registered entities that are corporately separate. The RCS DT believes the following response to draft 3 comments still holds true: “The way that COM-002 is crafted, it focuses on functional entity communication between and among functions. Face-to-face communication of Reliability Directives are subject to the requirements of COM-002 and can be measured for COM-002 by allowing Operator Logs as possible evidence to support compliance”. The use of operator logs to memorialize and provide evidence of compliance is directly specific to those Reliability Directives issued and received within the same control room or operations center. The RCS DT believes that any Registered Entity or person operating as such must understand the intent of the issued Reliability Directive, and that the issuer of the Reliability Directive believe that the Reliability Directive was correctly received. COM-002 should not be construed to mean that an individual serving in two functions be required to issue a Reliability Directive to himself, but rather it is expected that such an individual would appropriately address the reliability issues as required by the function they are serving and its subsequent responsibilities. In IRO-014, R1, delete sub-requirement 1.7. The requirement for weekly conference calls related to operating procedures is duplicative to R4 and could be burdensome while adding very little value under certain circumstances. In IRO-014, R4, delete the phrase “(per Requirement 1, Part 1.7)” as a conforming change. Response: The intent of R1 is for Reliability Coordinators to coordinate specific activities with other impacted Reliability Coordinators. These activities are listed as sub requirements. R1.7 requires you to have a procedure relating to weekly conference calls while R4 requires participation in weekly calls. Further, the RCS DT believes that it is prudent that Reliability Coordinators talk at least once a week to verify viability of mutual plans, procedures or processes. In IRO-014, Requirements R6-R8 allow at least the theoretical possibility that an RC may determine an Adverse Reliability Impact in another RC’s area that the other RC neither can see nor believes that any

Organization	Yes or No	Question 6 Comment
		action should be taken. R7 puts the burden on the first RC to develop a plan that it cannot implement because it has no agreement with the BAs and TOPs in the other RC area. As such, this requirement is unenforceable. Response: Requirements R6-R8 are translated from IRO-016-1, Requirement R1. If an RC sees a problem and another does not see the same problem, then there may be an issue with someone's model or processes or procedures. The RC's are supposed to have coordinated Operating Plans, Processes or Procedures to operate reliably. R6-R8 are only applicable if one of the two (or more) RCs do not see that a problem exists. It would be a detriment to reliability for both RCs to take no action. RCs are required to coordinate actions under existing IRO-016-1, R1. If one RC identifies a problem and provides an action plan to another RC to mitigate the problem, the second RC is obligated under R8 to implement it. We have revised the R8 to clarify this intent. R8. During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, each Reliability Coordinator shall implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact unless such actions would violate safety, equipment, regulatory or statutory requirements. IRO-014-2, Revised R8. During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, each Reliability Coordinator shall implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact unless such actions would violate safety, equipment, regulatory or statutory requirements. Please review all the implementation plans to be sure the applicable entities match those in the standards. Response: These have been updated. "The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Standards Review group only and should not be construed as the position of SERC Reliability Corporation, its board or its officers."
Response: The RCSDT thanks you for your comments.		
IRC Standards Review Committee		The SDT did not address all of our concerns with COM-002-3 from the last posting. For entities registered as multiple functions, the combination of the definition of Reliability Directive and Requirement R1 could be confused to require a company to issue directives to itself. There are several organizations registered as a Reliability Coordinator, Transmission Operator and Balancing Authority. In these companies, it is not uncommon for those responsibilities to be distributed across multiple desks. Thus, for certain situations, a single System Operator may actually be the Reliability Coordinator and the Transmission Operator. In other situations, the System Operator serving the Reliability Coordinator function may be adjacent to the System Operator serving the as the Transmission Operator or Balancing Authority. We believe that it should never be necessary for these System Operators to issue Reliability Directives to themselves in the first example or to

Organization	Yes or No	Question 6 Comment
		their co-worker in the second example to demonstrate compliance to NERC standards. How the entity coordinates its actions among its Reliability Coordinator, Balancing Authority and Transmission Operator roles is a corporate governance issue that should not be confused or complicated by the NERC standards. Thus, we believe that standards should be made clear that the Reliability Directive is directed to another company. Response: COM-002 does not preclude text or other forms of communication for issuing Reliability Directives. However, entities still must comply with the requirements of COM-002. Further, the RCSDT believes it to be equally imperative that each NERC registered function hold the authority to issue Reliability Directives, and the ability to receive Reliability Directives, whether those Reliability Directives are issued to subordinate registered functions within a vertically integrated utility, or to registered entities that are corporately separate. The RCSDT believes the following response to draft 3 comments still holds true: “The way that COM-002 is crafted, it focuses on functional entity communication between and among functions. Face-to-face communication of Reliability Directives are subject to the requirements of COM-002 and can be measured for COM-002 by allowing Operator Logs as possible evidence to support compliance”. The use of operator logs to memorialize and provide evidence of compliance is directly specific to those Reliability Directives issued and received within the same control room or operations center. The RCSDT believes that any Registered Entity or person operating as such must understand the intent of the issued Reliability Directive, and that the issuer of the Reliability Directive believe that the Reliability Directive was correctly received. COM-002 should not be construed to mean that an individual serving in two functions be required to issue a Reliability Directive to himself, but rather it is expected that such an individual would appropriately address the reliability issues as required by the function they are serving and its subsequent responsibilities. We believe that, in place of requiring an operator, in real-time, to state “this is a Reliability Directive,” there should be an allowance for an entity to develop procedures indicating, in advance, their expectations of three-part to their sub-operating entities. Therefore, we suggest modifying R1 to be “When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action, either verbally, when the communication is issued, or in advance through documented procedures, as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time.]” Response: In regards to your suggested modification of R1 to include “or in advance through documented

Organization	Yes or No	Question 6 Comment
		procedures”, the intent of R1 in its current form is to provide that ability, as such any documented procedure would require stating such implemented action is considered a response to a Reliability Directive. And would follow acknowledge and confirmation requirements. Also, we believe that the definition of Emergency, as currently cited in these draft Standards and included in the existing NERC Glossary should be modified to include the NERC Glossary term Adverse Reliability Impact to make the Standards more crisp, clear and enforceable. Because the Project 2007-03 Real-Time Operations SDT proposed to utilize the definition of Adverse Reliability Impact in TOP-001-2 R5 during the last posting, the change to the definition should be coordinated with that team. Response: The RCSDT believes that the term Emergency relates to the actual state of the system, including local and wide area, while an Adverse Reliability Impact is the impact resulting from an event resulting in instability or cascading that affects a widespread area of an Interconnection. There could be an Emergency that is local, or that threatens equipment but which does not necessarily result in cascading or instability; it is in this regard that the RCSDT believes that the definition of Emergency should not be dependent upon or pertain only to Adverse Reliability Impact events. The RCSDT coordinated the use of Adverse Reliability Impacts with the Real-Time Operations team. There is a text box in IRO-005-4 that indicates this standard will be retired. Yet, there still remain requirements in the standard and various other associated documentation indicates requirements are being move to this standard. Response: The text box was removed. Please delete the text box. IRO-014-2 R4 already includes a requirement to have weekly conference calls that should suffice. IRO-014-2 R2 seems to recognize that these Operating Procedures, Processes and Plans likely will not need to be discussed weekly as it only requires an annual update. Response: The intent of R1 is for Reliability Coordinators to coordinate specific activities with other impacted Reliability Coordinators, these activities are listed as sub requirements. Further the RCSDT believes that it is prudent that Reliability Coordinators talk at least once a week to verify viability of mutual plans, procedures or processes. The relation of IRO-14-2 R1.7 to R4 is that R1.7 requires having a conference call, R4 requires participation by all impacted Reliability Coordinators, as such, neither replaces the other. In the definition of Reliability Directive, we suggest changing “to address an Emergency” to “to address a reliability constraint or a declared Emergency”. The RCSDT believes that reliability constraint is ambiguous and undefined, thus introducing confusion. Further modifying Reliability Directive by including “declared Emergency” would add unnecessary step in mitigation of the Emergency

Organization	Yes or No	Question 6 Comment
		Further, Requirement R2 in IRO-001 contains the words “which could include issuing Reliability Directives” but Reliability Directives are not referenced anywhere else in the standard. This inclusion seems unnecessary since without it, R2 already requires that the RC take actions or direct actions by others to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. Whether or not a Reliability Directive is issued is irrelevant in this requirement. We suggest that these words be removed. Note that COM-002 already stipulates the requirement for 3-part communication when a Reliability Directive is issued. The inclusion of “which could include issuing Reliability Directives” in IRO-001 is unnecessary. Response: R2 requires the Reliability Coordinator to act, these actions could in include Reliability Directives in the case of an Emergency, however issuing Reliability Directives it might not always be necessary, as the Reliability Coordinator may be acting pro-active well in advance of an emergency. R2 promotes this pro-active approach, but reserves the use of Reliability Directives for circumstances that require its use.
Response: The RCSDT thanks you for your comments.		
Midwest ISO Standards Collaborators		The SDT did not address all of our concerns with COM-002-3 from the last posting. For entities registered as multiple functions, the combination of the definition of Reliability Directive and Requirement R1 could be confused to require a company to issue directives to itself. There are several organizations registered as a Reliability Coordinator, Transmission Operator and Balancing Authority. In these companies, it is not uncommon for those responsibilities to be distributed across multiple desks. Thus, for certain situations, a single System Operator may actually be the Reliability Coordinator and the Transmission Operator. In other situations, the System Operator serving the Reliability Coordinator function may be adjacent to the System Operator serving the as the Transmission Operator or Balancing Authority. We believe that it should never be necessary for these System Operators to issue Reliability Directives to themselves in the first example or to their co-worker in the second example to demonstrate compliance to NERC standards. How the entity coordinates its actions among its Reliability Coordinator, Balancing Authority and Transmission Operator roles is a corporate governance issue that should not be confused or complicated by the NERC standards. Thus, we believe that standards should be made clear that the Reliability Directive is directed to another company. Response: COM-002 does not preclude text or other forms of communication for issuing Reliability Directives. However, entities still must comply with the requirements of COM-002. Further, the RCSDT believes it to be equally imperative that each NERC registered function hold the authority to issue Reliability Directives, and the ability to receive Reliability Directives, whether those Reliability Directives are issued to subordinate registered functions within a vertically integrated utility, or to registered entities that are corporately separate. The RCSDT believes the following response to draft 3 comments still holds true: “The way that COM-002 is crafted, it focuses on functional entity communication between and among functions. Face-to-face communication of Reliability Directives are subject to the requirements of COM-

Organization	Yes or No	Question 6 Comment
		002 and can be measured for COM-002 by allowing Operator Logs as possible evidence to support compliance”. The use of operator logs to memorialize and provide evidence of compliance is directly specific to those Reliability Directives issued and received within the same control room or operations center. The RCS DT believes that any Registered Entity or person operating as such must understand the intent of the issued Reliability Directive, and that the issuer of the Reliability Directive believe that the Reliability Directive was correctly received. COM-002 should not be construed to mean that an individual serving in two functions be required to issue a Reliability Directive to himself, but rather it is expected that such an individual would appropriately address the reliability issues as required by the function they are serving and its subsequent responsibilities. We also are concerned about the need to conduct three-part communications for a Reliability Directive issued through a blast call. Under these circumstances, the need for immediate action of multiple parties may require a blast call and there may not be time for all parties to complete three-part communications before initiating actions. Thus, we believe blast calls should be treated separately and that should be made clear. Response: The RCS DT agrees that the use of Blast Calls to issue Reliability Directives, in mass, is efficient and effective. However the essence of accurately implementing Reliability Directives is accomplished by use of 3-part communications. The RCS DT believes Reliability Directives issued in mass should be defined by procedure, and that the procedure would establish a method of affirmation and notice of implementation. COM-002-3 R2 needs to be rewritten as it is too verbose. The point is for the recipient of the original message to get the issuer to confirm that the message was understood. We suggest rewording R2 to “Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive.” Once the receiver has completed this requirement, the ball is in the issuer’s court per Requirement R3. No additional words are necessary in the requirement. Response: The RCS DT believes that the additional verbiage is necessary to ensure that an entity understands the Reliability Directive and is able to communicate that understanding back to the Reliability

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		Coordinator. It is not necessary to repeat the exact same verbiage of the Reliability Directive, but rather the intent of the actions required. Having to repeat verbiage of the Reliability Directive word-for-word could be an impediment to achieving the reliability intent of the Reliability Directive when the focus is on repeating verbatim. Per COM-002-3 R1, who decides that actions need to be issued as a Reliability Directive? Shouldn't it be the responsible entity? Thus, can we assume that if the responsible entity does not identify a communication as a Reliability Directive that it is not a Reliability Directive per the requirement? After all, why would an entity require actions but not issue a Reliability Directive. Following this logic, the VSL for R1 would never apply. Would a compliance auditor second guess if an action required a Reliability Directive? Response: Those orders issued as a Reliability Directive, and identified as such, will heighten awareness, tighten communications and require the receiver of the Reliability Directive to prioritize its response. Moreover, linking Reliability Directives to Emergencies establishes that normal non-Emergency operating communications or actions are not applicable to COM-002. Because the Project 2007-03 Real-Time Operations SDT proposed to utilize the definition of Adverse Reliability Impact in TOP-001-2 R5 during the last posting, the change to the definition should be coordinated with that team. Response: The RCSDT coordinated the use of Adverse Reliability Impacts with the Real-Time Operations team There is a text box in IRO-005-4 that indicates this standard will be retired. Yet, there still remain requirements in the standard and various other associated documentation indicates requirements are being move to this standard. Please delete the text box. Response: The text box has been removed. Please strike part IRO-014-2 Part 1.7. There is no need to have a weekly conference to discuss every Operating Procedure, Operating Process and Operating Plan. As this requirement is written, a conference call would be necessary for each. Furthermore, IRO-014-2 R4 already includes a requirement to have weekly conference calls that should suffice. IRO-014-2 R2 seems to recognize that these Operating Procedures, Processes and Plans likely will not need to be discussed weekly as it only requires an annual update. Response: The intent of R1 is for Reliability Coordinators to coordinate specific activities with other impacted

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		Reliability Coordinators, these activities are listed as sub requirements. R1.7 is requires you to have a procedure relating to weekly conference calls while R4 requires participation in weekly calls. Further the RCSDT believes that it is prudent that Reliability Coordinators talk at least once a week to verify viability of mutual plans, procedures or processes. IRO-014-2 R4 is overly broad and would require Reliability Coordinators that will not impact one another to participate on conference calls with one another without any reliability benefit. The issue is created by the addition of the clause “within the same Interconnection” to the requirement. ISO-NE, FRCC, Midwest ISO, and SPP are all in the same Interconnection. It is hard to fathom there being reliability benefit to SPP and ISO-NE conversing weekly or Midwest ISO and FRCC conversing weekly. We suggest limiting the requirement to adjacent Reliability Coordinators. Response: IRO-14-2 R4 is applicable to those Reliability Coordinators engaged in activities related to R1 and subsequently R1.7, it is unlikely that Reliability Coordinators whom are geographically and electrically distant will have <i>mutually agreed upon</i> operating procedures (per R1), and as such they are not applicable to R4. For IRO-014-2 R5, we suggest replacing “other” with “impacted” to limit the notification of Adverse Reliability Impacts to only those Reliability Coordinators that need to know. Because the definition of Adverse Reliability Impact includes “Bulk Electric System instability or Cascading”, it is possible that the cascading of 138 kV lines serving a load pocket or generator outlet stability issues could require a Reliability Coordinator to notify all other Reliability Coordinators regardless of impact. This would include Reliability Coordinators outside of the Interconnection with the problem. It would also include Reliability Coordinators that are not impacted. For instance, an issue in New England that would not pose a threat outside the northeast would require ISO-NE to notify SPP and FRCC and Reliability Coordinators in the Western Interconnection. There is no reliability benefit to this notification. Response: This requirement continues the current practice of informing all RCs of ARIs. Due to the nature of an ARI, this requirement is typically implemented as an RCIS message or a hotline call to all RC’s. This is intended to make all RCs aware of ARIs and support situational awareness. IRO-014-2 R6-R8 are problematic and need to be refined to make clear that the Reliability Coordinators shall operate to the most conservative limit. It should not require a Reliability Coordinator that disagrees with an action plan to implement the action plan. The Reliability Coordinator will be disagreeing with the action plan for reliability reasons. Assuming they are correct, the requirement to implement said action plan will actually put the Interconnection at greater risk. These requirements inappropriately attempt to codify the debate and analysis that occurs between and within Reliability Coordinators when there are differing results in reliability

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		analysis. This is part of the problem with having a Wide Area view that results in Reliability Coordinators having a view into other Reliability Coordinator Areas. Their results and conclusions may be different. There should be a hierarchical structure for whose results should be used. It should be the Reliability Coordinator with primary responsibility unless the other Reliability Coordinator has evidence to demonstrate that the Reliability Coordinator with primary responsibility is incorrect. What this should do is to trigger both to review their models and data to assess the problem. None of this needs to be codified in the standards though. Response: Requirements R6-R8 are translated from IRO-016-1, Requirement R1. If an RC sees a problem and another does not see the same problem, then there may be an issue with someone's model or processes or procedures. The RC's are supposed to have coordinated Operating Plans, Processes or Procedures to operate reliably. R6-R8 are only applicable if one of the two (or more) RCs do not see that a problem exists. It would be a detriment to reliability for both RCs to take no action. RCs are required to coordinate actions under existing IRO-016-1, R1. If one RC identifies a problem and provides an action plan to another RC to mitigate the problem, the second RC is obligated under R8 to implement it. We have revised the R8 to clarify this intent. In the definition of Reliability Directive, we suggest changing "to address an Emergency" to "to address a declared Emergency". This would help limit second guessing for a situation where a System Operator took action because he truly believed he was an Emergency but after the fact analysis demonstrates there really was not an Emergency. Response: Modifying Reliability Directive by including "declared Emergency" would add an unnecessary step in mitigation of the Emergency. The act of issuing a Reliability Directive to address an Emergency (per the proposed definition) is sufficient. The drafting team should expand its rationale for deleting IRO-002-1 R3. Currently, TOP-005 R1 is referenced. The Real-Time Operations drafting team proposed to retire TOP-005-2 R1 in its most recent posting. Response: The data provisions are covered in recently approved IRO-010-1, R1-R3 which replaced TOP-005-1, R1. The secure network provisions are covered in the CIP body of standards. We disagree with deleting IRO-002-1 R5 and R7 which establish tools and monitoring capabilities. There should be basic tools requirements established for Reliability Coordinators. Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities will be addressing these issues in more detail. Thus, it does not make sense to delete these requirements until that drafting team completes its task. Response: Each RC has been certified to continue operations as an RC or been certified prior to beginning operations as an RC. The minimum set of tools and capabilities for an RC are "checked off" during the certification process. The reliability objective of R5 and R7 is to perform analyses to ensure reliability of the

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		BES by specifying capability rather than mandating specific tools. The analysis provisions of R5 and R7 are covered under IRO-008-1, Requirements R1 (perform Operational Planning Analysis) and R2 (perform Real-time Analysis). It is anticipated that Project 2009-02 team will address this issue more fully.
MRO's NERC Standards Review Subcommittee		A. COM-002-3, R2 As stated in FERC Order 693, section 512, it is essential that RCs, BA's and TOP's have communications with DPs. R2 also applies to TSPs, LSEs and PSEs. There is no directive for this and it is going to be almost impossible to communicate with a DP since DPs are usually not operated 24 hours per day as like a RC, TOP, or BA. Many DPs have answering services that will relay a message once they receive it and then pass it along to someone. An answering company could repeat the directive word for word but this will not add to any reliability level. The SDT should reconsider the applicability section of this Standard to only apply to a RC, TOP and BA for the issuance of a Reliability Directive. BA's should have the responsibility to have an Interpersonal Communication medium with DPs in their BA area per COM-001-2. Response: The purpose of COM-002 is "To ensure emergency communications between operating personnel are <u>effective</u>." It is not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication, in many cases this may be via a receptionist, or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan. B. IRO-002-2, R1, Recommend that "System Operators" be replaced with "system operators" since NERC has defined System Operator to be an individual at a control center (BA, TOP, GOP, or RC). The lower cased system operator will only point to the RC system operator that will have this R1 authority. Response: IRO-002-2 is applicable only to Reliability Coordinators, as such the using System Operator as it defined by the NERC Glossary of terms is appropriate. C. The SDT did not address all of our concerns with COM-002-3 from the last posting. For entities registered as multiple functions, the combination of the definition of Reliability Directive and Requirement R1 could be confused to require a company to issue directives to itself. There are several organizations registered as a Reliability Coordinator, Transmission Operator and Balancing Authority. In these companies, it is not uncommon for those responsibilities to be distributed across multiple desks. Thus, for certain situations, a single System Operator may actually be the Reliability Coordinator and the Transmission Operator. In other situations, the System Operator serving the Reliability Coordinator function may be adjacent to the System Operator serving the as the Transmission Operator or Balancing Authority. We believe that it should never be necessary for these System Operators to issue Reliability Directives to themselves in the first example or to their co-worker in the second example to demonstrate compliance to NERC standards. How the entity

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		coordinates its actions among its Reliability Coordinator, Balancing Authority and Transmission Operator roles is a corporate governance issue that should not be confused or complicated by the NERC standards. Thus, we believe that standards should be made clear that the Reliability Directive is directed to another company. Response: COM-002 does not preclude text or other forms of communication for issuing Reliability Directives. However, entities still must comply with the requirements of COM-002. Further, the RCSDT believes it to be equally imperative that each NERC registered function hold the authority to issue Reliability Directives, and the ability to receive Reliability Directives, whether those Reliability Directives are issued to subordinate registered functions within a vertically integrated utility, or to registered entities that are corporately separate. The RCSDT believes the following response to draft 3 comments still holds true: “The way that COM-002 is crafted, it focuses on functional entity communication between and among functions. Face-to-face communication of Reliability Directives are subject to the requirements of COM-002 and can be measured for COM-002 by allowing Operator Logs as possible evidence to support compliance”. The use of operator logs to memorialize and provide evidence of compliance is directly specific to those Reliability Directives issued and received within the same control room or operations center. The RCSDT believes that any Registered Entity or person operating as such must understand the intent of the issued Reliability Directive, and that the issuer of the Reliability Directive believe that the Reliability Directive was correctly received. COM-002 should not be construed to mean that an individual serving in two functions be required to issue a Reliability Directive to himself, but rather it is expected that such an individual would appropriately address the reliability issues as required by the function they are serving and its subsequent responsibilities. D. We also are concerned about the need to conduct three-part communications for a Reliability Directive issued through a blast call. Under these circumstances, the need for immediate action of multiple parties may require a blast call and there may not be time for all parties to complete three-part communications before initiating actions. Thus, we believe blast calls should be treated separately and that should be made clear. Response: The RCSDT agrees that the use of Blast Calls to issue Reliability Directives, in mass, is efficient and effective. The RCSDT believes Reliability Directives issued in mass should be defined by procedure, and that the procedure would establish a method of affirmation and notice of implementation. E. COM-002-3 R2 needs to be rewritten as it is too verbose. The point is for the recipient of the original message to get the issuer to confirm that the message was understood. We suggest rewording R2 to “Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient

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		of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive.” Once the receiver has completed this requirement, the ball is in the issuer’s court per Requirement R3. No additional words are necessary in the requirement. Response: The RCSDT believes that the additional verbiage is necessary to ensure that an entity understands the Reliability Directive and is able to communicate that understanding back to the Reliability Coordinator. It is not necessary to repeat the exact same verbiage of the Reliability Directive, but rather the intent of the actions required. Having to repeat verbiage of the Reliability Directive word-for-word could be an impediment to achieving the reliability intent of the Reliability Directive when the focus is on repeating verbatim. F. Per COM-002-3 R1, who decides that actions need to be issued as a Reliability Directive? Shouldn’t it be the responsible entity? Thus, can we assume that if the responsible entity does not identify a communication as a Reliability Directive that it is not a Reliability Directive per the requirement? After all, why would an entity require actions but not issue a Reliability Directive. Following this logic, the VSL for R1 would never apply. Would a compliance auditor second guess if an action required a Reliability Directive? Response: Those orders issued as a Reliability Directive, and identified as such, will heighten awareness, tighten communications and require the receiver of the Reliability Directive to prioritize its response. Moreover, linking Reliability Directives to Emergencies establishes that normal non-Emergency operating communications or actions are not applicable to COM-002. G. Because the Project 2007-03 (“Real-Time Operations SDT”) proposed to utilize the definition of Adverse Reliability Impact in TOP-001-2 R5 during the last posting, the change to the definition should be coordinated with that team. Response: The RCSDT coordinated the use of Adverse Reliability Impacts with the Real-Time Operations team H. There is a text box in IRO-005-4 that indicates this standard will be retired. Yet, there still remain requirements in the standard and various other associated documentation indicates requirements are being move to this standard. Please delete the text box. Response: The text box has been removed. I. Please strike part IRO-014-2 Part 1.7. There is no need to have a weekly conference to discuss every Operating Procedure, Operating Process and Operating Plan. As this requirement is written, a conference call would be necessary for each. Furthermore, IRO-014-2 R4 already includes a requirement to have weekly conference calls that should suffice. IRO-014-2 R2 seems to recognize that these Operating Procedures,

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		Processes and Plans likely will not need to be discussed weekly as it only requires an annual update. Response: The intent of R1 is for Reliability Coordinators to coordinate specific activities with other impacted Reliability Coordinators, these activities are listed as sub requirements. R1.7 is requires you to have a procedure relating to weekly conference calls while R4 requires participation in weekly calls. Further the RCSDT believes that it is prudent that Reliability Coordinators talk at least once a week to verify viability of mutual plans, procedures or processes. J. IRO-014-2 R4 is overly broad and would require Reliability Coordinators that will not impact one another to participate on conference calls with one another without any reliability benefit. The issue is created by the addition of the clause “within the same Interconnection” to the requirement. ISO-NE, FRCC, Midwest ISO, and SPP are all in the same Interconnection. It is hard to fathom there being reliability benefit to SPP and ISO-NE conversing weekly or Midwest ISO and FRCC conversing weekly. We suggest limiting the requirement to adjacent Reliability Coordinators. Response: IRO-14-2 R4 is applicable to those Reliability Coordinators engaged in activities related to R1 and subsequently R1.7, it is unlikely that Reliability Coordinators whom are geographically and electrically distant will have <i>mutually agreed upon</i> operating procedures (per R1), and as such they are not applicable to R4. K. For IRO-014-2 R5, we suggest replacing “other” with “impacted” to limit the notification of Adverse Reliability Impacts to only those Reliability Coordinators that need to know. Because the definition of Adverse Reliability Impact includes “Bulk Electric System instability or Cascading”, it is possible that the cascading of 138 kV lines serving a load pocket or generator outlet stability issues could require a Reliability Coordinator to notify all other Reliability Coordinators regardless of impact. This would include Reliability Coordinators outside of the Interconnection with the problem. It would also include Reliability Coordinators that are not impacted. For instance, an issue in New England that would not pose a threat outside the northeast would require ISO-NE to notify SPP and FRCC and Reliability Coordinators in the Western Interconnection. There is no reliability benefit to this notification. Response: This requirement continues the current practice of informing all RCs of ARIs. Due to the nature of an ARI, this requirement is typically implemented as an RCIS message or a hotline call to all RC’s. This is intended to make all RCs aware of ARIs and support situational awareness. L. IRO-014-2 R6-R8 are problematic and need to be refined to make clear that the Reliability Coordinators shall operate to the most conservative limit. It should not require a Reliability Coordinator that disagrees with an action plan to implement the action plan. The Reliability Coordinator will be disagreeing with the action plan for a reliability reasons. Assuming they are correct, the requirement to implement said action plan will actually put the Interconnection at greater risk. These requirements inappropriately attempt to codify the debate and analysis that occurs between and within Reliability Coordinators when there are differing results in reliability analysis. This is part of the problem with having a Wide Area view that results in Reliability Coordinators

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		having a view into other Reliability Coordinator Area. Their results and conclusions may be different. There should be a hierarchical structure for whose results should be used. It should be the Reliability Coordinator with primary responsibility unless the other Reliability Coordinator has evidence to demonstrate that the Reliability Coordinator with primary responsibility is incorrect. What this should do is, to trigger both to review their models and data to assess the problem. None of this needs to be codified in the standards though. Response: Requirements R6-R8 are translated from IRO-016-1, Requirement R1. If an RC sees a problem and another does not see the same problem, then there may be an issue with someone's model or processes or procedures. The RC's are supposed to have coordinated Operating Plans, Processes or Procedures to operate reliably. R6-R8 are only applicable if one of the two (or more) RCs do not see that a problem exists. It would be a detriment to reliability for both RCs to take no action. RCs are required to coordinate actions under existing IRO-016-1, R1. If one RC identifies a problem and provides an action plan to another RC to mitigate the problem, the second RC is obligated under R8 to implement it. We have revised the R8 to clarify this intent. M. In the definition of Reliability Directive, we suggest changing "to address an Emergency" to "to address a declared Emergency". This would help limit second guessing for a situation where a System Operator took action because he truly believed he was in an Emergency but after the fact analysis demonstrates there really was not an Emergency. Response: Modifying Reliability Directive by including "declared Emergency" would add an unnecessary step in mitigation of the Emergency. The act of issuing a Reliability Directive to address an Emergency (per the proposed definition) is sufficient. N. The drafting team should expand its rationale for deleting IRO-002-1 R3. Currently, TOP-005 R1 is referenced. The project 2007-03 ("Real-Time Operations SDT") proposed to retire TOP-005-2 R1 in its most recent posting. Response: The data provisions are covered in recently approved IRO-010-1, R1-R3 which replaced TOP-005-1, R1. The secure network provisions are covered in the CIP body of standards. O. We disagree with deleting IRO-002-1 R5 and R7 which establishes tools and monitoring capabilities. There should be basic tool requirements established for Reliability Coordinators. The project 2009-02 ("Real-time Reliability Monitoring and Analysis Capabilities") will be addressing these issues in more detail. Thus, it does not make sense to delete these requirements until that drafting team completes its task. Response: Each RC has been certified to continue operations as an RC or been certified prior to beginning

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		operations as an RC. The minimum set of tools and capabilities for an RC are “checked off” during the certification process. The reliability objective of R5 and R7 is to perform analyses to ensure reliability of the BES by specifying capability rather than mandating specific tools. The analysis provisions of R5 and R7 are covered under IRO-008-1, Requirements R1 (perform Operational Planning Analysis) and R2 (perform Real-time Analysis). It is anticipated that Project 2009-02 team will address this issue more fully.
Response: The RCS DT thanks you for your comments.		
FirstEnergy		FirstEnergy offers the following additional comments: 1. The effective dates of the standards indicate an effective date of the first day of the first calendar quarter following regulatory approval. The changes to these standards will require changes to existing compliance evidence, as well as the creation of compliance evidence for some entities such as the Generator Operator which is a new applicable entity in COM-001. Therefore, to give entities ample time to get their compliance evidence in place, we suggest the effective state “the first day of the second quarter after regulatory approval”. Response: The RCS DT agrees and will change the implementation plan to reflect the “first day of the second quarter after regulatory approval.” 3. With regard to the requirements for Alternative Interpersonal Communications, we question why the Generator Operator or Distribution Provider is not required to have backup communication. It would be difficult for a Reliability Coordinator, for instance, to contact a Generator Operator whose primary communications have been disabled if that entity does not have a backup. We suggest that the drafting team consider adding the GOP and DP as applicable entities requiring alternative communications. Response: The RCS DT asserts the standard meets FERC Order 693 regarding DP and GOP entities by requiring these entities to have Interpersonal Communication capability. Not requiring DP and GOP entities to have Alternative Interpersonal Communication capability meets FERC’s intention as stated here: “We (FERC) clarify that the NOPR did not propose to require redundancy on generator operators’ or distribution providers’ telecommunication facilities...” (Order 693, RM06-16-000, Paragraph 487).
Response: The RCS DT thanks you for your comments.		
SPP Standards Development		IRO-001-2, R2 implies that the RC could interrupt the normal chain of command from the TOP and/or BA to their respective GOPs, ICs and DPs thereby circumventing the coordinating process that currently exists. In fact, these entities may not even know their RCs nor be able to identify them and as such any directive from

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		the RC may not be implemented in a timely manner. We would like to see a qualifier on this requirement that does not remove the normal coordination role from the TOP with his DP, etc. Response: There may be unusual circumstances whereby the requirement may indeed circumvent the normal coordinating process in the interest of time / reliability. The RC has the ultimate authority with respect to BES reliability. We would suggest that "with enough details that the accuracy of the message has been confirmed" be deleted from COM-002-3, R2. Response: The RCSDT believes that the additional verbiage is necessary to ensure that an entity understands the Reliability Directive and is able to communicate that understanding back to the Reliability Coordinator. It is not necessary to repeat the exact same verbiage of the Reliability Directive, but rather the intent of the actions required. Having to repeat verbiage of the Reliability Directive word-for-word could be an impediment to achieving the reliability intent of the Reliability Directive when the focus is on repeating verbatim. We would suggest the use of the term 'instruction' and its derivatives rather than 'direct' in IRO-001-2, R2, R3 and R4. Response: This proposed change is stylistic in nature. Stakeholder consensus indicates that this is not an issue for the overwhelming majority of commenters. Delete 'issue an alert to' in IRO-005-4, R1. There are yellow boxes in IRO-005-4, redline versions, which indicate that this standard is being retired, but it isn't because two requirements from IRO-001 are being returned to this standard. Response: These are typos and have been corrected as noted.
Response: The RCSDT thanks you for your comments.		
Kansas City Power & Light		There are more requirements that are being removed in the IRO standards than are currently proposed. It would be helpful if the SDT would consider a mapping of each requirement that is being eliminated and whether the requirement is duplicated elsewhere, moved elsewhere and where, or is deemed not needed would be helpful in judging if the changes are appropriate. Without this mapping it is difficult to fully support all the proposed changes to all these Standards.

Organization	Yes or No	Question 6 Comment
Response: The RCSDT thanks you for your comments. The implementation plan contains the requested mapping.		
Competitive Suppliers		EPSA is the trade association for competitive suppliers including both generators and marketers that represent over 700 entities in the NERC compliance registry. As such, the EPSA membership includes members registered as Purchasing Selling Entities (PSE) in each NERC region. Moreover, many of EPSA's members are also registered as LSEs in several regions. In general, EPSA supports the progress made in revising COM-001, COM-002 and IRO-001 in Project 2006-06, particularly the improvements made to the definition of Reliability Directive. However, EPSA also has concerns with some proposed changes to the applicability sections of the revised standards. In addition, EPSA requests that the implementation plans be changed so that they are consistent with the standard. Regarding applicability, EPSA agrees that COM-001 should continue to not apply to Purchasing Selling Entity (PSE) and Load Serving Entity (LSE) functions. However, the implementation plan for COM-001-2 still includes a reference that PSEs and LSEs must comply (page 11 of the implementation plan). Additionally, EPSA supports the removal of LSEs and PSEs from IRO-001-2. Much like the situation with COM-001-2, the implementation plan for IRO-001-2 still includes a reference that LSEs and PSEs must comply (page 11 of the implementation plan). In both the implementation plans for COM-001-2 and IRO-001-2 these references should be removed. For reasons similar to those underlying why COM-001-2 and IRO-001-2 do not apply to PSEs and LSEs, EPSA opposes the addition of PSEs to the COM-002-3 applicability. The purpose of the emergency communications in these standards is "To ensure emergency communications between operating personnel are effective." The removal would recognize that PSEs and LSEs do not play an active role in reliability coordination under this standard since they have no authority, nor ability to assume or perform responsibilities associated with reliability coordination. When a RC, TOP, or BA needs to address an Emergency they do not contact, consult, or direct a PSE to take action to address the Emergency. Reliability is neither improved nor degraded by having these Standards applicable to PSEs or LSEs; therefore, COM-001, COM-002 and IRO-001 need not be applicable to PSEs or LSEs. Thanks to the drafting team members for their effort on revising the Project 2006-06 standards.
Response: The RCSDT thanks you for your comments. The RCSDT has removed the PSE and LSE from the COM-001-2 and IRO-001-2 implementation plans. For COM-002, the RCSDT believes that all registered NERC entities engaged in daily operational activities must adhere to requirements related to Reliability		

Organization	Yes or No	Question 6 Comment
Directives. While LSE and PSE's are not engaged in coordination activities, they are engaged in load serving, as well as purchasing and selling activities on a daily basis. These activities could be subject to Reliability Directives, either in the form of load reduction, or schedule curtailments.		
Exelon		1. COM-002-2, R2 - Remove the word "recapitulate", feel that "restate or rephrase" is adequate. The word "recapitulate" is not commonly used and is somewhat obscure. Response: The proposed changes are stylistic in nature. The RCSDT included the phrase including "recapitulate" at the suggestion of another stakeholder, and has decided to leave the phrase "restate, rephrase, or recapitulate" intact as suggested by the other stakeholder. 2. COM-002-2, R3 - Suggest using the words "repeat back" rather than "state or respond that" to more clearly identify the expectation with more commonly used language. Response: The proposed changes are stylistic in nature. The RCSDT included the phrase including "recapitulate" at the suggestion of another stakeholder, and has decided to leave the phrase "restate, rephrase, or recapitulate" intact as suggested by the other stakeholder. 3. IRO-001-2, R3 - While we appreciate that the SDT has defined the term "directive" as a much needed definition, IRC-001-2 R.3 now introduces a new term "direction", what is a "direction" and how does it differ from "directive"? If a new term is going to be introduced it needs to be defined, if the intent was to use the word "directive" then "direction" should be replaced with "directive." Response: The requirement language specifically ties back to Requirement R2 which states that the RC "shall take actions or direct actions, which could include issuing Reliability Directives, ". This is the "direction in accordance with Requirement R2" stated in R3 and the "direction in accordance with Requirement R3" stated in R4. 3. IRO-001-2, R4 - Again the term "as directed" is confusing, recommend that the text be changed to align with the term directive, "unable to perform the directive per Requirement R3." Response: The requirement language specifically ties back to Requirement R2 which states that the RC "shall take actions or direct actions, which could include issuing Reliability Directives, ". This is the "direction in accordance with Requirement R2" stated in R3 and the "direction in accordance with Requirement R3" stated in R4.
Response: The RCSDT thanks you for your comments.		
PacifiCorp		

Organization	Yes or No	Question 6 Comment
Arizona Public Service Company		
LG&E and KU Energy		1) LG&E/KU suggests that the definitions and related Reliability Standards be edited to provide a clearer understanding of what is required. When used in the requirements of COM-001, the proposed definitions for Interpersonal Communication and Alternative Interpersonal Communication read improperly (i.e., a “medium capability”). This may cause confusion as to what is required by the Applicable entities. Any further use of these terms may cause greater confusion. Suggested Alternative: Interpersonal Communication: Any instance where two or more individuals interact, consult, or exchange information. The definition of “Alternative Interpersonal Communication” would not have to be changed since it is dependent upon the definition of “Interpersonal Communication.” The change of the definitions of Interpersonal Communication and Alternative Interpersonal Communication shifts their focus to the communication itself-the event. This makes the Requirements themselves much clearer since the Requirements focus on the need that entities have the capabilities-the medium. It appears the SDT’s intent is to ensure that the event takes place by requiring that the medium for those events are in place. This is much clearer if there is a distinction between the two (the event and the medium) than if they have similar definitions (a medium and a “medium capability”). Response: The RCSDT chose to use “medium” so as to not preclude the use of text, voice, electronic or other technology. The intent of the definition as well as the requirements is to require that functional entities have a means to communicate. 2) LG&E/KU question the consistency of the Applicability sections as they pertain to the TSP, LSE and PSE functions between COM-001 and COM-002. The deletion of the TSP, LSE and PSE from COM-001 is supported, but if these entities are not required to establish Interpersonal Communication (or Alternative Interpersonal Communication) capability with reliability entities (RC, BA, TOP), should they still be required to follow the reliability directive process of COM-002? If the probability of issuing a Reliability Directive to a TSP, LSE or PSE is so low that Interpersonal Communications capabilities with reliability entities is not justified under COM-001, why are the TSP, LSE and PSE still held to the 3 way communication requirements of COM-002? Suggest the Applicability of COM-002 to TSP, LSE and PSE and associated requirements be deleted. Response: The RCSDT has revised the applicability of COM-001 and COM-002 such that they contain the same functional entities. These are: RC, TOP, BA, GOP, and DP.
Response: The RCSDT thanks you for your comments.		

Consideration of Comments on Reliability Coordination — Project 2006-06

Organization	Yes or No	Question 6 Comment
Southern Company		Comments: It appears that the requirements for entities designated in the IRO standards to have tools to access and/or monitor the system have been moved to pending standards that are not enforceable. It seems that if the newest revisions of the IRO standards are not implemented as a group there will be either missing requirements or duplicate requirements in the IRO standards.
Response: The RCS DT thanks you for your comments. The implementation plans note prerequisite approvals that must occur prior to retiring requirements. FERC recently approved IRO-008, 009 and 010. The standards under this project will be filed together with FERC.		
Green Country Energy, Green Country Operating Services		IRO-001-2 as proposed does not include the PSE in the applicability, nor does it require the PSE to respond to a directive. However, COM-002 requires them to repeat the directive back... If the directive is that important to repeat back should they not have to act upon the directive? I think the PSE should be included in IRO-001-2 this standard as they represent and direct generation facility deployment in many cases. Including the PSE in COM-001 may be a good idea too, just for the situations listed above.
Response: The RCS DT thanks you for your comments. The RCS DT has revised the applicability of COM-001 and COM-002 such that they contain the same functional entities. These are: RC, TOP, BA, GOP, and DP.		
Central Lincoln		The stated purpose of COM-002 is: “To ensure emergency communications between operating personnel are effective.” As written, the standard fails to meet this purpose because the three requirements only deal with communications at the entity level. There is no requirement for the directing entity to even try to reach operating personnel at the receiving entity. The directing entity may follow all the requirements of this standard by following R1 and R3 with the receiving entity's receptionist, answering service, janitor, night watchman, etc. The receiving entity only needs to meet R2, parroting the directive. Again this could be accomplished by anyone with no assurance the directive reaches the operating personnel who can implement it. When we stated a similar objection during the last comment period, The SDT's answer suggested this was a PER staffing issue, but none of the PER requirements even apply to DP/LSE directive recipients. We suggest the entity issuing the directive should be required to make an attempt to get it to those who are competent to understand and implement the directive. This is not a staffing, training, or credentials issue; it is a performance issue that falls squarely within the stated purpose of this standard. COM-001 R10 presents a paradoxical situation to an entity attempting to comply. Consider an interpersonal communication capability failure that lasts longer than 60 minutes past initial detection. At or before 60 minutes, the affected entity is expected to notify impacted entities. If it has no interpersonal communication capability, how shall it make this notification? And if the entity does manage to make such a notification, it has thereby proven that it does have interpersonal communication capability making such notification

Organization	Yes or No	Question 6 Comment
		unnecessary. Response: The DP or GOP has access to additional Interpersonal Communications, in all likelihood, to make notifications for failure. There is not a requirement for an alternative, but it is highly unlikely that someone couldn't use their cell phone to make the notification. We again ask the SDT to consider that not all the entities in the applicability sections of COM-001 and 002 have 24/7 dispatch centers. These are typically smaller entities that were required to register because they exceed 25 MW or were asked in the past to voluntarily provide UFLS. They do not and do not need to continuously communicate with TOPs, BAs, RCs, etc; and a "reliability directive" is a theoretical thing that has never happened during the memories of thirty year employees. The directive issuing entities simply realize the limitations around the receiving entities and work around them. The financial burden on these small entities and their customers to go to 24/7 dispatch will not have a corresponding reliability benefit. And while the two COM standards do not explicitly state that entities must maintain 24/7 dispatch, when all the requirements and definitions and time horizons are taken together 24/7 continuous competent communication is implied. During the last comment period, the SDT suggested this was a registration issue beyond their control. We submit instead that this is a standard applicability question that the SDT does have control over, since it is right there in Section A.4 of the two COM standards. While we appreciate that the SDT is responding to FERC order 693 to include DPs, we note that FERC also stated: Paragraph 487: "We expect the telecommunication requirements for all applicable entities will vary according to their roles and that these requirements will be developed under the Reliability Standards development process." Paragraph 6: "A Reliability Standard may take into account the size of the entity that must comply and the costs of implementation" Paragraph 141: "...the Commission clarifies that it did not intend to ... impose new organizational structures..." Paragraph 31: "We emphasize that we are not, at this time, mandating a particular outcome by way of these directives, but we do expect the ERO to respond with an equivalent alternative and adequate support that fully explains how the alternative produces a result that is as effective as or more effective than the Commission's example or directive. We ask the SDT to exclude DPs, LSEs, and PSEs that do not have 24/7 dispatch centers from the applicability of these two standards in order to meet FERC order 693.
Response: The RCSDT thanks you for your comments. There is no requirement for 24/7 support - the requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is "To ensure emergency communications between operating personnel are <u>effective</u>." It is not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication, in many cases this may be via a receptionist, or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.		

Consideration of Comments on Reliability Coordination — Project 2006-06

Organization	Yes or No	Question 6 Comment
Lakeland Electric		COM-002-3 R2. Each Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message can be confirmed by the originator. (Replace 'has been' with 'can be' and add 'by the originator' to better fit into the sequence with R3.)
Response: The RCSDT thanks you for your comments. The RCSDT agrees with the intent of your comment and has modified R2 as: R2. Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of a Reliability Directive issued in accordance with Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message is confirmed.		
Manitoba Hydro		-The current data retention requirement of 90 days is more than adequate. Increasing this period to 12 months would result in a significant amount of work with no benefit to reliability. -Clarification required on the VSL for R9 - there appears to be no
Response: The RCSDT thanks you for your comment. The data retention periods for the set of standards proposed is consistent with the guidelines provided in the NERC Drafting team Guidelines. Your second comment is incomplete and does not reference specific standard(s) or requirement(s).		
NextEra Energy, Inc.		At this stage in evolution of compliance with the mandatory Reliability Standards, it is important that any new or revised Reliability Standard clearly articulate all compliance obligations and tasks consistent with Sections 302 (6) and (8) of the NERC Rules of Procedure. COM-002, IRO-001, IRO-002 and IRO-014 do not meet this threshold. Thus, NextEra has numerous recommended corrections to provide clarity and completeness to these Reliability Standards.COM-002 R1The addition of defined terms for Reliability Directive and Emergency is a very good approach that helps provides clarity. Hence, it is also be appropriate to make the language in the requirement as clear as possible, and not add other implied or unexplained notions. Also, at times, in those regions with markets, it is not always clear whether a requirement to curtail for reliability reasons is being issued pursuant to market rules or from the Reliability Coordinator or Transmission Operator under the Reliability Standards. Therefore, it is also appropriate that the Reliability Coordinator, Transmission Operator, Balancing Authority be required to identify themselves;; and if they fail to identify themselves or fail to use the term Reliability Directive, the registered entity receiving the flawed issuance should not be consider in violation of a Reliability Standard for failing to act. Accordingly, R1 would be clearer and have the same intent, if it stated as follows:"A Reliability Coordinator, Transmission Operator or Balancing Authority have the authority to issue an oral or written Reliability Directive as authorized in [list the specific Reliability Standard requirements such as IRO-001 R8 and TOP-001 R3]. The issuance of an oral of written Reliability Directive,

Organization	Yes or No	Question 6 Comment
		by a Reliability Coordinator, Transmission Operator or Balancing Authority shall: (1) use the term ‘Reliability Directive;’ and (2) identify the issuer of the Reliability Directive as a Reliability Coordinator, Transmission Operator or Balancing Authority. If a Reliability Coordinator, Transmission Operator or Balancing Authority issues an oral or written directive without using the term “Reliability Directive” or failing to identify itself as a Reliability Coordinator, Transmission Operator or Balancing Authority, the registered entity receiving the directive cannot be considered in violation for its failure to act.” Response: Only reliability entities can issue Reliability Directives and only reliability entities are held compliant to NERC reliability standards. COM-002, R1 requires the issuer of a Reliability Directive to identify the action as a “Reliability Directive”, it is incumbent on the issuer or receiver to identify themselves in order establish authority, the RCSDT disagrees that identification should be part of the COM-002 standard, however, the RCSDT will pass this concern to Project 2007-02, Operating Personnel Communications Protocols SDT. Furthermore, your suggested revision is a compound requirement, making the requirement indistinct and difficult to measure and in contradiction with SAR. The RCSDT agrees that if an action is not identified as a “Reliability Directive” then the receiving entity cannot be held in violation of failing to follow a Reliability Directive. IRO-001The definition of Adverse Reliability Impacts uses the term “instability.” It is important that this term be technically defined in the same way “Cascading” is defined, otherwise the new requirement is not adding clarity; rather, it is maintaining the ambiguous term “instability” that will likely lead to confusion and debate. Response: The RCSDT disagrees that the term “instability” is ambiguous, and further believes the term is understood in the industry. The majority of stakeholder comments do not indicate that the definition is confusing. R1 Similar to the comments set forth with respect to COM-001 (question #1), the term “at least” should be deleted from R1 - it serves no useful purpose from a technical or compliance perspective; instead, it will add unnecessary ambiguity to the requirement. Response: The RCSDT agrees and has removed “at least” for IRO-001, R1. R2, as drafted, states:”Each Reliability Coordinator shall take actions or direct actions, which could include issuing oral or written Reliability Directives, of Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse

Organization	Yes or No	Question 6 Comment
		Reliability Impacts. “This long sentence has several significant grammatical errors that result in the reader not being able to discern the meaning of the requirement. It also unnecessarily adds verbiage that detracts from its primary focus. It is, therefore, recommended that R2 be revised as follows: “Each Reliability Coordinator shall take all necessary actions to prevent identified Emergencies or Adverse Reliability Impacts. These Reliability Coordinator actions shall include, to the extent necessary, the issuing of oral or written Reliability Directives to Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers located within its Reliability Coordinator Area. Response: The RCSDT disagrees that the suggested revisions adds clarity, and in fact removes directing actions “to mitigate the magnitude or duration of actual events” which weakens the requirement. Phrases such as “to the extent necessary” and “necessary actions” are not measurable and lead to a more confusing requirement. Stakeholders generally agree with the proposed verbiage of the proposed requirement. “R3, as drafted, is confusing and inconsistent with R2, and, thus, R3 should be revised to read as follows: ”Upon receipt of a Reliability Directive issued pursuant to R2, a Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator and Distribution Provider shall comply with the Reliability Directive, unless compliance would violate safety, equipment, regulatory or statutory requirements. In the event that a Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator or Distribution Provider determines that compliance with a Reliability Directive would violate safety, equipment, regulatory or statutory requirements, the Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator or Distribution Provider shall, within 10 minutes after the determination, inform the Reliability Coordinator of its inability to comply.” Response: The RCSDT disagrees with the suggested revision to R3. The revision creates a compound requirement with a specific time requirement. Upon recognition of the inability to perform a directed action, the receiver should immediately inform the Reliability Coordinator. Typically this would be during the original communication of the directive. The suggested 10 minute time is not technically justified and provides no reliability benefit beyond the currently worded requirement and only serves to extend the time before an RC is notified. IRO-002R1 and R2, as written, are confusing. It is recommended that R1 and R2 be combined to read as follows: “Pursuant to a written procedure to mitigate the impact of a Reliability Coordinator’s analysis tool outage, a Reliability Coordinator’s System Operator shall also have the authority to approve, deny or cancel a

Organization	Yes or No	Question 6 Comment
		planned outage for its analysis tool.” Response: The suggested revision to IRO-002-2 creates a compound requirement, which is indistinct and difficult to measure and in contradiction with SAR. The SAR for this project directs the team to “Improve clarity of, improve measurability of, and remove ambiguity from the requirement”. IRO-014It is unclear why the terms Operating Procedure, Operating Process or Operating Plan needs to be plural, as currently written in the Standard. Hence, it is recommended that these terms be made singular, otherwise a violation may be inferred for not having more than one Procedure, Process or Plan. Response: IRO-014, R1, The RCSDT disagrees with making Procedures, Processes, or Plans non-plural; this could lead to entities being audited on a procedure by procedure basis. In other words, it is meant that the weekly conference calls create an opportunity to discuss all of the Procedures, Processes, or Plans, and to not require a call for each. 1.1 Insert the word “applicable” before “Reliability Coordinator.” Response: The RCSDT disagrees with the use of applicable, as the 1.1 is subordinate to R1, which notes impacted Reliability Coordinators. 2.1, as written, is confusing. Recommend that 2.1 read as follows: ”Review and update, if an update is necessary, on an annual basis. Annual basis means the review shall be within one month plus or minus that date of the last review.” Response: The RCSDT disagrees, and believes the suggested revision is unclear. In its current draft form, the plan or procedure is required to be reviewed every 15 months, if the review indicates that there are no changes required, and then the update would simply be to change the revision date on the published procedure. R3 This requirement uses a very vague term “reliability-related information,” which, also, does not track the language used in R1 -- “information.” It is recommended that R1 and R3 use the same terms and read “. . . information, as defined by the Reliability Coordinator, . . .” Response: The RCSDT believes the reference to R1 within R3 clearly is representative of exchange of information related to R1. R4 As stated above, “at least” does not add value, and, therefore, should be deleted.

Organization	Yes or No	Question 6 Comment
		Response: The RCSDT disagrees. The inclusion of “at least” allows the calls take place every day or multiple times within a week if desired, and adds flexibility. e.g. if there was scheduled weekly call, however due to system conditions an interim call was held, during this interim call all of the necessary information for the week was exchanged, thus removing the need to the scheduled call, the use of “at least” allows for this kind of flexibility. R4 is applicable to those Reliability Coordinators engaged in activities related to R1 and subsequently R1.7, it is unlikely that Reliability Coordinators whom are geographically and electrically distant will have <i>mutually agreed upon</i> operating procedures (per R1), and as such they are not applicable to R4. R5, as written, is confusing. The recommended fix is to delete “all other” and replace with “impacted”. Response: This requirement continues the current practice of informing all RCs of ARIs. Due to the nature of an ARI, this requirement is typically implemented as an RCIS message or a hotline call to all RC’s. This is intended to make all RCs aware of ARIs and support situational awareness.
Response: The RCSDT thanks you for your comments.		
United Illuminating Company		Comments: 1. COM-002 R2 seems awkwardly worded. R2. Each [Entity] that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message has been confirmed. " R2 as it is written says the repeat is confirming the accuracy of the message itself. I think it is agreed that the repeat back in R2 is to allow the issuer of the Directive to confirm that the message was received accurately understood by the recipient. I suggest:R2. Each [Entity] that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details to allow the Issuer to confirm that the directive recipient accurately understands the Directive" Response: The RCSDT agrees with the intent of your comment and has modified COM-002-3, R2 as: R2. Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of a Reliability Directive issued in accordance with Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive. 2. The VSL for R2 is severe and states "The responsible entity that was the recipient of a Reliability Directive failed to repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message was confirmed." The purpose of the R2 repeat-back is to allow the Issuer verify the message

Organization	Yes or No	Question 6 Comment
		was accurately received. This VSL penalizes the responsible entity for not accurately receiving the message. The VSL should penalize the refusal of the registered entity to repeat back the message not for receiving the message incorrectly. Suggested rewording: "The responsible entity that was the recipient of a Reliability Directive failed to repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message can be evaluated by the entity issuing the Reliability Directive"3. United Illuminating does agree with the definition of Reliability Directive and Emergency. Response: The RCSDT agrees and has revised the VSL to: The responsible entity that was the recipient of a Reliability Directive failed to repeat, restate, rephrase or recapitulate the Reliability Directive. ~~with enough details that the accuracy of the message was confirmed.~~
Response: The RCSDT thanks you for your comments.		
Shell Energy North America (US), L.P.		The introduction of the definition of "Reliability Directive" and its connection to the definition of "Emergency" within this Project brings much needed clarity for the sector and will promote consistency between Regional Entities and within the audits of Registered Entities. Shell Energy supports the removal of Purchasing Selling Entities as a function to which IRO-001 applies. This removal recognizes that PSEs do not play a role in reliability coordination under this standard since they have no authorities and no abilities to assume or perform responsibilities associated with reliability coordination. This conclusion is reinforced by the adoption of the defined term "Reliability Directive". Where a RC, TOP, or BA needs to address an Emergency they do not contact, consult, or direct a PSE to take action that would address the Emergency. Rather, where the PSE is a user of the grid to perform or execute transactions, it is subject to the actions of these other entities that have the authority to stop, curtail, or alter the submitted transactions of the PSE in a way that aids in resolving the problem. With the fitting adoption of "Reliability Directive" into COM-002 as well, Shell Energy does not believe it is necessary or appropriate for the applicability of this standard to include Purchasing Selling Entities, as is contained in the current draft proposal. This standard does not apply to PSEs today, however, during the progression of Project 2006-06 this applicability was added to an early draft version that preceded the discussions and clarification that comes from the definition of a Reliability Directive in the standard. Shell Energy does not support the inclusion of PSEs in the current draft version of COM-002, and feels that it should be removed. The purpose of this standard is, "To ensure Emergency communications between operating personnel are effective" and relates directly to the capabilities and authorities established for the RC, TOP, or BA that requires actions to be taken by a recipient of a Reliability Directive. As noted previously, PSEs are acted upon by the entities with the necessary authority, and are not in a role that would initiate or fulfill the required actions. As additional matters related to the clarification and cleanup of the standards in this project, the implementation plans for both IRO-001 and COM-001 erroneously contain references to PSEs in the sections "Functions that Must Comply with the Requirements". These references

Organization	Yes or No	Question 6 Comment
		need to be removed.
Response: The RCSDT thanks you for your comments. The applicability of COM-001 and COM-002 were revised to be consistent and only include the RC, TOP, BA, DP and GOP.		
American Electric Power		The language used in COM-002-3 R2 including “with enough details that the accuracy of the message has been confirmed” is subjective and ambiguous. Response: The RCSDT agrees with the intent of your comment and has modified COM-002-3, R2 as: R2. Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of a Reliability Directive issued in accordance with Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive. IRO-001 R2, R3, and R4 have replaced “Directives” with the word direction in lower case (while it appears that “Directives” is a subset of “directions”). We believe that this muddies the waters and could bring numerous conversations and dialog into scope unnecessarily. The end result is that the RC has the right to issue and use “Directives” and anything short of this could just be communications. For example, a number of entities that are Reliability Coordinators also facilitate energy markets. There are many communications related to markets that probably should be out of scope with respect to the standards. Furthermore, it might not be clear what role (eg Reliability Coordinator, market operator, etc) the staff at these entities are fulfilling. Response: IRO-001 is written so that typical daily operating orders or directives could be used, and also to cover emergency scenarios, but stating the use of Reliability Directives is included. The requirement language specifically ties back to Requirement R2 which states that the RC “shall take actions or direct actions, which could include issuing Reliability Directives, “. This is the “direction in accordance with Requirement R2” stated in R3 and the “direction in accordance with Requirement R3” stated in R4.
Response: The RCSDT thanks you for your comments.		
American Transmission Company		None

Organization	Yes or No	Question 6 Comment
ISO New England		The SDT did not address all of our concerns with COM-002-3 from the last posting. For entities registered as multiple functions, the combination of the definition of Reliability Directive and Requirement R1 could be confused to require a company to issue directives to itself. There are several organizations registered as a Reliability Coordinator, Transmission Operator and Balancing Authority. In these companies, it is not uncommon for those responsibilities to be distributed across multiple desks. Thus, for certain situations, a single System Operator may actually be the Reliability Coordinator and the Transmission Operator. In other situations, the System Operator serving the Reliability Coordinator function may be adjacent to the System Operator serving the as the Transmission Operator or Balancing Authority. We believe that it should never be necessary for these System Operators to issue Reliability Directives to themselves in the first example or to their co-worker in the second example to demonstrate compliance to NERC standards. How the entity coordinates its actions among its Reliability Coordinator, Balancing Authority and Transmission Operator roles is a corporate governance issue that should not be confused or complicated by the NERC standards. Thus, we believe that standards should be made clear that the Reliability Directive is directed to another company. We believe that, in place of requiring an operator, in real-time, to state "this is a Reliability Directive," there should be an allowance for an entity to develop procedures indicating, in advance, their expectations of three-part to their sub-operating entities. Therefore, we suggest modifying R1 to be "When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action, either verbally, when the communication is issued, or in advance through documented procedures, as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time.]" Also, we believe that the definition of Emergency, as currently cited in these draft Standards and included in the existing NERC Glossary should be modified to include the NERC Glossary term Adverse Reliability Impact to make the Standards more crisp, clear and enforceable. Because the Project 2007-03 Real-Time Operations SDT proposed to utilize the definition of Adverse Reliability Impact in TOP-001-2 R5 during the last posting, the change to the definition should be coordinated with that team. There is a text box in IRO-005-4 that indicates this standard will be retired. Yet, there still remain requirements in the standard and various other associated documentation indicates requirements are being move to this standard. Please delete the text box. IRO-014-2 R4 already includes a requirement to have weekly conference calls that should suffice. IRO-014-2 R2 seems to recognize that these Operating Procedures, Processes and Plans likely will not need to be discussed weekly as it only requires an annual update. In the definition of Reliability Directive, we suggest changing "to address an Emergency" to "to address a reliability constraint or a declared Emergency". Further, Requirement R2 in IRO-001 contains the words "which could include issuing Reliability Directives" but Reliability Directives are not referenced anywhere else in the standard. This inclusion seems unnecessary since without it, R2 already requires that the RC take actions or direct actions by others to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. Whether or not a Reliability Directive is issued is irrelevant in this requirement. We suggest that these words be removed. Note that COM-002 already stipulates the requirement for 3-part communication when a

Organization	Yes or No	Question 6 Comment
		Reliability Directive is issued. The inclusion of “which could include issuing Reliability Directives” in IRO-001 is unnecessary.
Response: The RCSDT thanks you for your comments. See response to MRO above.		
ERCOT ISO		The SDT did not address all of our concerns with COM-002-3 from the last posting. For entities registered as multiple functions, the combination of the definition of Reliability Directive and Requirement R1 could be confused to require a company to issue directives to itself. There are several organizations registered as a Reliability Coordinator, Transmission Operator and Balancing Authority. In these companies, it is not uncommon for those responsibilities to be distributed across multiple desks. Thus, for certain situations, a single System Operator may actually be the Reliability Coordinator and the Transmission Operator. In other situations, the System Operator serving the Reliability Coordinator function may be adjacent to the System Operator serving the as the Transmission Operator or Balancing Authority. We believe that it should never be necessary for these System Operators to issue Reliability Directives to themselves in the first example or to their co-worker in the second example to demonstrate compliance to NERC standards. How the entity coordinates its actions among its Reliability Coordinator, Balancing Authority and Transmission Operator roles is a corporate governance issue that should not be confused or complicated by the NERC standards. Thus, we believe that standards should be made clear that the Reliability Directive is directed to another company. We believe that, in place of requiring an operator, in real-time, to state “this is a Reliability Directive,” there should be an allowance for an entity to develop procedures indicating, in advance, their expectations of three-part to their sub-operating entities. Therefore, we suggest modifying R1 to be “When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action, either verbally, when the communication is issued, or in advance through documented procedures, as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time.]” Also, we believe that the definition of Emergency, as currently cited in these draft Standards and included in the existing NERC Glossary should be modified to include the NERC Glossary term Adverse Reliability Impact to make the Standards more crisp, clear and enforceable. Because the Project 2007-03 Real-Time Operations SDT proposed to utilize the definition of Adverse Reliability Impact in TOP-001-2 R5 during the last posting, the change to the definition should be coordinated with that team. There is a text box in IRO-005-4 that indicates this standard will be retired. Yet, there still remain requirements in the standard and various other associated documentation indicates requirements are being move to this standard. Please delete the text box. IRO-014-2 R4 already includes a requirement to have weekly conference calls that should suffice. IRO-014-2 R2 seems to recognize that these Operating Procedures, Processes and Plans likely will not need to be discussed weekly as it only requires an annual update. In the definition of Reliability Directive, we suggest changing “to address an Emergency” to “to address a reliability constraint or a declared Emergency”. Further, Requirement R2 in IRO-001 contains the words “which could include issuing Reliability Directives” but Reliability Directives

Consideration of Comments on Reliability Coordination — Project 2006-06

Organization	Yes or No	Question 6 Comment
		are not referenced anywhere else in the standard. This inclusion seems unnecessary since without it, R2 already requires that the RC take actions or direct actions by others to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. Whether or not a Reliability Directive is issued is irrelevant in this requirement. We suggest that these words be removed. Note that COM-002 already stipulates the requirement for 3-part communication when a Reliability Directive is issued. The inclusion of “which could include issuing Reliability Directives” in IRO-001 is unnecessary.
Response: The RCSDT thanks you for your comments. See response to MRO above.		
WECC		Suggested minor revision to the definition of Reliability Directive as follows (change in caps)A communication, IDENTIFIED AS A RELIABILITY DIRECTIVE, initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where action by the recipient is necessary to address an Emergency. Clearly identifying a communication as a Reliability Directive provides immediate information to the recipient as to the nature of the communications.
Response: The RCSDT thanks you for your comments. The RCSDT believes embedding the term in “Reliability Directive” in the definition is a not proper method for defining a term.		
BGE		BGE has no additional comments.
Duke Energy		o COM-002-3 contains the proposed definition “Reliability Directive”. We continue to believe Requirement R1 should be deleted and that this definition should contain the phrase “identified as a Reliability Directive to the recipient”. Otherwise, compliance controversies will arise when auditors second-guess the RC, TOP or BA's judgment regarding whether or not an abnormal system condition met the definition of “Emergency”, and warranted a “Reliability Directive” with 3-part communication. A conforming change will need to be made to R2, since it refers to R1. This change in the definition of “Reliability Directive” is also needed because this term is used in other standards such as IRO-001-2, and without repeating a similar requirement to COM-002-3 requirement R1 in IRO-001-2, there is potential for confusion. Response: The RCSDT disagrees as the suggestion embeds a requirement in a definition. The SDT believes the requirements of COM-002 are clear as written. o We disagree with the VSL for COM-002-3. This is clearly a requirement with two possible compliance failures: Failure to acknowledge a correct repeat-back, and failure to resolve an incorrect repeat-back. These failures have dramatically different consequences, which the drafting team should recognize via a graduated VSL. We think that the failure to acknowledge should either be “Lower” or “Medium”. Response: The RCSDT contends that missing the requirement is a binary violation that results in a severe

Organization	Yes or No	Question 6 Comment
		VSL. You are including risk to the BES in your proposal for the VSL. Risk to the BES is captured in VRFs, while VSLs consider the degree to which the entity failed to meet the Requirement.. O Requirement R2 of IRO-001-2 is unclear and should be reworded as follows: “Each Reliability Coordinator shall take actions or direct actions (which could include issuing Reliability Directives to Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers within its Reliability Coordinator Area) to either prevent identified events that could result in an Adverse Reliability Impact, or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts.” Response: The RCSDT believes that the suggested revision does not add further clarity to the requirement. o Various changes have been made to the defined term “Adverse Reliability Impact” as this project has progressed. We believe the latest change should not be made, and the Phrase “uncontrolled separation” should be reinserted in the definition, because that phrase is part of the EPAct 2005 legislation definition of “reliable operation”. Here is the text from the legislation: “The term ‘reliable operation’ means operating the elements of the bulk-power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements.” Response: During the last posting of the proposed definition, the RCSDT received the following comment and revised the definition appropriately: “This change is problematic in that any automatic protective element operation that trips a BES element could be construed to be an Adverse Reliability Impact.”. The modification eliminated the phrase “that affects a widespread area of the Interconnection” which clarified the scope of the definition. “Uncontrolled separation” has been deleted from the definition, as it is included in the definition of Cascading.
Response: The RCSDT thanks you for your comments. Please see responses above.		
CECD		1. COM-002 R2 states that "the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message has been confirmed." Recommend a change to "the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the desired outcome of the message is clear". Response: The RCSDT agrees with the intent of your comment and has modified COM-002-3, R2 as: R2. Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of a Reliability Directive issued in accordance with Requirement R1, shall repeat, restate,

Organization	Yes or No	Question 6 Comment
		rephrase or recapitulate the Reliability Directive. 2. IRO-001 R2 states "Each Reliability Coordinator shall take actions or direct actions which could include issuing Reliability Directives of Transmission Operators, ..." Recommend a change to "Each Reliability Coordinator shall take actions or direct actions which could include issuing Reliability Directives [See COM-002] to Transmission Operators, ..." Response: Based on feedback from other stakeholders, the RCSDT believes that the existing verbiage is clear and does not require further revision. 3. IRO-001 R4 states entities "shall inform its Reliability Coordinator upon recognition of its inability to perform as directed per Requirement R3." Recommend a change to, entities "shall inform its Reliability Coordinator upon recognition of its inability to perform as directed." Response: Based on feedback from other stakeholders, the RCSDT believes that the existing verbiage is clear and does not require further revision.
Response: The RCSDT thanks you for your comments.		
Indeck Energy Services		
City of Springfield, IL - City Water Light and Power (CWLP)		CWLP generally concurs with and supports comments previously submitted by the SERC Operating Committee where those comments are not in conflict with the specific comments above.
Response: The RCSDT thanks you for your comments.		
South Carolina Electric and Gas		1. Reliability Directives may be issued by blast calls from Reliability Coordinators. It is inefficient and may be a hindrance to reliability to require 3-part communications in these instances. Response: The RCSDT agrees that the use of Blast Calls to issue Reliability Directives, in mass, is efficient and effective. The RCSDT believes Reliability Directives issued in mass should be defined by procedure, and that the procedure would establish a method of affirmation and notice of implementation. 2. There are several organizations registered as BAs, RCs and TOPs. It is not uncommon for those entities to be distributed across multiple desks in the same control room without regard to how an entity is registered. Thus, a single System Operator may perform functions that are categorized under two or more of those functional entities. The drafting team should clarify that under no circumstances should that System Operator be required to issue a Reliability Directive to himself. This is a corporate governance

Organization	Yes or No	Question 6 Comment
		issue. Response: The RCSDT believes that any Registered Entity or person operating as such must understand the intent of the issued Reliability Directive, and that the issuer of the Reliability Directive believe that the Reliability Directive was correctly received. COM-002 should not be construed to mean that an individual serving in two functions be required to issue a Reliability Directive to himself, but rather it is expected that such an individual would appropriately address the reliability issues as required by the function they are serving and its subsequent responsibilities 3. In IRO-014, R1, delete sub-requirement 1.7. The requirement for weekly conference calls related to operating procedures is duplicative to R4 and could be burdensome while adding very little value under certain circumstances. Response: R1, Part 1.7 requires an entity to address how and when they will hold conference calls in their Operating Plans, Processes or Procedures. R4 requires the participation in those calls. 4. In IRO-014, R4, delete the phrase “(per Requirement 1, Part 1.7)” as a conforming change. Response: R1, Part 1.7 requires an entity to address how and when they will hold conference calls in their Operating Plans, Processes or Procedures. R4 requires the participation in those calls. 5. In IRO-014, Requirements R6-R8 allow at least the theoretical possibility that an RC may determine an Adverse Reliability Impact in another RC’s area that the other RC neither can see nor believes that any action should be taken. R7 puts the burden on the first RC to develop a plan that it cannot implement because it has no agreement with the BAs and TOPs in the other RC area. As such, this requirement is unenforceable. Response: You are correct. Requirements R6-R8 are translated from IRO-016-1, Requirement R1. If an RC sees a problem and another does not see the same problem, then there may be an issue with someone’s model or processes or procedures. The RC’s are supposed to have coordinated Operating Plans, Processes or Procedures to operate reliably. R6-R8 are only applicable if one of the two (or more) RCs do not see that a problem exists. It would be a detriment to reliability for both RCs to take no action. RCs are required to coordinate actions under existing IRO-016-1, R1. If one RC identifies a problem and provides an action plan to another RC to mitigate the problem, the second RC is obligated under R8 to implement it. We have revised the R8 to clarify this intent. Revised R8. During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, each Reliability Coordinator shall implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact unless such actions would violate safety, equipment, regulatory or statutory requirements.

Organization	Yes or No	Question 6 Comment
		6. Please review all the implementation plans to be sure the applicable entities match those in the standards. Response: We have revised the implementation plans to reflect the appropriate applicability.
Response: The RCSDT thanks you for your comments.		
Independent Electricity System Operator		1. IRO-001: Reliability Directive: We do not agree with the proposed definition since it addresses Emergencies only. There are situations where a Reliability Directive is issued such that the directed action must be taken by the receiving entity to address a reliability constraint or any condition on the BES which if left unattended could, in the judgment of the issuing entity, lead to an Emergency. These conditions themselves do not constitute an Emergency which is defined as “Any abnormal system condition that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System.” There could be no abnormal condition but the actions must nevertheless be taken promptly to prevent the bulk electric system from entering into an abnormal condition. We therefore suggest the term Reliability Directive be revised to: Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address a reliability constraint or an Emergency. Response: The RCSDT believes that your comment concerns “directives” or “instructions” for normal operational activities rather than a Reliability Directive. There is no requirement preventing an entity from issuing either directives or instructions for the situations you mention. The intent of creating a Reliability Directive definition is to ensure that communications is tightened during Emergencies (per blackout report). When an RC issues a Reliability Directive, the RC has made a deliberate decision to formally end collaboration and require specific action(s). 2. IRO-001, Requirement R2: This requirement contains the words “which could include issuing Reliability Directives” which is not referenced anywhere else in the standard. We do not think this inclusion is necessary since without it, R2 already requires that the RC take actions or direct actions by others to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. Whether or not a Reliability Directive is issued is irrelevant in this requirement. We suggest to remove these words. Note that COM-002 already stipulates the requirement for 3-part communication when a Reliability Directive is issued. The inclusion of “which could include issuing Reliability Directives” in IRO-001 is unnecessary. We suggest replacing “identified events” with “anticipated events”. This requirement also lists Interchange Coordinators as one of the recipients of Reliability Directives which is not consistent with the

Organization	Yes or No	Question 6 Comment
		implementation plan. Response: R2 requires the Reliability Coordinator to act. These actions could include Reliability Directives in the case of an Emergency. However, issuing Reliability Directives might not always be necessary, as the Reliability Coordinator may be acting proactively well in advance of an emergency. R2 promotes this proactive approach, but reserves the use of Reliability Directives for circumstances that require its use. Your suggested edits are not supported by the majority of stakeholder comments. The Interchange Coordinator has been removed from the standard. 3. IRO-014: R4 as written creates unnecessary requirements for an RC to participate in conference calls for issues that may not affect the RC itself. We suggest to reinstate the original word “impacted” as opposed to “other”, and remove the words “within the same Interconnection” since such calls and coordination may be required for RCs on both side of the Interconnection boundary. Same change suggested for R5, i.e. replace “other” with “impacted”. Response: The requirement for weekly conference calls exists in IRO-015-1. The RCSDT has revised the requirement and incorporated it into proposed IRO-014-2. IRO-14-2, R4 is applicable to those Reliability Coordinators engaged in activities related to R1 and subsequently R1.7, it is unlikely that Reliability Coordinators that are geographically and electrically distant will have mutually agreed upon operating procedures (per R1), and as such they are not applicable to R4. If RCs in different interconnections have operating procedures (per R1) with each other, then these operating procedures may include specifications for conference calls at least weekly. 4. If an entity provides Interpersonal Communication for day-to-day communication using two different media, e.g. radio and telephone, the proposed definition of Alternative Interpersonal Communication suggests that it would not be possible for one medium to be used as the Alternative Interpersonal Communication for the other since the two media are both used every day. Response: The intent of AIC is to make sure there is an alternative in case the IC fails. If you have two, you may designate one as the AIC regardless of how often you use it. 5. COM-001-2 R10 suggests that the responsible entity must wait for at least 30 minutes before notifying other entities of the failure of its Interpersonal Communication capability. We recommend changing “that lasts 30 minutes” to “that lasts or is expected to last 30 minutes”. This allows responsible entities to start notifying other entities earlier.

Organization	Yes or No	Question 6 Comment
		Response: The requirement is written such that an outer bound is set for notifications. An entity does not have to wait and can begin notifications immediately if it knows that an outage will last more than 30 minutes. 6. In IRO-005-4 R1: Delete “notify”. Response: The phrase “issue an alert” was removed in the redline version but was not removed from the clean version. This was corrected.
Response: The RCSDT thanks you for your comments.		

Consideration of Comments on Initial Ballot — Reliability Coordination (Project 2006-06) Date of Initial Ballot: February 25 – March 7, 2011

If you feel that the drafting team overlooked your comments, please let us know immediately. Our goal is to give every comment serious consideration in this process. If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Herb Schrayshuen, at 609-452-8060 or at herb.schrayshuen@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.¹

Summary Consideration:

The RCSDT thanks all stakeholders for their comments. Many stakeholders provided comments suggesting revisions to the standards. Many of these suggestions were incorporated into the standards. As a result of the revisions, the RCSDT is moving COM-001-2, COM-002-3 and IRO-001-2 to a successive ballot. The RCSDT made a few clarifying edits to the remaining standards based on stakeholder comments. Therefore, IRO-002-3, IRO-005-4 and IRO-014-2 are being moved to recirculation ballot. Because of this approach, the SDT will be proposing an interim change to IRO-001: the elimination of Requirement R7, as it is duplicative of one of the requirements in IRO-014-2.

For the COM-001 standard, several commenters had suggestions for improvements to the requirement language and applicability. The RCSDT believes the standard correctly and adequately requires each applicable entity that would have capability to receive Interconnection and operating information to have Interpersonal Communications and Alternative Interpersonal Communications to be used when the Interpersonal Communication is not available. The RCSDT has addressed the applicability of the standards and implementation plans by aligning COM-001-2, and COM-002-3 to include the same entities and by removing LSE, PSE and TSP from the COM standards.

Many comments were concerned about both the medium (e.g. cellular, satellite, etc.) and media (e.g. voice, email, etc.) used for Interpersonal Communications. The current language avoids being prescriptive and allows each entity to determine what is suitable. Interpersonal Communication and Alternative Interpersonal Communication is between the applicable entities which may include multiple locations (e.g. a primary and back-up control center).

The RCSDT added the following Requirement Parts at the suggestion of stakeholders:

3.5 Adjacent Transmission Operators synchronously connected within the same Interconnection

4.3 Adjacent Transmission Operators synchronously connected within the same Interconnection

5.6 Adjacent Balancing Authorities

6.3 Adjacent Balancing Authorities

The RCSDT agrees with the many industry comments and removed the phrase "to exchange Interconnection and operating information" in requirements R1 through R8. This removal clarifies that the intent of this capability is NOT for the exchange of data.

A few commenters also expressed concerns about the frequency of testing Alternative Interpersonal Communications capability. The RCSDT believes that the proposed testing frequency is supported by the majority of stakeholders and is not overly burdensome.

¹ The appeals process is in the Reliability Standards Development Procedure: http://www.nerc.com/files/RSDP_V6_1_12Mar07.pdf.

Several commenters suggested that VSLs should be written based on the percent of entities rather than by an occurrence of a violation. VSLs must be written on a violation occurrence basis in accordance with FERC guidelines. The requirements specify which entities must be included in communications capabilities. If a single entity is missing, this is a violation of the requirement. According to VSL guidelines, if missing any part of the requirement could have the same reliability outcome as missing the entire requirement, the requirement is binary and the VSL must be severe.

A new requirement was added to COM-001 for clarity regarding responsibilities of the Distribution Provider and the Generator Operator when either entity experiences a failure of its Interpersonal Communication capability:

R11. Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities shall consult with its Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability. [Violation Risk Factor: Medium][Time Horizon: Real-time Operations]

This requirement requires collaboration between entities to restore a failed communications capability.

The RCSDT asked stakeholders if they believed that the requirements of TOP-001-1 obviate the need to develop additional requirements to address Xcel's comment as directed in FERC Order 693. The original justification that the RCSDT posited for not adding a requirement to directly address Xcel Energy's comments in paragraph 516 and FERC's related recommendation in paragraph 523 was that TOP-001-1 R3 was considered to address this concern. Since that time, the RTO SDT has proposed to retire TOP-001-1 R3. However, NERC has since retired IRO-004-1 R3 and R5 along with IRO-005-3 R5. Because these are retired, there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency. Therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered "would violate safety, equipment, regulatory, or statutory requirements," the TOP may respond to the RC that it cannot comply.

Stakeholders were asked if they agree with the revision to IRO-001, R1 for certifying Reliability Coordinators. Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.

A significant revision to IRO-001-2 was made by removing the Interchange Coordinator from the standard. The RCSDT made this revision because the Balancing Function is responsible for implementing interchange (see NERC Reliability Functional Model, version 5, page 32, item 7) and to operate the Balancing Authority Area to maintain load-interchange-generation balance (item 3). The RCSDT asked stakeholders if they agree with moving two requirements from IRO-001 back to IRO-002 relating to Analysis Tool outages. All stakeholders that responded agreed and there were no comments received.

The RCSDT asked stakeholders if they agree with moving two requirements from IRO-001 back to IRO-005 relating to Reliability Coordinator notifications. Several commenters noted a typographical error in R1 which was corrected to read:

When the results of an Operational Planning Analysis or Real-time Assessment indicate an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify ~~issue an alert to~~ all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]"

One commenter also asked that an errant yellow text box be removed from Page 1, which was also done.

The RCSDT received a number of comments regarding the applicability of COM-001, and COM-002. The RCSDT agrees with these comments and has removed PSE and LSE from the COM-001-2 implementation plan. The RCSDT also addressed minor issues involving typos, formatting and style.

The RCSDT received comments suggesting clarification of COM-002-3. The RCSDT intends the communication of Reliability Directives to be person-to-person and in such a manner that the Reliability Directive is understood and not necessarily repeated verbatim. COM-002-3 is not intended to be prescriptive on how the Reliability Directive is issued. Spoken or written communications are valid methods (i.e. using the telephone, radio, electronic texting, email, etc.). The purpose of COM-002-3 is to ensure emergency communications between operating personnel are effective. There is no proxy requirement for 24/7 operating personnel regarding small entities. Only “capability” as provided for in COM-001-2 is applicable. The RCSDT agrees that the use of Blast Calls to issue Reliability Directives, in mass, is efficient and effective. The RCSDT believes Reliability Directives issued in mass should be defined by procedure, and that the procedure would establish a method of affirmation and notice of implementation. As envisioned, communications protocols would be addressed in the COM-003 standard being developed in Project 2007-02.

Some commenters suggested revisions to IRO-014, requirement R8 to conform to similar requirements R6 and R7. The RCSDT made the suggested revision by re-ordering R8:

R8. During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, each Reliability Coordinator shall implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact unless such actions would violate safety, equipment, regulatory or statutory requirements. [Violation Risk Factor: High][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

IRO-014-2, requirement R4 is applicable to those Reliability Coordinators engaged in activities related to requirement R1 and part 1.7. It is unlikely that Reliability Coordinators geographically and electrically distant from one another will have mutually agreed upon operating procedures (per requirement R1), and therefore requirement R4 would not be applicable. The RCSDT believes IRO-014-2, requirement R4 (which requires weekly communication) provides reasonable contact and flexibility – and this requirement is in effect today.

The RCSDT coordinated the use of the NERC Glossary term “Adverse Reliability Impact” with the Real-Time Operations team and continues the practice of informing all RCs of Adverse Reliability Impacts in requirement R5.

The RCSDT has revised IRO-014-2, requirements R6-R8 to clarify that when one RC identified a problem and presents an action plan for another RC, the second RC is obligated to implement the action plan. The RCSDT will forward the concern about RC's identifying themselves and the receiver to establish authority to the Project 2007-02, Operating Personnel Communications Protocols SDT. The Project 2007-02 team is developing a standard that includes requirements for use of specific communications protocols.

Voter	Entity	Segment	Vote	Comment
Edward P. Cox	AEP Marketing	6	Negative	1) The applicability of COM-001 and COM-002 appear to be at odds with each other. The requirements may need to be re-written so that they are in sync. Response: The RCSDT has revised the applicability of COM-001 and COM-002 such that they contain the same functional entities. These are: RC, TOP, BA, GOP, and DP. 2) The revision to IRO-001, R1 is out of scope with the standard, as it is currently addressed through the NERC certification process that the NERC reliability coordinators are subject to.

Voter	Entity	Segment	Vote	Comment
				Response: Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2. 3) The language used in COM-002-3 R2 including “with enough details that the accuracy of the message has been confirmed” is subjective and ambiguous. Response: The RCSDT agrees with the intent of your comment and has modified COM-002-3, R2 as: R2. Each Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive. 4) IRO-001 R2, R3, and R4 have replaced “Directives” with the word direction in lower case (while it appears that “Directives” is a subset of “directions”). We believe that this muddies the waters and could bring numerous conversations and dialog into scope unnecessarily. The end result is that the RC has the right to issue and use “Directives” and anything short of this could just be communications. For example, a number of entities that are Reliability Coordinators also facilitate energy markets. There are many communications related to markets that probably should be out of scope with respect to the standards. Furthermore, it might not be clear what role (eg Reliability Coordinator, market operator, etc) the staff at these entities are fulfilling. Response: IRO-001 is written to cover both typical daily operating scenarios and also emergency scenarios. The required performance encompasses issuing and responding to Reliability Directives as well as other directions. The requirement language specifically ties back to Requirement R2 which states that the RC “shall take actions or direct actions, which could include issuing Reliability Directives, “. This is the “direction in accordance with Requirement R2” stated in R3 and the “direction in accordance with Requirement R3” stated in R4.
Response: The RCSDT thanks you for your comment. Please see responses above.				

Voter	Entity	Segment	Vote	Comment
Brock Ondayko	AEP Service Corp.	5	Negative	1) The applicability of COM-001 and COM-002 appear to be at odds with each other. The requirements may need to be re-written so that they are in sync. Response: The RCSDT has revised the applicability of COM-001, and COM-002 such that they contain the same functional entities. These are: RC, TOP, BA, GOP, and DP. 2) The revision to IRO-001, R1 is out of scope with the standard, as it is currently addressed through the NERC certification process that the NERC reliability coordinators are subject to. Response: Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2. 3) The language used in COM-002-3 R2 including “with enough details that the accuracy of the message has been confirmed” is subjective and ambiguous. Response: The RCSDT agrees with the intent of your comment and has modified COM-002-2, R2 as: R2. Each Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive. 4) IRO-001 R2, R3, and R4 have replaced “Directives” with the word direction in lower case (while it appears that “Directives” is a subset of “directions”). We believe that this muddies the waters and could bring numerous conversations and dialog into scope unnecessarily. The end result is that the RC has the right to issue and use “Directives” and anything short of this could just be communications. For example, a number of entities that are Reliability Coordinators also facilitate energy markets. There are many communications related to markets that probably should be out of scope with respect to the standards. Furthermore, it might not be clear what role (eg Reliability Coordinator, market operator, etc) the staff at these entities are fulfilling. Response: IRO-001 is written to cover both typical daily operating scenarios and also emergency scenarios. The required performance encompasses issuing and responding to Reliability Directives as well as other directions. The requirement language specifically ties back to Requirement R2 which

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				states that the RC "shall take actions or direct actions, which could include issuing Reliability Directives." This is the "direction in accordance with Requirement R2" stated in R3 and the "direction in accordance with Requirement R3" stated in R4.
Response: The RCSDT thanks you for your comment. Please see responses above.				
Richard J. Mandes	Alabama Power Company	3	Affirmative	Please see comments
Response: The RCSDT thanks you for your comment. Please see response to posting comments for the SERC OC Standards Review Group; the RCSDT did not specifically find comments from Alabama Power Company and believes comments were included within this group.				
Kenneth Goldsmith	Alliant Energy Corp. Services, Inc.	4	Negative	While most of the changes recommended in the standards are acceptable to us, we do not believe multiple standards should be included in one ballot. You might ask for comments as a group, but each standard should be balloted separately. Response: The SDT has discussed this recommendation and has changed the way that these standards are being posting for ballot. Thank you for your suggestion. COM-001 R10 needs to be clarified that the "impacted entities" are within the same interconnection/area. It is not necessary to contact all entities as could be interpreted by the standard as currently written. We believe there may be differing levels of communication requirements, especially as it relates to smaller entities registered as DP's or LSE's that are not staffed 24 hours per day. We agree there is some responsibility of everyone to have some level of communications, the question is to what level. Response: R10 specifies only "impacted entities." That phrase is used to limit the scope of the requirement. If an entity has a failure of its Interpersonal Communications capability with only one entity, then <i>that</i> entity is the "impacted entity" and they should be notified of the failure.

Voter	Entity	Segment	Vote	Comment
Response: The RCSDT thanks you for your comment. Please see responses above.				
Jennifer Richardson	Ameren Energy Marketing Co.	6	Negative	Comment COM-001: (1) R2 is written with the onus on the Recipient to get repeat an accurate message. The Measure and VSL appear to attach to the Recipient to make a bad message into an accurate one. Response: The SDT assumes you intended to comment regarding COM-002-3 R2, as that is where the issuance, dialogue, and confirmation process is described, not COM-001. The SDT believes that it is the issuing entity which is required to decide whether the message has been received to its satisfaction. However, the SDT further believes the recipient of the original communications must be responsible for responding and participating in dialogue with the issuing entity. Without that, the issuing entity cannot decide whether the message has been received and understood. (2) R2 is too verbose. Response: Based on specific suggestions from other stakeholders, the team deleted the following phrase from R2: with enough details that the accuracy of the message has been confirmed The team revised the associated VSL to: The responsible entity that was the recipient of a Reliability Directive failed to repeat, restate, rephrase or recapitulate the Reliability Directive. ~~with enough details that the accuracy of the message was confirmed.~~ (3) We don't think Operations should rely on email, for instance, as an Interpersonal Communication capability. We should be explicit to exclude these kinds of medium. The medium must be near instantaneous like voice, cell, and satellite. Response: COM-002 does not preclude text or other forms of communication for issuing Reliability Directives.
Response: The RCSDT thanks you for your comment. Please see responses above.				

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Kirit S. Shah	Ameren Services	1	Negative	Comment COM-001: (1) R2 is written with the onus on the Recipient to get repeat an accurate message. The Measure and VSL appear to attach to the Recipient to make a bad message into an accurate one. Response: The SDT assumes you intended to comment regarding COM-002-3 R2, as that is where the issuance, dialogue, and confirmation process is described, not COM-001. The SDT believes that it is the issuing entity which is required to decide whether the message has been received to its satisfaction. However, the SDT further believes the recipient of the original communications must be responsible for responding and participating in dialogue with the issuing entity. Without that, the issuing entity cannot decide whether the message has been received and understood. (2) R2 is too verbose. Response: COM-002-3 R2: Based on specific suggestions from other stakeholders, the team deleted the following phrase from R2: with enough details that the accuracy of the message has been confirmed The team revised the associated VSL to: The responsible entity that was the recipient of a Reliability Directive failed to repeat, restate, rephrase or recapitulate the Reliability Directive. ~~with enough details that the accuracy of the message was confirmed.~~ (3) We don't think Operations should rely on email, for instance, as an Interpersonal Communication capability. We should be explicit to exclude these kinds of medium. The medium must be near instantaneous like voice, cell, and satellite. Response: COM-002 does not preclude text or other forms of communication for issuing Reliability Directives.
Response: The RCSDT thanks you for your comment. Please see responses above.				
Gregory S Miller	Baltimore Gas & Electric Company	1	Affirmative	BGE is supportive of all 5 questions in the Comment Form.

Voter	Entity	Segment	Vote	Comment
Response: The RCSDT thanks you for your support.				
Joseph S. Stonecipher	Beaches Energy Services	1	Negative	From the last posting to this posting, for COM-002-3 R2, the phrase "the accuracy of the message has been confirmed" was added to the second step of three part communication. "Accuracy" is not the correct term here. "Understanding" is a better term. It would seem that "accuracy" is a term to be used in R3, the third part of the 3-part communication so that the issuer of the directive ensures the accuracy of the recipients understanding. I suggest changing COM-002-3 R2 to read: Each Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details to clearly communicate the recipient's understanding of the Reliability Directive. The term "accuracy" can be interpreted as requiring the recipient to second-guess the Reliability Directive of the RC to ensure the accuracy of the RC's directive in the first place. Under tight time constraints of Emergencies, this is not practical. We are sure that was not the intent of the drafting team. Response: The SDT, in drafting the proposed language, did indeed discuss using the word "understanding" rather than accuracy. However, the SDT was not able to identify a feasible measure for "understanding". A recipient can judge whether the response is accurate when compared with the communications issued, but cannot judge the understanding of anyone, even though the responder may have accurately responded. For IRO-001-2, I don't see a need for R1. Doesn't the ERO already have that authority to establish RC's through the registration process, and to certify system operators through the PER standards? Response: Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2. IRO-014-2 R5, "impacted" was replaced with "other". Wouldn't it be better to at

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				least limit the notification to within the same interconnection? Or is R5 truly to identify all NERC registered RC's? Response: This requirement continues the current practice of informing all RCs of Adverse Reliability Impacts (ARIs). Due to the nature of an ARI, this requirement is typically implemented as an RCIS message or a hotline call to all RCs. This is intended to make all RCs aware of ARIs and support situational awareness. More minor comments / suggestions for improvement: IRO-002 R2 can be improved by replacing "prevent identified events" with "prevent anticipated events". "Anticipated" aligns better with contingency analysis than "identified" Response: The SDT believes the commenter intended to be commenting upon IRO-001-2 R2 rather than IRO-002-2 R2. The SDT did indeed consider using the word "anticipated" rather than identified. However, the SDT believes that a decision cannot be made regarding whether to anticipate an event unless it is first identified through some method of assessment. Contingency analysis certainly can be one valid form useful in assessment. Since anything identified by such an assessment must be considered, the SDT believes the requirement should apply to what is identified, rather than the subjective decision of whether to expect or anticipate that which has been identified IRO-005-4 R1 and R2 can be improved by replacing "expected" with "anticipated". Contingencies are not necessarily "expected"; however, we do "anticipate" them. Response: The SDT agrees, and has revised the requirements per your suggestion.
Response: The RCSDT thanks you for your comment.				
Bud Tracy	Blachly-Lane Electric Co-op	3	Negative	Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a

Voter	Entity	Segment	Vote	Comment
				small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of Communication capabilities impacted entities will be notified of the past loss and current status of Communication." We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.
Response: The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u>." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this				

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return call would not be timely enough, then the issuer would determine a different mitigation plan.				
Gregory Van Pelt	California ISO	2	Abstain	The California ISO will be submitting comments Jointly as part of the ISO/RTO Council Standards Review Committee
Response: Thank you; please see responses to the comments submitted on the posting by the ISO/RTO Council Standards Review Committee.				
Dave Markham	Central Electric Cooperative, Inc. (Redmond, Oregon)	3	Negative	Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities

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Response: The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u>." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.				
Steve Alexanderson	Central Lincoln PUD	3	Negative	The stated purpose of COM-002 is: "To ensure emergency communications between operating personnel are effective." As written, the standard fails to meet this purpose because the three requirements only deal with communications at the entity level. There is no requirement for the directing entity to even try to reach operating personnel at the receiving entity. The directing entity may follow all the requirements of this standard by following R1 and R3 with the receiving entity's receptionist, answering service, janitor, night watchman, etc. The receiving entity only needs to meet R2, parroting the directive. Again this could be accomplished by anyone with no assurance the directive reaches the operating personnel who can implement it. When we stated a similar objection during the last comment period, The SDT's answer suggested this was a PER staffing issue, but none of the PER requirements even apply to DP/LSE directive recipients. We suggest the entity issuing the directive should be required to make an attempt to get it to those who are competent to understand and implement the directive. This is not a staffing, training, or credentials issue; it is a performance issue that falls squarely within the stated purpose of this standard. COM-001 R10 presents a paradoxical situation to an entity attempting to comply. Consider an interpersonal communication capability

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				failure that lasts longer than 60 minutes past initial detection. At or before 60 minutes, the affected entity is expected to notify impacted entities. If it has no interpersonal communication capability, how shall it make this notification? And if the entity does manage to make such a notification, it has thereby proven that it does have interpersonal communication capability making such notification unnecessary. We again ask the SDT to consider that not all the entities in the applicability sections of COM-001 and 002 have 24/7 dispatch centers. These are typically smaller entities that were required to register because they exceed 25 MW or were asked in the past to voluntarily provide UFLS. They do not and do not need to continuously communicate with TOPs, BAs, RCs, etc; and a “reliability directive” is a theoretical thing that has never happened during the memories of thirty year employees. The directive issuing entities simply realize the limitations around the receiving entities and work around them. The financial burden on these small entities and their customers to go to 24/7 dispatch will not have a corresponding reliability benefit. And while the two COM standards do not explicitly state that entities must maintain 24/7 dispatch, when all the requirements and definitions and time horizons are taken together 24/7 continuous competent communication is implied. During the last comment period, the SDT suggested this was a registration issue beyond their control. We submit instead that this is a standard applicability question that the SDT does have control over, since it is right there in Section A.4 of the two COM standards. While we appreciate that the SDT is responding to FERC order 693 to include DPs, we note that FERC also stated: Paragraph 487: “We expect the telecommunication requirements for all applicable entities will vary according to their roles and that these requirements will be developed under the Reliability Standards development process.” Paragraph 6: “A Reliability Standard may take into account the size of the entity that must comply and the costs of implementation” Paragraph 141: “...the Commission clarifies that it did not intend to ... impose new organizational structures...” Paragraph 31: “We emphasize that we are not, at this time, mandating a particular outcome by way of these directives, but we do expect the ERO to respond with an equivalent alternative and adequate support that fully explains how the alternative produces a result that is as effective as or more effective than the Commission’s example or directive. We ask the SDT to exclude DPs, LSEs, and PSEs that do not have 24/7 dispatch centers from the applicability of these two standards in order to meet FERC order 693.
Response: The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, “to ensure emergency communications between operating personnel are <u>effective</u>.” It’s not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a method of				

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Shamus J Gamache	Central Lincoln PUD	4	Negative	The stated purpose of COM-002 is: "To ensure emergency communications between operating personnel are effective." As written, the standard fails to meet this purpose because the three requirements only deal with communications at the entity level. There is no requirement for the directing entity to even try to reach operating personnel at the receiving entity. The directing entity may follow all the requirements of this standard by following R1 and R3 with the receiving entity's receptionist, answering service, janitor, night watchman, etc. The receiving entity only needs to meet R2, parroting the directive. Again this could be accomplished by anyone with no assurance the directive reaches the operating personnel who can implement it. When we stated a similar objection during the last comment period, The SDT's answer suggested this was a PER staffing issue, but none of the PER requirements even apply to DP/LSE directive recipients. We suggest the entity issuing the directive should be required to make an attempt to get it to those who are competent to understand and implement the directive. This is not a staffing, training, or credentials issue; it is a performance issue that falls squarely within the stated purpose of this standard. COM-001 R10 presents a paradoxical situation to an entity attempting to comply. Consider an interpersonal communication capability failure that lasts longer than 60 minutes past initial detection. At or before 60 minutes, the affected entity is expected to notify impacted entities. If it has no interpersonal communication capability, how shall it make this notification? And if the entity does manage to make such a notification, it has thereby proven that it does have interpersonal communication capability making such notification unnecessary. We again ask the SDT to consider that not all the entities in the applicability sections of COM-001 and 002 have 24/7 dispatch centers. These are typically smaller entities that were required to register because they exceed 25 MW or were asked in the past to voluntarily provide UFLS. They do not and do not need to continuously communicate with TOPs, BAs, RCs, etc; and a "reliability directive" is a theoretical thing that has never happened during the memories of thirty year employees. The directive issuing entities simply realize the limitations around the receiving entities and work around them. The financial burden on these small entities and their customers to go to 24/7 dispatch will not have a corresponding reliability benefit. And while the two COM standards do not explicitly state that entities must maintain 24/7 dispatch, when all the requirements and definitions and time horizons are taken together 24/7 continuous competent communication is

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				implied. During the last comment period, the SDT suggested this was a registration issue beyond their control. We submit instead that this is a standard applicability question that the SDT does have control over, since it is right there in Section A.4 of the two COM standards. While we appreciate that the SDT is responding to FERC order 693 to include DPs, we note that FERC also stated: Paragraph 487: "We expect the telecommunication requirements for all applicable entities will vary according to their roles and that these requirements will be developed under the Reliability Standards development process." Paragraph 6: "A Reliability Standard may take into account the size of the entity that must comply and the costs of implementation" Paragraph 141: "...the Commission clarifies that it did not intend to ... impose new organizational structures..." Paragraph 31: "We emphasize that we are not, at this time, mandating a particular outcome by way of these directives, but we do expect the ERO to respond with an equivalent alternative and adequate support that fully explains how the alternative produces a result that is as effective as or more effective than the Commission's example or directive. We ask the SDT to exclude DPs, LSEs, and PSEs that do not have 24/7 dispatch centers from the applicability of these two standards in order to meet FERC order 693.
Response: The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u>." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.				
Gregg R Griffin	City of Green Cove Springs	3	Negative	From the last posting to this posting, for COM-002-3 R2, the phrase "the accuracy of the message has been confirmed" was added to the second step of three part communication. "Accuracy" is not the correct term here. "Understanding" is a better term. It would seem that "accuracy" is a term to be used in R3, the third part of the 3-part communication so that the issuer of the directive ensures the accuracy of the recipients understanding. FMPA suggests changing COM-002-3 R2 to read: Each Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details to clearly communicate the recipient's understanding of the Reliability Directive.. The term "accuracy" can be interpreted as requiring the recipient to second-guess

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				the Reliability Directive of the RC to ensure the accuracy of the RC's directive in the first place. Under tight time constraints of Emergencies, this is not practical. We are sure that was not the intent of the drafting team. Response: The SDT, in drafting the proposed language, did indeed discuss using the word "understanding" rather than accuracy. However, the SDT was not able to identify a feasible measure for "understanding". A recipient can judge whether the response is accurate when compared with the communications issued, but cannot judge the understanding of anyone, even though the responder may have accurately responded. For IRO-001-2, FMPA does not see a need for R1. Doesn't the ERO already have that authority to establish RC's through the registration process, and to certify system operators through the PER standards? Response: Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCS DT concurs and has removed R1 from IRO-001-2. IRO-014-2 R5, "impacted" was replaced with "other". Wouldn't it be better to at least limit the notification to within the same interconnection? Or is R5 truly to identify all NERC registered RC's? Response: This requirement continues the current practice of informing all RCs of Adverse Reliability Impacts (ARIs). Due to the nature of an ARI, this requirement is typically implemented as an RCIS message or a hotline call to all RC's. This is intended to make all RCs aware of ARIs and support situational awareness. More minor comments / suggestions for improvement: IRO-002 R2 can be improved by replacing "prevent identified events" with "prevent anticipated events". "Anticipated" aligns better with contingency analysis than "identified" Response: The SDT believes the commenter intended to be commenting upon IRO-001-2 R2 rather than IRO-002-2 R2. The SDT did indeed consider using the word "anticipated" rather than identified. However, the SDT believes that a decision cannot be made regarding whether to anticipate an event unless it is first identified through some method of assessment. Contingency analysis certainly can be one valid form useful in assessment. Since anything identified by such an assessment must be considered, the SDT believes the requirement should apply to what is

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				identified, rather than the subjective decision of whether to expect or anticipate that which has been identified. IRO-005-4 R1 and R2 can be improved by replacing "expected" with "anticipated". Contingencies are not necessarily "expected"; however, we do "anticipate" them. Response: The SDT agrees and have revised the requirements per your suggestion.
Response: The RCSDT thanks you for your comment.				

Randall McCamish	City of Vero Beach	1	Negative	From the last posting to this posting, for COM-002-3 R2, the phrase "the accuracy of the message has been confirmed" was added to the second step of three part communication. "Accuracy" is not the correct term here. "Understanding" is a better term. It would seem that "accuracy" is a term to be used in R3, the third part of the 3-part communication so that the issuer of the directive ensures the accuracy of the recipients understanding. The City of Vero Beach (COVB) suggests changing COM-002-3 R2 to read: Each Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details to clearly communicate the recipient's understanding of the Reliability Directive. The term "accuracy" can be interpreted as requiring the recipient to second-guess the Reliability Directive of the RC to enure the accuracy of the RC's directive in the first place. Under tight time constraints of Emergencies, this is not practical. We are sure that was not the intent of the drafting team. Response: The SDT, in drafting the proposed language, did indeed discuss using the word "understanding" rather than accuracy. However, the SDT was not able to identify a feasible measure for "understanding". A recipient can judge whether the response is accurate when compared with the communications issued, but cannot judge the understanding of anyone, even though the responder may have accurately responded. For IRO-001-2, COVB does not see a need for R1. Doesn't the ERO already have that authority to establish RC's through the registration process, and to certify system operators through the PER standards? Response: Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2. IRO-014-2 R5, "impacted" was replaced with "other". Wouldn't it be better to at least limit the notification to within the same interconnection? Or is R5 truly to identify all NERC registered RC's? Response: This requirement continues the current practice of informing all RCs of Adverse Reliability Impacts (ARIs). Due to the nature of an ARI, this requirement is typically implemented as an RCIS message or a hotline call to all RC's. This is

				intended to make all RCs aware of ARIs and support situational awareness. More minor comments/suggestions for improvement: IRO-002 R2 can be improved by replacing "prevent identified events" with "prevent anticipated events". "Anticipated" aligns better with contingency analysis than "identified" Response: The SDT believes the commenter intended to be commenting upon IRO-001-2 R2 rather than IRO-002-2 R2. The SDT did indeed consider using the word "anticipated" rather than identified. However, the SDT believes that a decision cannot be made regarding whether to anticipate an event unless it is first identified through some method of assessment. Contingency analysis certainly can be one valid form useful in assessment. Since anything identified by such an assessment must be considered, the SDT believes the requirement should apply to what is identified, rather than the subjective decision of whether to expect or anticipate that which has been identified. IRO-005-4 R1 and R2 can be improved by replacing "expected" with "anticipated". Contingencies are not necessarily "expected"; however, we do "anticipate" them. Response: The SDT agrees and have revised the requirements per your suggestion.
Response: The RCSDT thanks you for your comment.				
John Allen	City Utilities of Springfield, Missouri	4	Negative	See comments from the SPP Standards Development group.
Response: The RCSDT thanks you for your comment. Please see response to those comments.				
Shaun Anders	City Water, Light & Power of Springfield	1	Negative	The definition of "Interpersonal Communications" is overly broad and does not address the functional needs of reliability coordination. The definition should be limited to systems utilized for essential reliability functions. While the Purpose statement in the standard does address this intent, the explicit inclusion in the definition removes all ambiguity. Further, the definition of "Alternative Interpersonal Communications" without corresponding explicit definition of Primary Interpersonal Communications may lead to confusion and unnecessary duplication of efforts in

				testing and maintenance.
Response: The RCSDT thanks you for your comment. The certification of an entity as a functional entity by the ERO through its certification process will not take place unless the entity has the needed communications capabilities. If the entity cannot perform, it will not be registered. Once an entity is certified as a functional entity, then that entity must comply with all requirements applicable to that functional entity. These standard revisions establish clear requirements for alternative interpersonal communications capability which may or may not be part of the entity certification process. Taken together, the certification process and the Reliability Standards clearly establish the requirements for both normal interpersonal communications capability and alternative interpersonal communications capability. The RCSDT has revised the applicability of COM-001, and COM-002 such that they contain the same functional entities. These are: RC, TOP, BA, GOP, and DP.				
Dave Hagen	Clearwater Power Co.	3	Negative	Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities

				that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of Communication capabilities impacted entities will be notified of the past loss and current status of Communication." We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.
Response: The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u> ." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.				
Bruce Krawczyk	ComEd	3	Negative	Exelon is voting negative based on our previously submitted comments.
Response: The RCSDT thanks you for your comment. Please see the response to those comments.				
Christopher L de Graffenried	Consolidated Edison Co. of New York	1	Abstain	o COM-002 assumes, but does not require, voice logs. This needs to be fixed. Otherwise the documentation could just be a paper log 'check box' entry which says "Yes, we used 3-part." This is not adequate, verifiable documentation for entity audits. Response: The standards establish "what" is required, not "how" to do it. The Measures identify methods which are examples of evidence that may be provided to demonstrate compliance, but requirements cannot be established in the measures. Further, valid requirements should not be established that preclude improvements that may arise through technological innovations or other equally effective alternatives. The state of the art at present would seem to indicate that the most prevalent evidence would likely come from a form of voice recordings or transcripts.

				o COM-002 only requires the entity maintain this documentation 3 months. This short retention time period expires long before most auditors check on the entity. So, why bother? This also needs to be fixed or clarified. Response: The retention time was established using the NERC Data Retention Guidelines and to recognize that vast amount of data which would have to be retained to present evidence. In addition, any event under investigation has likely been accompanied by a requirement to “freeze” data retention and keep all relevant information and date for a specified timeframe surrounding the event.
Response: The RCSDT thanks you for your comment.				
Roman Gillen	Consumers Power Inc.	3	Negative	Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be

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Roger Meader	Coos-Curry Electric Cooperative, Inc	3	Negative	Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers

				with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of Communication capabilities impacted entities will be notified of the past loss and current status of Communication." We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.
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Russell A Noble	Cowlitz County PUD	3	Negative	COM-001 presents problems for smaller entities that do not have any other option for communications other than the failed communication line. The SDT should consider exempting such entities, requiring them to contact others to inform of their failed one and only communication option is a catch-22. COM-002 does not adequately provide for effective communication with smaller entities that do not have 24-7 control/dispatch functions. The directing entity issuing Reliability Directives must contact competent personnel. The SDT's reference to

				the PER requirements falls very short in addressing this problem as the DPs and LSEs are not even applicable to the suggested standards. Again, the SDT should consider certain exemptions for such entities. Please note that FERC itself noted that “a Reliability Standard may take into account the size of the entity that must comply and the costs of implementation...”...the Commission clarifies that it did not intend to ... impose new organizational structures...” and also “[w]e expect the communication requirements for all applicable entities will vary according to their roles and that these requirements will be developed under the Reliability Standards development process.” Although the STD did not include all applicable entities to have backup communications, it failed to see the limitations of such entities without backup communications impeding their ability to comply with other requirements.
Response: The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, “to ensure emergency communications between operating personnel are <u>effective</u>.” It’s not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.				
Rick Syring	Cowlitz County PUD	4	Negative	COM-001 presents problems for smaller entities that do not have any other option for communications other than the failed communication line. The SDT should consider exempting such entities, requiring them to contact others to inform of their failed one and only communication option is a catch-22. COM-002 does not adequately provide for effective communication with smaller entities that do not have 24-7 control/dispatch functions. The directing entity issuing Reliability Directives must contact competent personnel. The SDT’s reference to the PER requirements falls very short in addressing this problem as the DPs and LSEs are not even applicable to the suggested standards. Again, the SDT should consider certain exemptions for such entities. Please note that FERC itself noted that “a Reliability Standard may take into account the size of the entity that must comply and the costs of implementation...”...the Commission clarifies that it did not intend to ... impose new organizational structures...” and also “[w]e expect the communication requirements for all applicable entities will vary according to their roles and that these requirements will be developed under the Reliability Standards development process.” Although the STD did not include all applicable entities to have backup communications, it failed to see the limitations of such entities without backup communications impeding their ability to comply with other requirements.

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Bob Essex	Cowlitz County PUD	5	Negative	COM-001 presents problems for smaller entities that do not have any other option for communications other than the failed communication line. The SDT should consider exempting such entities, requiring them to contact others to inform of their failed one and only communication option is a catch-22. COM-002 does not adequately provide for effective communication with smaller entities that do not have 24-7 control/dispatch functions. The directing entity issuing Reliability Directives must contact competent personnel. The SDT’s reference to the PER requirements falls very short in addressing this problem as the DPs and LSEs are not even applicable to the suggested standards. Again, the SDT should consider certain exemptions for such entities. Please note that FERC itself noted that “a Reliability Standard may take into account the size of the entity that must comply and the costs of implementation...” “...the Commission clarifies that it did not intend to ... impose new organizational structures...” and also “[w]e expect the communication requirements for all applicable entities will vary according to their roles and that these requirements will be developed under the Reliability Standards development process.” Although the STD did not include all applicable entities to have backup communications, it failed to see the limitations of such entities without backup communications impeding their ability to comply with other requirements.

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Dave Sabala	Douglas Electric Cooperative	3	Negative	Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability

				directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of Communication capabilities impacted entities will be notified of the past loss and current status of Communication." We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.
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Henry Ernst-Jr	Duke Energy Carolina	3	Negative	o We question how far the definition of Alternative Interpersonal Communication goes in requiring separate infrastructure from Interpersonal Communication. For example, wireless communications sometime utilize fiber optic networks. Response: The definition requires the use of different infrastructure (medium) than the Interpersonal Communication used for day to day operations. The RCSDT does not believe it is appropriate to be prescriptive with respect to the specific medium employed. This is intended to apply to assets and access to media that is under your control. For example, the way cell phone signals are routed are not under your control. o We question why the requirements state that entities must “have” Interpersonal Communications capability, but must “designate” Alternative Interpersonal Communications capability? Response: Many entities have multiple Alternative Interpersonal Communication capabilities. Large entities may have a second land line, cell phone, satellite phone, etc. The purpose of “designating” the Alternative is so that other entities know which one is in use and is a reliable means of communications. Allowing them to designate which one they want to employ allows for flexibility in which one they use for AIC. o R1.2 and R2.2 - Why is this limited to the same interconnection? Response: The phrase “within the same interconnection” is added for the case of ERCOT which has only DC tie lines with the Eastern Interconnection and has minimal interchange. o R3 - need to add neighboring TOPs. Response: Agreed. The standard has been modified as suggested. o R5 - need to add adjacent BAs. Response: Agreed. The standard has been modified as suggested. o Interchange Coordinator - Add IC to the Applicability Section, and add a requirement that the IC have Interpersonal Communication capability with its BA and adjacent BAs. Response: We eliminated the Interchange Coordinator from COM-001-2 based

				on stakeholder feedback. o Requirements to “designate” Alternative Interpersonal Communication should carry a “Medium” VRF instead of “High”, because they are a backup capability. The word “designate” carries the connotation that these are documentation requirements. Response: While the requirement is phrased to focus on the documentation, the reliability objective is that the entity has an alternative communication capability with those functional entities most critical to its real-time operations. o R9 requires a monthly test of Alternative Interpersonal Communications capability. This was quarterly in the last draft. We question how these requirements for “Alternative Interpersonal Communications” capability are related to requirements for “backup functionality” in EOP-008-1, which requires an annual test of backup functionality. Clarity on the relationship between “Interpersonal Communications”, “Alternative Interpersonal Communications”, “primary control center functionality” and “backup control center functionality” would be appreciated. Response: Interpersonal Communication and Alternative Interpersonal Communication are not related to EOP-008. The provision to test may be performed through day to day use of the capability.
Response: The RCSDT thanks you for your comment. Please see responses above.				
George S. Carruba	East Kentucky Power Coop.	1	Negative	As currently written, IRO-014 could be interpreted that if a RC identifies an adverse reliability impact in another RC and the other RC does not agree with the findings, the RC who identified the adverse reliability impact would be responsible for creating a mitigation plan to address the issue. This may not be possible if the identifying RC does not have agreements in place with the TOPs/BAs in the other RC area.
Response: The RCSDT thanks you for your comment. IRO-014-2 requirement R6, requires all RCs to operate as if the problem exists even when they disagree with the RC that identified the problem. Even if there is a disagreement between RCs, R8 still requires that all RCs comply with the action plan developed by the RC that identified the adverse reliability impact unless compliance with the action plan would violate safety, equipment, regulatory or statutory requirements. As envisioned, the TOPs and BAs would receive operating instructions from their own RC, not from the RC in another Reliability Coordinator Area.				
Sally Witt	East Kentucky Power Coop.	3	Negative	As currently written it could be interpreted that if an RC identifies an Adverse reliability Impact in another RC Area and they do not agree with the findings, the

				RC who identified the adverse reliability Impact would be responsible for creating a mitigation plan to address the issue. This may not be feasible if the identifying RC does not have agreements in place with TOPs/BAs in the other RC Area.
Response: The RCSDT thanks you for your comment. IRO-014-2 requirement R6, requires all RCs to operate as if the problem exists even when they disagree with the RC that identified the problem. Even if there is a disagreement between RCs, R8 still requires that all RCs comply with the action plan developed by the RC that identified the adverse reliability impact unless compliance with the action plan would violate safety, equipment, regulatory or statutory requirements. As envisioned, the TOPs and BAs would receive operating instructions from their own RC, not from the RC in another Reliability Coordinator Area.				
John R Cashin	Electric Power Supply Association	5	Affirmative	I will be submitting comments in the regular form tomorrow.
Response: The RCSDT thanks you for your comment. Please see response to those comments.				
Chuck B Manning	Electric Reliability Council of Texas, Inc.	2	Negative	We agree with the comments submitted by the IRC SRC and we have submitted those same comments.
Response: The RCSDT thanks you for your comment. Please see response to those comments.				
Martin Kaufman	ExxonMobil Research and Engineering	5	Negative	The Measurement 2 of COM-002-3 has the potential to create numerous violations without any reliability impact to the Bulk Electric System. Specifically, for those facilities without voice recording equipment, the requirement to record in an operator log that the BA/GOP/TOP/TSP repeated the intent of a directive back to the RC provides no benefit to the reliability of the BES and adds a situation where an entity can be found non-compliant by an RE with zero impact to the reliability of the BES. In response to a directive from an RC, it's important for the reliability of the BES for a facility to identify an instruction as a directive, resolve whether the facility can comply with the directive, and inform the RC when it could not comply with the directive. Documentation requirements should reflect these three items.
Response: The RCSDT thanks you for your comment. Based on comments from other stakeholders, the SDT has removed the TSP, LSE and PSE from responsibility for any of the requirements in COM-002. As envisioned, in an emergency the RC would issue most Reliability Directives to its BAs and TOPs, and there may be times when the RC bypasses its TOPs and BAs and issues a Reliability Directive to its DPs				

and GOPS. The RC would not, however, issue a Reliability Directive to TSPs, LSEs, or PSEs.

Note that M2 only requires that the recipient document that it repeated the reliability directive. Collectively, the three measures do what you have proposed – they require that the applicable entities document that the three parts of the communication took place – original issuance; accurate repeat; confirmation. Operating logs are offered as one form of acceptable evidence – but other types of evidence could also be used to demonstrate compliance.

Bryan Case	Fall River Rural Electric Cooperative	3	Negative	Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of

				Communication capabilities impacted entities will be notified of the past loss and current status of Communication." We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.
Response: The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u> ." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.				
Robert Martinko	FirstEnergy Energy Delivery	1	Affirmative	FirstEnergy supports the proposed standards and would appreciate consideration of our comments submitted through the formal comment period.
Response: The RCSDT thanks you for your comment. Please see response to those comments.				
Kevin Querry	FirstEnergy Solutions	3	Affirmative	FirstEnergy supports the proposed standards and would appreciate consideration of our comments submitted through the formal comment period.
Response: The RCSDT thanks you for your comment. Please see response to those comments.				
Mark S Travaglianti	FirstEnergy Solutions	6	Affirmative	FirstEnergy supports the proposed standards and would appreciate consideration of our comments submitted through the formal comment period.
Response: The RCSDT thanks you for your comment. Please see response to those comments.				
Frank Gaffney	Florida Municipal	4	Negative	From the last posting to this posting, for COM-002-3 R2, the phrase "the accuracy of the message has been confirmed" was added to the second step of three part

	Power Agency		communication. "Accuracy" is not the correct term here. "Understanding" is a better term. It would seem that "accuracy" is a term to be used in R3, the third part of the 3-part communication so that the issuer of the directive ensures the accuracy of the recipients understanding. FMPA suggests changing COM-002-3 R2 to read: Each Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details to clearly communicate the recipient's understanding of the Reliability Directive. The term "accuracy" can be interpreted as requiring the recipient to second-guess the Reliability Directive of the RC to ensure the accuracy of the RC's directive in the first place. Under tight time constraints of Emergencies, this is not practical. We assume that was not the intent of the drafting team. Response: The SDT, in drafting the proposed language, did indeed discuss using the word "understanding" rather than accuracy. However, the SDT was not able to identify a feasible measure for "understanding". A recipient can judge whether the response is accurate when compared with the communications issued, but cannot judge the understanding of anyone, even though the responder may have accurately responded. For IRO-001-2, FMPA does not see a need for R1. Doesn't the ERO already have that authority to establish RC's through the registration process, and to certify system operators through the PER standards? Response: Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2. IRO-014-2 R5, "impacted" was replaced with "other". Wouldn't it be better to at least limit the notification to within the same interconnection? Or is R5 truly to identify all NERC registered RC's? Response: This requirement continues the current practice of informing all RCs of Adverse Reliability Impacts (ARIs). Due to the nature of an ARI, this requirement is typically implemented as an RCIS message or a hotline call to all RC's. This is intended to make all RCs aware of ARIs and support situational awareness. More minor comments / suggestions for improvement: IRO-002 R2 can be

				improved by replacing "prevent identified events" with "prevent anticipated events". "Anticipated" aligns better with contingency analysis than "identified" Response: The SDT believes the commenter intended to be commenting upon IRO-001-2 R2 rather than IRO-002-2 R2. The SDT did indeed consider using the word "anticipated" rather than identified. However, the SDT believes that a decision cannot be made regarding whether to anticipate an event unless it is first identified through some method of assessment. Contingency analysis certainly can be one valid form useful in assessment. Since anything identified by such an assessment must be considered, the SDT believes the requirement should apply to what is identified, rather than the subjective decision of whether to expect or anticipate that which has been identified. IRO-005-4 R1 and R2 can be improved by replacing "expected" with "anticipated". Contingencies are not necessarily "expected"; however, we do "anticipate" them. Response: The SDT agrees and have revised the requirements per your suggestion.
Response: The RCSDT thanks you for your comment.				
Thomas E Washburn	Florida Municipal Power Pool	6	Negative	From the last posting to this posting, for COM-002-3 R2, the phrase "the accuracy of the message has been confirmed" was added to the second step of three part communication. "Accuracy" is not the correct term here. "Understanding" is a better term. It would seem that "accuracy" is a term to be used in R3, the third part of the 3-part communication so that the issuer of the directive ensures the accuracy of the recipients understanding. FMPA suggests changing COM-002-3 R2 to read: Each Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details to clearly communicate the recipient's understanding of the Reliability Directive.. The term "accuracy" can be interpreted as requiring the recipient to second-guess the Reliability Directive of the RC to ensure the accuracy of the RC's directive in the first place. Under tight time constraints of Emergencies, this is not practical. We are sure that was not the intent of the drafting team. Response: The SDT, in drafting the proposed language, did indeed discuss using the word "understanding" rather than accuracy. However, the SDT was not able to identify a feasible measure for "understanding". A recipient can judge whether the

			response is accurate when compared with the communications issued, but cannot judge the understanding of anyone, even though the responder may have accurately responded. For IRO-001-2, do not see a need for R1. Doesn't the ERO already have that authority to establish RC's through the registration process, and to certify system operators through the PER standards? Response: Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2. IRO-014-2 R5, "impacted" was replaced with "other". Wouldn't it be better to at least limit the notification to within the same interconnection? Or is R5 truly to identify all NERC registered RC's? Response: IRO-014-2 R5: This requirement continues the current practice of informing all RCs of ARIs. Due to the nature of an ARI, this requirement is typically implemented as an RCIS message or a hotline call to all RC's. This is intended to make all RCs aware of ARIs and support situational awareness. More minor comments / suggestions for improvement: IRO-002 R2 can be improved by replacing "prevent identified events" with "prevent anticipated events". "Anticipated" aligns better with contingency analysis than "identified" Response: The SDT believes the commenter intended to be commenting upon IRO-001-2 R2 rather than IRO-002-2 R2. The SDT did indeed consider using the word "anticipated" rather than identified. However, the SDT believes that a decision cannot be made regarding whether to anticipate an event unless it is first identified through some method of assessment. Contingency analysis certainly can be one valid form useful in assessment. Since anything identified by such an assessment must be considered, the SDT believes the requirement should apply to what is identified, rather than the subjective decision of whether to expect or anticipate that which has been identified. IRO-005-4 R1 and R2 can be improved by replacing "expected" with "anticipated". Contingencies are not necessarily "expected"; however, we do "anticipate" them. Response: The SDT agrees, and has revised the requirements per your

				suggestion.
Response: The RCSDT thanks you for your comment.				
Silvia P. Mitchell	Florida Power & Light Co.	6	Negative	8) Question 1 1. Do you agree with COM-001 requirements for Interpersonal Communications capability and Alternative Interpersonal Communications capability (R1-R8)? If not, please explain in the comment area below. No 9) Question 1 Comments: As drafted, COM-001 is not clear or complete. At this stage in the evolution of compliance with the mandatory Reliability Standards, it is important that any new or revised Reliability Standard clearly articulate all compliance obligations and tasks consistent with Sections 302 (6) and (8) of the NERC Rules of Procedure. Thus, NextEra Energy Inc. (NextEra) has numerous recommended corrections to provide clarity and completeness to COM-001. For example, the requirement to designate an Alternative Interpersonal Communication capability is not clear. Does the designator solely designate for the designator's knowledge or does the designator need to inform the entity on the other end of the connection. In R2, for instance, the Reliability Coordinator must designate, but it is also not clear whether the Reliability Coordinator must inform the Balancing Authorities or Transmission Operators. It is further unclear whether the designation must be documented, or if any informing of the Balancing Authorities or Transmission Operators must be documented. Thus, it is recommended that the drafters decide what was intended regarding the designation and clearly state the requirements. In R9 it states that “. . . on at least a monthly basis.” There are two issues to consider here. If the sentence stays, grammatically it should read “. . . on, at least, a monthly basis. . . .” However, from a compliance and technical perspective, the term “at least” has no significance and should be deleted. The requirement is to test on a monthly basis - the phrase “at least” only introduces ambiguity and implies that the party should consider every two or three weeks. If the drafting team believes a best practice is less than a month, there are other NERC educational tools to explain a best practice. In R10, it states “. . . shall notify the impacted entity . . .” It would be clearer to state: “. . . shall notify the impacted Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider or Generator Operator . . .” Page 6

			Response: The Requirement R2 is for the RC to designate an AIC and inform the other entity (BA, TOP, etc.) as to what that AIC is. The Measure M2 provides examples of the types of evidence which may be used to prove compliance with the requirement. The RCSDT believes that stakeholders are satisfied with the wording of the requirements of this standard. The phrase “at least” was included to relay the intent – that the monthly requirement is a minimum, and some entities may wish to perform this more frequently. It does not add any compliance obligation to perform this activity more frequently than specified. For R10, the RCSDT believes that the existing language is sufficiently clear. 10) Question 2 2. The RCSDT believes that the requirements of TOP-001-1 obviate the need to develop additional requirements to address Xcel's comment. Do you agree? If not, please explain in the comment area below. No 11) Question 2 Comments: As stated in response to number 1, Reliability Standards are to be clear and complete. If a Transmission Operator is not responsible for a delay caused by a Reliability Coordinator, the Standard should specifically state that the Transmission Operator does not need to wait for an assessment or approval of a Reliability Coordinator to take actions pursuant to TOP-001-1 R3. Since the Reliability Coordinator is atop the reliability higherachy, such a statement provides clarity and completeness to understanding a Transmission Operators rights. Thus, TOP-001-1 R3 should be revised to lead with: “Without any obligation to first seek and obtain an assessment or approval from its Reliability Coordinator, each Transmission Operator” Page 10 Response: The SDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered “would violate safety, equipment, regulatory, or statutory requirements”, the TOP may respond to the RC that it cannot comply. 12) Question 6 Comments: At this stage in evolution of compliance with the mandatory Reliability Standards, it is important that any new or revised Reliability Standard clearly articulate all compliance obligations and tasks consistent with Sections 302 (6) and (8) of the NERC Rules of Procedure. COM-002, IRO-001, IRO-002 and IRO-014 do not meet this threshold. Thus, NextEra has numerous recommended corrections to provide clarity and completeness to these Reliability

				Standards. COM-002 R1 The addition of defined terms for Reliability Directive and Emergency is a very good approach that helps provides clarity. Hence, it is also be appropriate to make the language in the requirement as clear as possible, and not add other implied or unexplained notions. Also, at times, in those regions with markets, it is not always clear whether a requirement to curtail for reliability reasons is being issued pursuant to market rules or from the Reliability Coordinator or Transmission Operator under the Reliability Standards. Therefore, it is also appropriate that the Reliability Coordinator, Transmission Operator, Balancing Authority be required to identify themselves;, and if they fail to identify themselves or fail to use the term Reliability Directive, the registered entity receiving the flawed issuance should not be consider in violation of a Reliability Standard for failing to act. Accordingly, R1 would be clearer and have the same intent, if it stated as follows: “A Reliability Coordinator, Transmission Operator or Balancing Authority have the authority to issue an oral or written Reliability Directive as authorized in [list the specific Reliability Standard requirements such as IRO-001 R8 and TOP-001 R3]. The issuance of an oral of written Reliability Directive, by a Reliability Coordinator, Transmission Operator or Balancing Authority shall: (1) use the term ‘Reliability Directive;’ and (2) identify the issuer of the Reliability Directive as a Reliability Coordinator, Transmission Operator or Balancing Authority. If a Reliability Coordinator, Transmission Operator or Balancing Authority issues an oral or writtern directive without using the term “Reliability Directive” or failing to indentify itself as a Reliability Coordinator, Transmission Operator or Balancing Authority, the registered entity receiving the directive cannot be considered in violation for its failure to act.” Response: There is a new standard under development (COM-003) that is addressing a broader range of communications protocols, and has proposed a requirement for the Reliability Coordinator to announce his/her title when issuing alerts and other types of announcements. IRO-001 The definition of Adverse Reliability Impacts uses the term “instability.” It is important that this term be technically defined in the same way “Cascading” is defined, otherwise the new requirement is not adding clarity; rather, it is maintaining the ambiguous term “instability” that will likely lead to confusion and debate. Response: The term, ‘instability’ is already used in many reliability standards. R1 Similar to the comments set forth with respect to COM-001 (question #1), the term “at least” should be deleted from R1 - it serves no useful purpose from a technical or compliance perspective; instead, it will add unnecessary ambiguity to the requirement. Response: The phrase, “at least” was included to relay the intent – that the monthly requirement is a minimum, and some entities may wish to perform this

				more frequently. It does not add any compliance obligation to perform this activity more frequently than specified. R2, as drafted, states: “Each Reliability Coordinator shall take actions or direct actions, which could include issuing oral or written Reliability Directives, of Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. “ This long sentence has several significant grammatical errors that result in the reader not being able to discern the meaning of the requirement. It also unnecessarily adds verbiage that detracts from its primary focus. It is, therefore, recommended that R2 be revised as follows: “Each Reliability Coordinator shall take all necessary actions to prevent identified Emergencies or Adverse Reliability Impacts. These Reliability Coordinator actions shall include, to the extent necessary, the issuing of oral or written Reliability Directives to Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers located within its Reliability Coordinator Area. “ Response: The SDT has considered the alternative language proposed and finds that the— the phrase, ‘all necessary action’ is ambiguous. Who would decide that ‘all necessary action’ had been taken? R3, as drafted, is confusing and inconsistent with R2, and, thus, R3 should be revised to read as follows: “Upon receipt of a Reliability Directive issued pursuant to R2, a Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator and Distribution Provider shall comply with the Reliability Directive, unless compliance would violate safety, equipment, regulatory or statutory requirements. In the event that a Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator or Distribution Provider determines that compliance with a Reliability Directive would violate safety, equipment, regulatory or statutory requirements, the Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator or Distribution Provider shall, within 10 minutes after the determination, inform the Reliability Coordinator of its inability to comply.” Response: The team adopted the intent of part of this suggestion by replacing the word, ‘per’ with, ‘in accordance with’. The team elected not to add a time constraint because the proposed time constraint implies that it would be acceptable to delay up to 10 minutes before notifying the RC – and in some instances this time delay

				could result in and adverse impact to reliability. IRO-002R1 and R2, as written, are confusing. It is recommended that R1 and R2 be combined to read as follows: “Pursuant to a written procedure to mitigate the impact of a Reliability Coordinator’s analysis tool outage, a Reliability Coordinator’s System Operator shall also have the authority to approve, deny or cancel a planned outage for its analysis tool.” Response: The drafting team believes that the language in the proposed standard is clear as written. No reason has been provided for merging the two requirements, and the benefit of merging the requirements is not clear. IRO-014 It is unclear why the terms Operating Procedure, Operating Process or Operating Plan needs to be plural, as currently written in the Standard. Hence, it is recommended that these terms be made singular, otherwise a violation may be inferred for not having more than one Procedure, Process or Plan. Response: The range of activities that must be addressed by the documents is expected to require more than one document, thus the use of the plural versions of these terms. Insert the word “applicable” before “Reliability Coordinator.” Response: The benefit of adding the word ‘applicable’ is not clear. 2.1, as written, is confusing. Recommend that 2.1 read as follows: “Review and update, if an update is necessary, on an annual basis. Annual basis means the review shall be within one month plus or minus that date of the last review.” Response: The 15 month interval was recommended by the compliance program as the outer bound to recommend in standards that use the term, “annual” or “annually.” There is a compliance bulletin on this issue. R3 This requirement uses a very vague term “reliability-related information,” which, also, does not track the language used in R1 -- “information.” It is recommended that R1 and R3 use the same terms and read “ . . . information, as defined by the Reliability Coordinator, . . . ” Response: Requirement R1 is not open-ended – it identifies information needed for Interconnection reliability. R3 points to the information identified by complying with R1. The intent was to limit the scope to areas needed for reliability. RCs may want other information for reasons not related to reliability, and that information is outside the scope of this standard. R4 As stated above, “at least” does not add value, and, therefore, should be

				deleted. Response: The phrase, “at least” was included to relay the intent – that the monthly requirement is a minimum, and some entities may wish to perform this more frequently. It does not add any compliance obligation to perform this activity more frequently than specified. R5, as written, is confusing. The recommended fix is to delete “all other” and replace with “impacted”. Response: The SDT did intend that all other RCs be notified. This requirement continues the current practice of informing all RCs of Adverse Reliability Impacts (ARIs). Due to the nature of an ARI, this requirement is typically implemented as an RCIS message or a hotline call to all RC’s. This is intended to make all RCs aware of ARIs and support situational awareness.
Response: The RCSDT thanks you for your comment. Please see responses above.				
Thomas W. Richards	Fort Pierce Utilities Authority	4	Negative	From the last posting to this posting, for COM-002-3 R2, the phrase "the accuracy of the message has been confirmed" was added to the second step of three part communication. "Accuracy" is not the correct term here. "Understanding" is a better term. It would seem that "accuracy" is a term to be used in R3, the third part of the 3-part communication so that the issuer of the directive ensures the accuracy of the recipients understanding. FPUA suggests changing COM-002-3 R2 to read: Each Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details to clearly communicate the recipient's understanding of the Reliability Directive.. The term "accuracy" can be interpreted as requiring the recipient to second-guess the Reliability Directive of the RC to enure the accuracy of the RC's directive in the first place. Under tight time constraints of Emergencies, this is not practical. We are sure that was not the intent of the drafting team. Response: The RCSDT revised the requirement as follows to remove the “accuracy” language: R2. Each Balancing Authority, Transmission Operator, Generator

				Operator, and Distribution Provider that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive. For IRO-001-2, FPUA does not see a need for R1. Doesn't the ERO already have that authority to establish RC's through the registration process, and to certify system operators through the PER standards? Response: Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2. IRO-014-2 R5, "impacted" was replaced with "other". Wouldn't it be better to at least limit the notification to within the same interconnection? Or is R5 truly to identify all NERC registered RC's? Response: This requirement continues the current practice of informing all RCs of ARIs. Due to the nature of an ARI, this requirement is typically implemented as an RCIS message or a hotline call to all RC's. This is intended to make all RCs aware of ARIs and support situational awareness. More minor comments / suggestions for improvement: IRO-002 R2 can be improved by replacing "prevent identified events" with "prevent anticipated events". "Anticipated" aligns better with contingency analysis than "identified" IRO-005-4 R1 and R2 can be improved by replacing "expected" with "anticipated". Contingencies are not necessarily "expected"; however, we do "anticipate" them. Response: The SDT believes the commenter intended to be commenting upon IRO-001-2 R2 rather than IRO-002-2 R2. The SDT has revised the requirements per your suggestion.
Response: Thank you for your comments. Please see responses above.				
Anthony L Wilson	Georgia Power Company	3	Affirmative	Please see comments
Response: The RCSDT thanks you for your comment. Please see response to posting comments for the SERC OC Standards Review Group; the RCSDT did not specifically find comments from Georgia Power Company and believes comments were included within this group.				

Gordon Pietsch	Great River Energy	1	Negative	Reliability Directive: It is our opinion the definition as currently written is too subjective and may cause a compliance auditor to question the grounds under which one of applicable entities declared the directive. We believe that revising the definition to state “to address a declared emergency...” will remove the subjectivity. Requirements for using three-part communication: It is our opinion that the standard needs language that clearly states that during a Blast Call three-part communication is not required. Blast Calls are used when information needs to be disseminated quickly to a large number of entities. Strictly enforcing the use of three-part communication under these circumstances has the potential to be more harmful to reliability than helpful.
Response: The RCSDT thanks you for your comment. Reliability Directive: The RCSDT believes the proposed standard requirement addresses your requested revision. “R1...<u>shall identify the action as a Reliability Directive...</u>” is addressing a declared emergency. R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority <u>shall identify the action as a Reliability Directive</u> to the recipient. As a reference, we have included the existing definition of Emergency: Emergency: Any abnormal system condition that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System. The RCSDT agrees that the use of Blast Calls to issue Reliability Directives, in mass, is efficient and effective. The RCSDT believes Reliability Directives issued in mass should be defined by procedure, and that the procedure would establish a method of affirmation and notice of implementation. As envisioned, communications protocols would be addressed in the COM-003 standard being developed in Project 2007-02.				
Shaun Jensen	Idaho Power Company	3	Negative	It appears there is much concern with the wording, particularly in R2, as well as parties having issues with intermingled definitions. It is recommended to reword this, and ensure the VSL accurately reflects a direct definition that all entities all clear and certain on.
Response: The RCSDT thanks you for your comment. The RCSDT is not sure of which standard requirement is being referenced.				
Bob C. Thomas	Illinois Municipal Electric Agency	4	Negative	IMEA appreciates the SDT's efforts to date. We are basing our negative vote on ballot pool communications that have addressed points that need further refinement before the proposed revisions to these reliability standards are affirmed. IMEA supports, in particular, comments submitted by the Midwest ISO and the SERC OC

				Standards Review Group.
Response: The RCSDT thanks you for your comments. Please see responses to Midwest ISO and SERC OC Standards Review Group.				
Kim Warren	Independent Electricity System Operator	2	Negative	While we support the general direction of these standards development actions, we do have a number of concerns which cumulatively lead us to advocate a NEGATIVE vote. These include: (1) The phrase “within the same Interconnection” in COM-001-2 R1, limits the coordination activities to RCs, TOPs and BAs that can be detrimental to reliability. We recommend removing this phrase. Response: The RCSDT does not agree that the phrase “within the same interconnection” limits coordination between entities. The purpose of the phrase is to place a bound on which adjacent entity an RC must have Interpersonal Communication (e.g., an EI RC does not need communication with WI RCs). The phrase “within the same interconnection” is added for the case of ERCOT which has only DC tie lines with the Eastern Interconnection and has minimal interchange. (2) We believe the Interchange Coordinator and Purchasing-Selling Entity also need to have adequate communication capabilities with other entities but they are not included in the applicability section of COM-001-2. Response: We disagree that the IC and PSE need to be an applicable entity. To maintain reliability does not require communication with these entities. The applicability of COM-001, COM-002 and IRO-001 were revised to include the same reliability entities: RC, TOP, BA, DP and GOP. LSE, PSE and TSP were removed from the applicability of these standards per stakeholder suggestion. (3) The proposed definition of Reliability Directive addresses Emergency condition only. There are situations where a Reliability Directive is issued such that the directed action must be taken by the receiving entity to address a reliability constraint, which by itself does not constitute an Emergency. We suggest the term Reliability Directive be revised to: “A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address a reliability constraint or an Emergency.” Response: The RCSDT believes that your comment concerns “directives” or “instructions” for normal operational activities rather than a Reliability Directive. There is no requirement preventing an entity from issuing either directives or

				instructions for the situations you mention. The intent of creating a Reliability Directive definition is to ensure that communications is tightened during Emergencies (per blackout report). When an RC issues a Reliability Directive, the RC has made a deliberate decision to formally end collaboration and require specific action(s). In addition, the Operating Personnel Communication Protocols SDT is addressing your concern about instances that are not considered an emergency. As envisioned, communications protocols requiring additional applications for use of three-part communications would be addressed in the COM-003 standard being developed in Project 2007-02. (4) Requirement R9 of COM-001-2 needs to be clarified. As written the requirement seems open ended once action to repair of a failed Alternative Interpersonal Communication is initiated within 2 hours but not completed within that time. It is not clear whether there is an expectation on the responsible entity to designate a replacement Alternative Interpersonal Communication if repairs cannot be completed within that period. Response: The requirement is saying that if the test fails you must initiate action for repair or designate a replacement alternative within two hours. There is no requirement for a tertiary capability nor is there a requirement for a repair deadline. We have also submitted additional comments in response to the request for comments. Response: Please see responses to other comments
Response: The RCSDT thanks you for your comment. Please see responses above.				
Michael Moltane	International Transmission Company Holdings Corp	1	Negative	ITC votes negative for the reasons detailed in the MISO-submitted comment form related to this Project (ITC signed onto the MISO comments). While this standard revision moves in the right direction, we believe at least one additional iteration will be needed to correct the concerns indicated in the comment form.
Response: The RCSDT thanks you for your comments. Please see responses to Midwest ISO.				
Kathleen Goodman	ISO New England, Inc.	2	Negative	Although ISO-NE believes these Standard represent a great improvement, we are voting against because we believe they would be improved by the comments that we have offered. We would gladly modify our vote in the Affirmative if our comments are considered in the next ballot.

Response: The RCSDT thanks you for your comment. Please see response to those comments.				
Charles Locke	Kansas City Power & Light Co.	3	Negative	These requirements impose alternative means of communication on TOP's, BA's and GOP's regardless of the impact the entity may have on maintaining interconnection reliability. In addition, there are many IRO requirements that are proposed to be eliminated that do not appear to be considered in other places.
Response: The RCSDT thanks you for your comments. We cannot delineate entity impact on reliability and respond only regarding entity registration with NERC.				
Scott Heidtbrink	Kansas City Power & Light Co.	5	Negative	These requirements impose alternative means of communication on TOP's, BA's and GOP's regardless of the impact the entity may have on maintaining interconnection reliability. In addition, there are many IRO requirements that are proposed to be eliminated that do not appear to be considered in other places.
Response: The RCSDT thanks you for your comments. We cannot delineate entity impact on reliability and respond only regarding entity registration with NERC.				
Jessica L Klinghoffer	Kansas City Power & Light Co.	6	Negative	These requirements impose alternative means of communication on TOP's, BA's and GOP's regardless of the impact the entity may have on maintaining interconnection reliability. In addition, there are many IRO requirements that are proposed to be eliminated that do not appear to be considered in other places.
Response: The RCSDT thanks you for your comments. We cannot delineate entity impact on reliability and respond only regarding entity registration with NERC.				
Jim M Howard	Lakeland Electric	5	Negative	From the last posting to this posting, for COM-002-3 R2, the phrase "the accuracy of the message has been confirmed" was added to the second step of three part communication. Why was this added? - "Accuracy" is not the correct term here. Suggest changing COM-002-3 R2 to read: Each Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details to clearly communicate the recipient's understanding of the Reliability Directive. Response: The SDT, in drafting the proposed language, did indeed discuss using the word "understanding" rather than accuracy. However, the SDT was not able to

				identify a feasible measure for “understanding”. A recipient can judge whether the response is accurate when compared with the communications issued, but cannot judge the understanding of anyone, even though the responder may have accurately responded. The term "accuracy" can be interpreted as requiring the recipient to second-guess the Reliability Directive of the RC to ensure the accuracy of the RC's directive in the first place. Under tight time constraints of Emergencies, this is not practical. We are sure that was not the intent of the drafting team. Response: Several commenters expressed concern about the use of the word, 'accuracy' and the team revised the requirement to remove this word.
Response: The RCSDT thanks you for your comment.				
Paul Shipps	Lakeland Electric	6	Negative	The phrase "the accuracy of the message has been confirmed" was added to the second step of three part communication. "Accuracy" is not the correct term here. "Understanding" is a better term. The term "accuracy" is a term to be used in R3, the third part of the 3-part communication, so that the issuer of the directive ensures the accuracy of the recipients understanding.
Response: The RCSDT thanks you for your comment. The RCSDT has removed that phrase from the requirement as it was difficult to measure and many stakeholders had concerns with the language.				
Rick Crinklaw	Lane Electric Cooperative, Inc.	3	Negative	Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the

				language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of Communication capabilities impacted entities will be notified of the past loss and current status of Communication." We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.
Response: The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u>." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.				
Michael Henry	Lincoln Electric Cooperative, Inc.	3	Negative	Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-

				service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of Communication capabilities impacted entities will be notified of the past loss and current status of Communication." We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.
Response: The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u>." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this				

return call would not be timely enough, then the issuer would determine a different mitigation plan.				
Bruce Merrill	Lincoln Electric System	3	Negative	For NERC Reliability Standard COM-001-2, LES believes that interpersonal communication is the act of communicating and that the requirements specify normal and redundant facilities for Interpersonal Communication. As such, LES recommends the definition for "Interpersonal Communication" be changed to "Any act where two or more individuals communicate, interact, consult or exchange information, including listening or reading". Additionally, for NERC Reliability Standard IRO-001-2, LES recommends replacing the word "certify" in R1 and M1 with "assign". As currently written it is unclear what the certification of the Reliability Coordinator will entail and how it will be established by the ERO.
Response: The RCS DT thanks you for your comment. We specifically included "medium" to distinguish a source or vehicle of communication instead of a "personal" reference. NERC has an established certification procedure for all registered entities and "certify" is in line with NERC's process.				
Dennis Florom	Lincoln Electric System	5	Negative	For NERC Reliability Standard COM-001-2, LES believes that interpersonal communication is the act of communicating and that the requirements specify normal and redundant facilities for Interpersonal Communication. As such, LES recommends the definition for "Interpersonal Communication" be changed to "Any act where two or more individuals communicate, interact, consult or exchange information, including listening or reading". Additionally, for NERC Reliability Standard IRO-001-2, LES recommends replacing the word "certify" in R1 and M1 with "assign". As currently written it is unclear what the certification of the Reliability Coordinator will entail and how it will be established by the ERO.
Response: The RCS DT thanks you for your comment.. We specifically included "medium" to distinguish a source or vehicle of communication instead of a "personal" reference. NERC has an established certification procedure for all registered entities and "certify" is in line with NERC's process.				
Richard Reynolds	Lost River Electric Cooperative	3	Negative	Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the

				event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of Communication capabilities impacted entities will be notified of the past loss and current status of Communication." We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.
Response: The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u>." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.				

Charles A. Freibert	Louisville Gas and Electric Co.	3	Negative	Refer to the comment form.
Response: The RCSDT thanks you for your comment. Please see response to posting comments for LGE/KE; the RCSDT did not specifically find comments from Louisville Gas and Electric Co.				
Joseph G. DePoorter	Madison Gas and Electric Co.	4	Negative	MGE is voting negative for several reasons. Please see the MRO NSRS comments for a full description. Plus, whenever there are multiple Standards within a Project, registered entities will be forced to vote negative when there is at least one negative aspect.
Response: The RCSDT thanks you for your comment. Please see response to MRO NSRS comments. The NERC SC approved the SAR and the RCSDT only drafts requirements within the scope of the SAR. The RCSDT will move to a successive ballot with each standard balloted separately.				
Joe D Petaski	Manitoba Hydro	1	Negative	The current data retention requirement of 90 days is more than adequate. Increasing this period to 12 months would result in a significant amount of work with no benefit to reliability. For additional comments, please see Manitoba Hydro's comments provided during formal comment period.
Response: The RCSDT thanks you for your comment. However, the comment submitted is incomplete and does not reference specific standard(s) or requirement(s). The data retention periods for the set of standards proposed is consistent with the guidelines provided in the NERC Drafting team Guidelines. Note that with recent changes to the Rules of Procedure, entities must be prepared to demonstrate that they were compliant for the full time period since the last audit.				
Greg C. Parent	Manitoba Hydro	3	Negative	The current data retention requirement of 90 days is more than adequate. Increasing this period to 12 months would result in a significant amount of work with no benefit to reliability. For additional comments, please see Manitoba Hydro's comments provided during formal comment period.
Response: The RCSDT thanks you for your comment. However, the comment submitted is incomplete and does not reference specific standard(s) or requirement(s). The data retention periods for the set of standards proposed is consistent with the guidelines provided in the NERC Drafting team Guidelines. Note that with recent changes to the Rules of Procedure, entities must be prepared to demonstrate that they were compliant for the full time period since the last audit.				
S N Fernando	Manitoba Hydro	5	Negative	The current data retention requirement of 90 days is more than adequate. Increasing this period to 12 months would result in a significant amount of work with no benefit to reliability. For additional comments, please see Manitoba Hydro's

				comments provided during formal comment period.
Response: The RCSDT thanks you for your comment. However, the comment submitted is incomplete and does not reference specific standard(s) or requirement(s). The data retention periods for the set of standards proposed is consistent with the guidelines provided in the NERC Drafting team Guidelines. Note that with recent changes to the Rules of Procedure, entities must be prepared to demonstrate that they were compliant for the full time period since the last audit.				
Daniel Prowse	Manitoba Hydro	6	Negative	The current data retention requirement of 90 days is more than adequate. Increasing this period to 12 months would result in a significant amount of work with no benefit to reliability. For additional comments, please see Manitoba Hydro's comments provided during formal comment period.
Response: The RCSDT thanks you for your comment. However, the comment submitted is incomplete and does not reference specific standard(s) or requirement(s). The data retention periods for the set of standards proposed is consistent with the guidelines provided in the NERC Drafting team Guidelines. Note that with recent changes to the Rules of Procedure, entities must be prepared to demonstrate that they were compliant for the full time period since the last audit.				
Jason L Marshall	Midwest ISO, Inc.	2	Negative	We thank the drafting team for their efforts on this project to improve the reliability coordination standards. The quality of the standards continues to improve over previous postings. While the drafting team is definitely moving the standards in the right direction, we believe we have not reached the point of diminishing returns and that there are several issues that the drafting team still needs to address. 1 This standard does not comport with the informational filing that NERC submitted to FERC on August 10, 2009 regarding its discontinued use of sub-requirements in standards development activities. Response: The sub-requirements are an old format. The standard was updated to the new template, and sub-requirements are now Parts. 2 In general, we are not opposed to the concept of the ERO certifying the Reliability Coordinators; however, there are some issues with how the requirement IRO-001-2 R1 is written. The requirement places emphasis on regions and regional boundaries when no emphasis should be placed there. There are multiple Reliability Coordinators that span multiple regions. The language “to continuously assess transmission reliability” should be changed to “to continuously assess Bulk Electric System reliability” to reflect on what the standards are enforceable. The requirement on the ERO should also be expanded similar to BAL-005-0.1b R1 to ensure that all operating entities and the entire BES are covered under a Reliability Coordinator Area.

				Response: Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2. 3 The SDT did not address all of our concerns with COM-002-3 from the last posting. For entities registered as multiple functions, the combination of the definition of Reliability Directive and Requirement R1 could be confused to require a company to issue directives to itself. There are several organizations registered as a Reliability Coordinator, Transmission Operator and Balancing Authority. In these companies, it is not uncommon for those responsibilities to be distributed across multiple desks. Thus, for certain situations, a single System Operator may actually be the Reliability Coordinator and the Transmission Operator. In other situations, the System Operator serving the Reliability Coordinator function may be adjacent to the System Operator serving the as the Transmission Operator or Balancing Authority. We believe that it should never be necessary for these System Operators to issue Reliability Directives to themselves in the first example or to their co-worker in the second example to demonstrate compliance to NERC standards. How the entity coordinates its actions among its Reliability Coordinator, Balancing Authority and Transmission Operator roles is a corporate governance issue that should not be confused or complicated by the NERC standards. Thus, we believe that standards should be made clear that the Reliability Directive is directed to another company. Response: COM-002 does not preclude text or other forms of communication for issuing Reliability Directives. However, entities still must comply with the requirements of COM-002. Further, the RCSDT believes it to be equally imperative that each NERC registered function hold the authority to issue Reliability Directives, and the ability to receive Reliability Directives, whether those Reliability Directives are issued to subordinate registered functions within a vertically integrated utility, or to registered entities that are corporately separate. The RCSDT believes the following response to draft 3 comments still holds true: “The way that COM-002 is crafted, it focuses on functional entity communication between and among functions. Face-to-face communication of Reliability Directives are subject to the requirements of COM-002 and can be measured for COM-002 by allowing Operator Logs as possible evidence to support compliance”. The use of operator logs to memorialize and provide evidence of compliance is applicable to those Reliability Directives issued and received within the same control room or operations center. The RCSDT believes that any Registered Entity or person operating as such must understand the intent of the issued Reliability Directive, and that the issuer of the Reliability Directive believe that the Reliability

				Directive was correctly received. 4 We also are concerned about the need to conduct three-part communications for a Reliability Directive issued through a blast call. Under these circumstances, the need for immediate action of multiple parties may require a blast call and there may not be time for all parties to complete three-part communications before initiating actions. Thus, we believe blast calls should be treated separately and that should be made clear. Response: The RCSDT agrees that the use of Blast Calls to issue Reliability Directives, in mass, is efficient and effective. However the essence of accurately implementing Reliability Directives is accomplished by use of 3-part communications. The RCSDT believes Reliability Directives issued in mass should be defined by procedure, and that the procedure would establish a method of affirmation and notice of implementation. As envisioned, communications protocols requiring for issuing alerts will be addressed in the COM-003 standard being developed in Project 2007-02. 5 COM-002-3 R2 needs to be rewritten as it is too verbose. The point is for the recipient of the original message to get the issuer to confirm that the message was understood. We suggest rewording R2 to “Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive.” Once the receiver has completed this requirement, the ball is in the issuer’s court per Requirement R3. No additional words are necessary in the requirement. Response: The RCSDT agrees and has revised the requirement as you suggest. 6 Please strike part IRO-014-2 Part 1.7. There is no need to have a weekly conference to discuss every Operating Procedure, Operating Process and Operating Plan. As this requirement is written, a conference call would be necessary for each. Furthermore, IRO-014-2 R4 already includes a requirement to have weekly conference calls that should suffice. IRO-014-2 R2 seems to recognize that these Operating Procedures, Processes and Plans likely will not need to be discussed weekly as it only requires an annual update. Response: The intent of R1 is for Reliability Coordinators to coordinate specific activities with other impacted Reliability Coordinators. These activities are listed as Parts. Further the RCSDT believes that it is prudent that Reliability Coordinators talk at least once a week to verify viability of mutual plans, procedures or processes. The relation of IRO-14-2 PART 1.7 to R4 is that PART 1.7 requires

				having a conference call, R4 requires participation by all impacted Reliability Coordinators. As such, neither replaces the other. 7 IRO-014-2 R4 is overly broad and would require Reliability Coordinators that will not impact one another to participate on conference calls with one another without any reliability benefit. The issue is created by the addition of the clause “within the same Interconnection” to the requirement. ISO-NE, FRCC, Midwest ISO, and SPP are all in the same Interconnection. It is hard to fathom there being reliability benefit to SPP and ISO-NE conversing weekly or Midwest ISO and FRCC conversing weekly. We suggest limiting the requirement to adjacent Reliability Coordinators. Response: IRO-14-2 R4 is applicable to those Reliability Coordinators engaged in activities related to R1 and subsequently PART 1.7. It is unlikely that Reliability Coordinators whom are geographically and electrically distant will have mutually agreed upon operating procedures; therefore requirement R4 would not apply. 8 For IRO-014-2 R5, we suggest replacing “other” with “impacted” to limit the notification of Adverse Reliability Impacts to only those Reliability Coordinators that need to know. Because the definition of Adverse Reliability Impact includes “Bulk Electric System instability or Cascading”, it is possible that the cascading of 138 kV lines serving a load pocket or generator outlet stability issues could require a Reliability Coordinator to notify all other Reliability Coordinators regardless of impact. This would include Reliability Coordinators outside of the Interconnection with the problem. It would also include Reliability Coordinators that are not impacted. For instance, an issue in New England that would not pose a threat outside the northeast would require ISO-NE to notify SPP and FRCC and Reliability Coordinators in the Western Interconnection. There is no reliability benefit to this notification. Response: This requirement continues the current practice of informing all RCs of ARIs. Due to the nature of an ARI, this requirement is typically implemented as an RCIS message or a hotline call to all RC's. This is intended to make all RCs aware of ARIs and support situational awareness. 9 IRO-014-2 R6-R8 are problematic and need to be refined to make clear that the Reliability Coordinators shall operate to the most conservative limit. It should not require a Reliability Coordinator that disagrees with an action plan to implement the action plan. The Reliability Coordinator will be disagreeing with the action plan for reliability reasons. Assuming they are correct, the requirement to implement said action plan will actually put the Interconnection at greater risk. These requirements inappropriately attempt to codify the debate and analysis that occurs between and within Reliability Coordinators when there are differing results in reliability analysis. This is part of the problem with having a Wide Area view that results in Reliability Coordinators having a view into other Reliability Coordinator Areas. Their results

			and conclusions may be different. There should be a hierarchical structure for whose results should be used. It should be the Reliability Coordinator with primary responsibility unless the other Reliability Coordinator has evidence to demonstrate that the Reliability Coordinator with primary responsibility is incorrect. What this should do is to trigger both to review their models and data to assess the problem. None of this needs to be codified in the standards though. Response: Requirements R6-R8 are translated from IRO-016-1, Requirement R1. If an RC sees a problem and another does not see the same problem, then there may be an issue with someone's model or processes or procedures. The RC's are supposed to have coordinated Operating Plans, Processes or Procedures to operate reliably. R6-R8 are only applicable if one of the two (or more) RCs do not see that a problem exists. It would be a detriment to reliability for both RCs to take no action. RCs are required to coordinate actions under existing IRO-016-1, R1. If one RC identifies a problem and provides an action plan to another RC to mitigate the problem, the second RC is obligated under R8 to implement it. We have revised the R8 to clarify this intent. IRO-014-2, Revised R8. During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, each Reliability Coordinator shall implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact unless such actions would violate safety, equipment, regulatory or statutory requirements. 10 In the definition of Reliability Directive, we suggest changing "to address an Emergency" to "to address a declared Emergency". This would help limit second guessing for a situation where a System Operator took action because he truly believed he was in an Emergency but after the fact analysis demonstrates there really was not an Emergency. Response: The RCDT believes that modifying Reliability Directive by including "declared Emergency" would add an unnecessary step in mitigation of the Emergency. 11 We disagree with deleting IRO-002-1 R5 and R7 which establish tools and monitoring capabilities. There should be basic tools requirements established for Reliability Coordinators. Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities will be addressing these issues in more detail. Thus, it does not make sense to delete these requirements until that dra Response: Each RC has been certified to continue operations as an RC or been certified prior to beginning operations as an RC. The minimum set of tools and capabilities for an RC are "checked off" during the certification process. The

				reliability objective of R5 and R7 is to perform analyses to ensure reliability of the BES by specifying capability rather than mandating specific tools. The analysis provisions of R5 and R7 are covered under IRO-008-1, Requirements R1 (perform Operational Planning Analysis) and R2 (perform Real-time Analysis). It is anticipated that Project 2009-02 team will address this issue more fully.
Response: The RCS DT thanks you for your comments.				
Richard Burt	Minnkota Power Coop. Inc.	1	Negative	Minnkota is in agreement with the comments submitted by the MRO NSRS.
Response: The RCS DT thanks you for your comment. Please see MRO NSRS response to comments.				
Don Horsley	Mississippi Power	3	Affirmative	Please see comments
Response: The RCS DT thanks you for your comment. Please see response to those comments.				
John S Bos	Muscatine Power & Water	3	Negative	1 In the COM-001 requirements, MP&W does not agree that a Distribution Provider and a Generator Operator need to be held to the same level of responsibility as a Reliability Coordinator, Balancing Authority, or Transmission Operator. In FERC Order 693 (paragraph 487), FERC directed the Distribution Provider and Generator Operator to be incorporated in this standard by stating: "We expect the telecommunication requirements for all applicable entities will vary according to their roles and that these requirements will be developed under the Reliability Standards development process." A Distribution Provider and Generator Operator may not be staffed 24 hours a day like a Balancing Authority or Transmission Operator; nevertheless, the Standards Drafting Team did not consider this. Response: There is no requirement that requires identical communications systems. The requirement is to have "a" communication capability. Regarding 24/7 support, the requirement is to have communications capability. The type of media used is not specified. For a small DP, an on-call system could suffice. The RCS DT also recognizes the FERC directive and has not included GOPs and DPs in the requirements for Alternative Interpersonal Communications capability. 2 MP&W does not agree with the revision of IRO-001 with the statement included

				for certifying Reliability Coordinators. As written, it is ambiguous as far as what level of certification this would involve. Response: Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2. 3 MP&W disagrees with COM-002-3 R2. As stated in FERC Order 693 (paragraph 512) it is essential that Reliability Coordinators, Balancing Authorities, and Transmission Operators have communications with Distribution Providers. Requirement 2 also applies to Transmission Service Providers, Load-Serving Entities and Purchasing and Selling Entities. As stated above, it is going to be unattainable to communicate with a Distribution Provider since most Distribution Providers are usually not operated 24 hours per day like Reliability Coordinators, Balancing Authorities, and Transmission Operators. Many Distribution Providers have answering services that will relay a message once they receive it and then pass it along to someone. An answering service could repeat the directive back, word for word, but this would not add any level of reliability. The Standards Drafting Team should reconsider the applicability section of this Standard to apply to only Reliability Coordinators, Balancing Authorities, and Transmission Operators for the issuance of a Reliability Directive. Response: There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u>." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.
Response: The RCSDT thanks you for your comments. Please see responses above.				
Mike Avesing	Muscatine Power & Water	5	Negative	In the COM-001 requirements, MP&W does not agree that a Distribution Provider and a Generator Operator need to be held to the same level of responsibility as a Reliability Coordinator, Balancing Authority, or Transmission Operator. In FERC

			Order 693 (paragraph 487), FERC directed the Distribution Provider and Generator Operator to be incorporated in this standard by stating: "We expect the telecommunication requirements for all applicable entities will vary according to their roles and that these requirements will be developed under the Reliability Standards development process." A Distribution Provider and Generator Operator may not be staffed 24 hours a day like a Balancing Authority or Transmission Operator; nevertheless, the Standards Drafting Team did not consider this. Response: There is no requirement that requires identical communications systems. The requirement is to have "a" communication capability. Regarding 24/7 support, the requirement is to have communications capability. The type of media used is not specified. For a small DP, an on-call system could suffice. The RCSDT also recognizes the FERC directive and has not included GOPs and DP in the requirements for Alternative Interpersonal Communications capability. MP&W does not agree with the revision of IRO-001 with the statement included for certifying Reliability Coordinators. As written, it is ambiguous as far as what level of certification this would involve. Response: Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2. MP&W disagrees with COM-002-3 R2. As stated in FERC Order 693 (paragraph 512) it is essential that Reliability Coordinators, Balancing Authorities, and Transmission Operators have communications with Distribution Providers. Requirement 2 also applies to Transmission Service Providers, Load-Serving Entities and Purchasing and Selling Entities. As stated above, it is going to be unattainable to communicate with a Distribution Provider since most Distribution Providers are usually not operated 24 hours per day like Reliability Coordinators, Balancing Authorities, and Transmission Operators. Many Distribution Providers have answering services that will relay a message once they receive it and then pass it along to someone. An answering service could repeat the directive back, word for word, but this would not add any level of reliability. The Standards Drafting Team should reconsider the applicability section of this Standard to apply to only Reliability Coordinators, Balancing Authorities, and Transmission Operators for the issuance of a Reliability Directive. Response: The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is

				designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u>." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.
Response: The RCSDT thanks you for your comment.				
Brandy D Olson	Muscatine Power & Water	6	Negative	In the COM-001 requirements, MP&W does not agree that a Distribution Provider and a Generator Operator need to be held to the same level of responsibility as a Reliability Coordinator, Balancing Authority, or Transmission Operator. In FERC Order 693 (paragraph 487), FERC directed the Distribution Provider and Generator Operator to be incorporated in this standard by stating: "We expect the telecommunication requirements for all applicable entities will vary according to their roles and that these requirements will be developed under the Reliability Standards development process." A Distribution Provider and Generator Operator may not be staffed 24 hours a day like a Balancing Authority or Transmission Operator; nevertheless, the Standards Drafting Team did not consider this. Response: There is no requirement that requires identical communications systems. The requirement is to have "a" communication capability. Regarding 24/7 support, the requirement is to have communications capability. The type of media used is not specified. For a DP an on-call system could suffice. The RCSDT also recognizes the FERC directive and has not included GOPs and DP in the requirements for Alternative Interpersonal Communications capability. MP&W does not agree with the revision of IRO-001 with the statement included for certifying Reliability Coordinators. As written, it is ambiguous as far as what level of certification this would involve. Response: Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.

				MP&W disagrees with COM-002-3 R2. As stated in FERC Order 693 (paragraph 512) it is essential that Reliability Coordinators, Balancing Authorities, and Transmission Operators have communications with Distribution Providers. Requirement 2 also applies to Transmission Service Providers, Load-Serving Entities and Purchasing and Selling Entities. As stated above, it is going to be unattainable to communicate with a Distribution Provider since most Distribution Providers are usually not operated 24 hours per day like Reliability Coordinators, Balancing Authorities, and Transmission Operators. Many Distribution Providers have answering services that will relay a message once they receive it and then pass it along to someone. An answering service could repeat the directive back, word for word, but this would not add any level of reliability. The Standards Drafting Team should reconsider the applicability section of this Standard to apply to only Reliability Coordinators, Balancing Authorities, and Transmission Operators for the issuance of a Reliability Directive. Response: The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u>." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.
Response: The RCSDT thanks you for your comment.				
Tony Eddleman	Nebraska Public Power District	3	Negative	COM-001-2: A) We would need clarification as to what the process would be for Interpersonal communication and alternate Interpersonal communications and voice recording if the (1) TO and the BA are the same person, (2) if the TO and the BA are sitting across the desk from each other, or (3) if the TO, BA, and Distribution provider are all in the same company or same room. B) In the definition of Interpersonal Communications if data is included (?), what

				evidence of compliance is expected? C) R 1.2 and R2.2 Reliability Coordinators communication shouldn't be limited to the same interconnection. They need communications concerned with schedules across DC ties. D) For R3, neighboring Transmission Operators should be included. E) For R5, neighboring Balancing Authorities should be included. Response: A) The IC and AIC requirements apply to the functional entity. If a company has all of the functions performed in the same room, they would verbally communicate with each other in person (with sound waves being the medium). B) Data is not included in the definition of Interpersonal Communications but is covered in approved IRO-010-1 and proposed TOP-003-2. C) BAs handle Interchange Schedules. The RC has Interpersonal Communications with its BAs. DC ties usually have contractually designated operators who handle operating concerns. D) The SDT agrees, and has revised the requirement to include 'adjacent' TOPs synchronously connected within the same Interconnection. E) The SDT agrees and has revised the requirement to include 'adjacent' BAs COM-002-3 (R1): A) Since an entity can be registered for multiple functions (functions noted in R1), this could lead to the requirement for entities to issue directives to themselves or co-workers in the same room. B) How would a 3-part communication work when a "blast" call is used to provide directives to several entities? Response: A) COM-002 does not preclude text or other forms of communication for issuing Reliability Directives. However, entities still must comply with the requirements of COM-002. Further, the RCSDT believes it to be equally imperative that each NERC registered function hold the authority to issue Reliability Directives, and the ability to receive Reliability Directives, whether those Reliability Directives are issued to subordinate registered functions within a vertically integrated utility, or to registered entities that are corporately separate.

				The RCSDT believes the following response to draft 3 comments still holds true: “The way that COM-002 is crafted, it focuses on functional entity communication between and among functions. Face-to-face communication of Reliability Directives are subject to the requirements of COM-002 and can be measured for COM-002 by allowing Operator Logs as possible evidence to support compliance”. COM-002 should not be construed to mean that an individual serving in two functions be required to issue a Reliability Directive to himself, but rather it is expected that such an individual would appropriately address the reliability issues as required by the function they are serving and its subsequent responsibilities. B) The RCSDT agrees that the use of Blast Call's to issue Reliability Directives, in mass, is efficient and effective. However the essence of accurately implementing Reliability Directives is accomplished by use of 3-part communications. The RCSDT believes Reliability Directives issued in mass should be defined by procedure, and that the procedure would establish a method of affirmation and notice of implementation. As envisioned, communications protocols requiring for issuing alerts will be addressed in the COM-003 standard being developed in Project 2007-02.
Response: The RCSDT thanks you for your comment.				
Don Schmit	Nebraska Public Power District	5	Negative	COM-001-2: A) We would need clarification as to what the process would be for Interpersonal communication and alternate Interpersonal communications and voice recording if the TO and the BA are the same person, if the TO and the BA are sitting across the desk from each other, or if the TO, BA, and Distribution provider are all in the same company or same room. B) If the Interpersonal Communication definition includes data (?) then what evidence needs to be provided? C) R1.2 and R2.2, Reliability Coordinators communication shouldn't be limited to the same interconnection. They also need communications concerned with schedules across DC ties. D) For R3, neighboring Transmission Operators should be included. E) For R5, neighboring Balancing Authorities should be included. Response: A) The IC and AIC requirements apply to the functional entity. If a

			company has all of the functions performed by the same person or people in the same room, they would verbally communicate with each other in person. (sound waves – medium) B) Data is not included in the definition of Interpersonal Communications but is covered in approved IRO-010-1 and proposed TOP-003-2. C) BAs handle Interchange Schedules. The RC has Interpersonal Communications with its BAs. DC ties usually have contractually designated operators who handle operating concerns. D) The SDT agrees, and has revised the requirement to include 'adjacent' TOPs synchronously connected within the same Interconnection. E) The SDT agrees and has revised the requirement to include 'adjacent' BAs COM-002-3(R1): A) Concern regarding entities registered with multiple functions. Could lead to requirement for entities to give directives to themselves or to co-workers in the same room. B) How would 3-part communications be handled during 'blast' calls? Response: A) COM-002 does not preclude text or other forms of communication for issuing Reliability Directives. However, entities still must comply with the requirements of COM-002. Further, the RCSDT believes it to be equally imperative that each NERC registered function hold the authority to issue Reliability Directives, and the ability to receive Reliability Directives, whether those Reliability Directives are issued to subordinate registered functions within a vertically integrated utility, or to registered entities that are corporately separate. The RCSDT believes the following response to draft 3 comments still holds true: “The way that COM-002 is crafted, it focuses on functional entity communication between and among functions. Face-to-face communication of Reliability Directives are subject to the requirements of COM-002 and can be measured for COM-002 by allowing Operator Logs as possible evidence to support compliance”. Com-002 should not be construed to mean that an individual serving in two functions be required to issue a Reliability Directive to himself, but rather it is expected that such an individual would appropriately address the reliability issues as required by the function they are serving and its subsequent responsibilities. B) The RCSDT agrees that the use of Blast Calls to issue Reliability Directives, in

				mass, is efficient and effective. However the essence of accurately implementing Reliability Directives is accomplished by use of 3-part communications. The RCSDT believes Reliability Directives issued in mass should be defined by procedure, and that the procedure would establish a method of affirmation and notice of implementation. As envisioned, communications protocols requiring for issuing alerts will be addressed in the COM-003 standard being developed in Project 2007-02.
Response: The RCSDT thanks you for your comment.				
Gregory Campoli	New York Independent System Operator	2	Abstain	The NYISO agrees that these revised standards are an improvement from the current version. However we believe that the comments submitted by the IRC and NPCC are required to make them acceptable as the new set of standards. We will have an opportunity to revise our vote on the second ballot based on the consideration given to the comments submitted.
Response: The RCSDT thanks you for your comment. See IRC and NPCC comments.				
Michael Schiavone	Niagara Mohawk (National Grid Company)	3	Affirmative	IRO-001 R1 The language “to continuously assess transmission reliability” should be changed to “to continuously assess Bulk Electric System reliability” to reflect what the enforceability of the standards are meant to be. Response: Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2. IRO-001 R2 Should “of” be “to”? Reliability Directives are issued to TOPs, BA, etc. Response: The requirement was rewritten for clarity as follows: R2. Each Reliability Coordinator shall take actions or direct actions (which could include issuing Reliability Directives) by Transmission Operators, Balancing Authorities, Generator Operators, and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. IRO-001 R2 Contains the words “which could include issuing Reliability Directives”, but Reliability Directives are not referenced anywhere else in the standard. This inclusion seems unnecessary since without it, R2 already requires that the RC take actions or direct actions by others to prevent identified events or mitigate the

				magnitude or duration of actual events that result in Adverse Reliability Impacts. Whether or not a Reliability Directive is issued is irrelevant in this requirement. These words should be removed. Note that COM-002 will stipulate the requirement for 3-part communication when a Reliability Directive is issued. The inclusion of “which could include issuing Reliability Directives” in IRO-001 is unnecessary. Response: R2 requires the Reliability Coordinator to act. These actions could include Reliability Directives in the case of an Emergency. However, issuing Reliability Directives might not always be necessary, as the Reliability Coordinator may be acting proactively well in advance of an emergency. R2 promotes this proactive approach, but reserves the use of Reliability Directives for circumstances that require its use. During the vetting of the prior version of this requirement, some stakeholders expressed concern that the word, “action,” if not clarified, could lead some people to believe that the Reliability Coordinator must be the entity to perform the actual operation. COM-002 In place of requiring an operator, in real-time, to state “this is a Reliability Directive,” there should be an allowance for an entity to develop procedures indicating, in advance, their expectations of three-part to their sub-operating entities. Modify R1 to be “When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action, either verbally, when the communication is issued, or in advance through documented procedures, as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time.]” Response: Your proposed edit does not meet the reliability intent of the requirement. The RCSDT believes that it is important to state that the Reliability Directive is being issued to convey that action by the recipient is required. An RC could issue a Reliability Directive to implement an agreed upon procedure whereby the three part communication would not list each step of the procedure individually, but would include implementation of the entire procedure. As envisioned, communications protocols such as the procedure you've proposed will be addressed in the COM-003 standard being developed in Project 2007-02.
Response: The RCSDT thanks you for your comment. Please see responses above.				
Jon Shelby	Northern Lights Inc.	3	Negative	Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability

				directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of Communication capabilities impacted entities will be notified of the past loss and current status of Communication." We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.
Response: The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u>." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical				

that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.				
Douglas Hohlbaugh	Ohio Edison Company	4	Affirmative	FirstEnergy supports the proposed standards and would appreciate consideration of our comments submitted through the formal comment period.
Response: The RCSDT thanks you for your comment. Your comments have been considered, Please see the Consideration of Comments document for FirstEnergy.				
Ray Ellis	Okanogan County Electric Cooperative, Inc.	3	Negative	Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication

				not be available within the 15 minute access time, then upon reestablishment of Communication capabilities impacted entities will be notified of the past loss and current status of Communication." We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.
Response: The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u>." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.				
Margaret Ryan	Pacific Northwest Generating Cooperative	8	Negative	Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due

				to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of Communication capabilities impacted entities will be notified of the past loss and current status of Communication." We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.
Response: The RCSdT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u> ." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.				
Brenda L Truhe	PPL Electric Utilities Corp.	1	Negative	Comments were submitted as part of a group via the comment form. Thank you for your work on the standard.
Response: The RCSdT thanks you for your comment. Your other comments have been considered. Please see the Consideration of Comments document.				
Mark A Heimbach	PPL EnergyPlus LLC	6	Negative	Comments: We thank the Standards Drafting Team for the improvements made in the revisions to COM-001 and COM-002. The revision appropriately clarifies the standard. We are providing the following comments for the Standards Drafting Team to consider. 1) Consider changing R1 to 'Each RC shall have the capability for Interpersonal Communications with the following entities to exchange Interconnection and

				operating information...' for clarity as Interpersonal Communications and capability are both nouns. Response: Thank you for your suggestion to modify the sentence structure into a noun phrase. However the RCSDT believes the current form is unambiguous. 2) We feel changing the applicability of the standard is important to the accuracy of the standard. The purpose of COM-002 is 'To ensure emergency communications between operating personnel are effective'. Since operating personnel are covered by the applicability of RC, BA, TOP and GOP, we suggest the applicability to TSP, LSE, and PSE be removed from COM-002-3. Response: The SDT agrees. The applicability of COM-002 has been revised. COM-001, and COM-002 are now applicable to the RC, TOP, BA, GOP and DP only. 3) Additionally, we would like to bring to the attention of the Standards Drafting Team, that the implementation plan for COM-001-2 and IRO-001-2 still includes TSP, LSE, and PSE although the revised standard does not include these entities in the Applicability Section. For COM-001-2 refer to the implementation plan, page 11. For IRO-001-2 refer to the implementation plan for new R2, new R3, new R4 and the chart on the last page. Thank you for your consideration in addressing these comments. Response: The RCSDT has revised the implementation plans appropriately to address your comment.
Response: The RCSDT thanks you for your comments. .				
Annette M Bannon	PPL Generation LLC	5	Negative	We thank the Standards Drafting Team for the improvements made in the revisions to COM-001 and COM-002. The revision appropriately clarifies the standard. We are providing the following comments for the Standards Drafting Team to consider. 1) Consider changing R1 to 'Each RC shall have the capability for Interpersonal Communications with the following entities to exchange Interconnection and operating information...' for clarity as Interpersonal Communications and capability are both nouns. Response: Thank you for your suggestion to modify the sentence structure into a noun phrase. However the RCSDT believes the current form is unambiguous. 2) We feel changing the applicability of the standard is important to the accuracy of the standard. The purpose of COM-002 is 'To ensure emergency communications

				between operating personnel are effective'. Since operating personnel are covered by the applicability of RC, BA, TOP and GOP, we suggest the applicability to TSP, LSE, and PSE be removed from COM-002-3. Response: We agree. The applicability of COM-002 has been revised. COM-001, and COM-002 are now applicable to the RC, TOP, BA, GOP and DP only. 3) Additionally, we would like to bring to the attention of the Standards Drafting Team, that the implementation plan for COM-001-2 and IRO-001-2 still includes TSP, LSE, and PSE although the revised standard does not include these entities in the Applicability Section. For COM-001-2 refer to the implementation plan, page 11. For IRO-001-2 refer to the implementation plan for new R2, new R3, new R4 and the chart on the last page. Thank you for your consideration in addressing these comments. Response: The RCSDT has revised the implementation plans appropriately to address your comment.
Response: The RCSDT thanks you for your comments.				
John T Sturgeon	Progress Energy	6	Negative	COM-001-2 R10 states that "Each Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider and Generator Operator shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that last 30 minutes or longer". The standard states that the RC, TOP, BA shall designate an Alternative Interpersonal Communication capability but does not require the same of the DP and GOP. Compliance by the DP and GOP with R10 would be jeopardized while still being compliant with the rest of the standard by having only the Interpersonal Communications capability. Response: The DP or GOP has access to additional Interpersonal Communications, in all likelihood, to make notifications for failure. There is not a requirement for an alternative, but it is likely that someone could use a cell phone to make the notification. The RCSDT is proposing to add Part 7.3 and 8.3 to the requirements as follows: 7.3 Each Distribution Provider that experiences a failure of its Interpersonal Communication capabilities shall consult with their Transmission Operator or Balancing Authority to determine a mutually agreeable time to restore its Interpersonal Communication capability. 8.3 Each Generator Operator that experiences a failure of its Interpersonal Communication capabilities shall consult with their Transmission Operator or Balancing Authority to determine a mutually

				agreeable time to restore its Interpersonal Communication capability. The phrase “within” used in R3-R6 does not take into account that there are electrically adjacent BAS/TOPs who are not “within” each other’s area. Response: The requirements are dealing with entities within the Area or entities that operate Facilities located within the Area. We have also added the following to R3: Adjacent Transmission Operators synchronously connected within the same Interconnection. The SDT also added, ‘adjacent Balancing Authorities’ to Requirements R4, R5 and R6.
Response: The RCSDT thanks you for your comment.				
Peter Dolan	PSEG Energy Resources & Trade LLC	6	Negative	Com-001-2 implementation plan lists that this is applicable to PSE’s and LSE’s however, PSE’s and LSE’s were removed from the actual standard. The implementation plan should be revised. Com-002-3 standard continues to include PSE. PSE’s do not play an active role in operating the BES and have no authority or ability to perform reliability coordination related tasks as may be directed by a RC. PSE’s should be removed from the standard. IRO-001-2 references PSE’s in the implementation for R2, R3, R4 and “Functions that must comply with the requirements in this standard” table. PSE’s were removed from the standard and should be removed from the implementation plan.
Response: The RCSDT thanks you for your comment. The applicability of COM-002 has been revised. COM-001, and COM-002 are now applicable to the RC, TOP, BA, GOP and DP only. The RCSDT has revised the implementation plans appropriately to address your comment.				
Kenneth D. Brown	Public Service Electric and Gas Co.	1	Negative	Com-001-2 implementation plan lists that this is applicable to PSE’s and LSE’s however, PSE’s and LSE’s were removed from the actual standard. The implementation plan should be revised. Com-002-3 standard continues to include PSE. PSE’s do not play an active role in operating the BES and have no authority or ability to perform reliability coordination related tasks as may be directed by a

				RC. PSE's should be removed from the standard. IRO-001-2 references PSE's in the implementation for R2, R3, R4 and "Functions that must comply with the requirements in this standard" table. PSE's were removed from the standard and should be removed from the implementation plan.
Response: The RCSDT thanks you for your comment. The applicability of COM-002 has been revised. COM-001, and COM-002 are now applicable to the RC, TOP, BA, GOP and DP only. The RCSDT has revised the implementation plans appropriately to address your comment.				
Jeffrey Mueller	Public Service Electric and Gas Co.	3	Negative	PSEG opposes this standard for the following reasons: Com-001-2 implementation plan lists that this is applicable to PSE's and LSE's however, PSE's and LSE's were removed from the actual standard. The implementation plan should be revised. Com-002-3 standard continues to include PSE. PSE's do not play an active role in operating the BES and have no authority or ability to perform reliability coordination related tasks as may be directed by a RC. PSE's should be removed from the standard. IRO-001-2 references PSE's in the implementation for R2, R3, R4 and "Functions that must comply with the requirements in this standard" table. PSE's were removed from the standard and should be removed from the implementation plan.
Response: The RCSDT thanks you for your comment. The applicability of COM-002 has been revised. COM-001, and COM-002 are now applicable to the RC, TOP, BA, GOP and DP only. The RCSDT has revised the implementation plans appropriately to address your comment.				
Dominick Grasso	Public Service Enterprise Group Incorporated	5	Negative	COM-001-2 implementation plan lists that this is applicable to PSE's and LSE's however, PSE's and LSE's were removed from the actual standard. The implementation plan should be revised. COM-002-3 standard continues to include PSE. PSE's do not play an active role in operating the BES and have no authority or ability to perform reliability coordination related tasks as may be directed by a RC. PSE's should be removed from the standard. IRO-001-2 references PSE's in the implementation for R2, R3, R4 and "Functions that must comply with the requirements in this standard" table. PSE's were removed from the standard and should be removed from the implementation plan.
Response: The RCSDT thanks you for your comment. The applicability of COM-002 has been revised. COM-001, and COM-002 are now applicable to the RC, TOP, BA, GOP and DP only.				

The RCSDT has revised the implementation plans appropriately to address your comment.				
Steven Grega	Public Utility District No. 1 of Lewis County	5	Negative	These changes do not recognize that many small utilities do not have 24-hour dispatch, do not have SCADA systems or do not man generation plants 24-hours a day. Specific exception should be written into the standards to provide relief for small GO, GOP, LSE and DP. The standard changes need to address notifications if personnel are only available on a on-call basis.
Response: The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u>." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.				
Heber Carpenter	Raft River Rural Electric Cooperative	3	Negative	Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due

				to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of Communication capabilities impacted entities will be notified of the past loss and current status of Communication." We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.
Response: The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u>." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.				
Anthony E Jablonski	ReliabilityFirst Corporation	10	Negative	1. General comments a. The standards should be balloted individually rather than balloted as a group. Response: The SDT agrees, and will be balloting the standards individually. 2. COM-001-2 a. The "R" should be removed from all sub requirements (they should be referenced as parts) A Response: The SDT agrees. This has been corrected. 3. IRO-005-4 a. Fix typo in R1. Insert the word "and" between the words "notify issue" b. Response: This typo has been addressed through other edits 4. IRO-001-2 a. The Electric Reliability Organization (ERO) listed in the Applicability

				section and R1 is neither a user, owner nor operator of the BES and such should not be subject to Reliability Standards. Response: Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.
Response: The RCSDT thanks you for your comment. Please see responses above.				
Ken Dizes	Salmon River Electric Cooperative	3	Negative	Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of

				Communication capabilities impacted entities will be notified of the past loss and current status of Communication." We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.
Response: The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u>." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.				

Carter B. Edge	SERC Reliability Corporation	10	Negative	If the following issues are addressed in the standards revisions I should be able to cast an affirmative vote: COM-001-2 o Each sub-requirement should not have an “R” in front of the number in order to be consistent with NERC’s August 10, 2009 filing at FERC on this subject. Response: The SDT agrees. This has been corrected. o Requirement R3 and R4 should include adjacent TOPs as a sub-requirement. Response: The SDT agrees. The SDT modified R3 and R4 to add adjacent TOPs o Requirements R5 and R6 should include adjacent BAs as a sub-requirement. Response: The SDT added adjacent Balancing Authorities to Requirements R4, R5 and R6. o “to exchange Interconnection and operating information” should be deleted from requirements R1 through R8 as it is redundant with the definition of Interpersonal Communications Response: The SDT agrees. The SDT adopted this suggestion and deleted this phrase. o The last page of the Implementation Plan includes LSEs, PSE, and TSPs as being responsible entities under this standard, yet the standard does not include them. Please correct the implementation plan. Response: The implementation plan was corrected as proposed. TOP-001-1, o Requirement R3, which is what the SDT appears to be using as its justification for not adding a requirement here is proposed to be deleted by the RTO-SDT on Project 2007-03. IRO-001-2 R2-R4 deal with complying with directives or instruction and is the justification for retiring TOP-001, R3. IRO-001-2 o I’m unclear on the language of R1. I think you are attempting to create a

			requirement similar to BAL-005, R1 where all generation, transmission, and load operating within an Interconnection must be included within the metered boundaries of a Balancing Authority Area. If that is the case, suggested language could be "All Balancing Areas and Transmission Operators must be under the authority of a Reliability Coordinator certified by the ERO to continuously assess transmission reliability and coordinate emergency operations within each region and across the regional boundaries" Response: Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2. o Please remove the yellow box on page 1 indicating this standard will be retired. Response: The SDT agrees, and has made the change. Additional comments: o Reliability Directives may be issued by blast calls from Reliability Coordinators. It is inefficient and may be a hindrance to reliability to require 3-part communications in these instances. Response: The RCSDT agrees that the use of Blast Call's to issue Reliability Directives, in mass, is efficient and effective. However the essence of accurately implementing Reliability Directives is accomplished by use of 3-part communications. The RCSDT believes Reliability Directives issued in mass should be defined by procedure, and that the procedure would establish a method of affirmation and notice of implementation. As envisioned, communications protocols such as the procedure you've proposed will be addressed in the COM-003 standard being developed in Project 2007-02. o There are several organizations registered as BAs, RCs and TOPs. It is not uncommon for those entities to be distributed across multiple desks in the same control room without regard to how an entity is registered. Thus, a single System Operator may perform functions that are categorized under two or more of those functional entities. The drafting team should clarify that under no circumstances should that System Operator be required to issue a Reliability Directive to himself. This is a corporate governance issue. Response: COM-002 does not preclude text or other forms of communication for issuing Reliability Directives. However, entities still must comply with the requirements of COM-002. Further, the RCSDT believes it to be equally imperative that each NERC registered function hold the authority to issue

			Reliability Directives, and the ability to receive Reliability Directives, whether those Reliability Directives are issued to subordinate registered functions within a vertically integrated utility, or to registered entities that are corporately separate. The RCSDT believes the following response to draft 3 comments still holds true: “The way that COM-002 is crafted, it focuses on functional entity communication between and among functions. Face-to-face communication of Reliability Directives are subject to the requirements of COM-002 and can be measured for COM-002 by allowing Operator Logs as possible evidence to support compliance.” The use of operator logs to memorialize and provide evidence of compliance is directly specific to those Reliability Directives issued and received within the same control room or operations center. The RCSDT believes that any Registered Entity or person operating as such must understand the intent of the issued Reliability Directive, and that the issuer of the Reliability Directive believe that the Reliability Directive was correctly received. COM-002 should not be construed to mean that an individual serving in two functions be required to issue a Reliability Directive to himself, but rather it is expected that such an individual would appropriately address the reliability issues as required by the function they are serving and its subsequent responsibilities. o In IRO-014, R1, delete sub-requirement 1.7. The requirement for weekly conference calls related to operating procedures is duplicative to R4 and could be burdensome while adding very little value under certain circumstances. R1, Part 1.7 indicates that the Operating Plan, process or Procedure is to include how the entity will accomplish these calls. R4 requires the entity to actually perform them. Response: The intent of R1 is for Reliability Coordinators to coordinate specific activities with other impacted Reliability Coordinators. These activities are listed as Parts. Part 1.7 is requires you to have a procedure relating to weekly conference calls while R4 requires participation in weekly calls. Further the RCSDT believes that it is prudent that Reliability Coordinators talk at least once a week to verify viability of mutual plans, procedures or processes. o In IRO-014, R4, delete the phrase “(per Requirement 1, Part 1.7)” as a conforming change. Response: The intent of R1 is for Reliability Coordinators to coordinate specific activities with other impacted Reliability Coordinators, these activities are listed as sub requirements. Part 1.7 is requires you to have a procedure relating to weekly

				conference calls while R4 requires participation in weekly calls. Further the RCSDT believes that it is prudent that Reliability Coordinators talk at least once a week to verify viability of mutual plans, procedures or processes. o I believe that the intent of IRO-014, Requirements R6-R8 is to require conservative operation by all affected Reliability Coordinators if any Reliability Coordinator detects an Adverse Reliability Impact. It could be read to allow at least the theoretical possibility that an RC may determine an Adverse Reliability Impact in another RC's area that the other RC neither can see nor believes that any action should be taken. R7 puts the burden on the first RC to develop a plan that it cannot implement because it has no agreement with the BAs and TOPs in the other RC area and thus could be ineffective. Alternately, it could be read that the identifying RC must take action in its own area to mitigate the Adverse Reliability Impact identified in another area much like the "general prudential rule" in the Coast Guard's Rules of the Road where regardless of what the rules state if action can be taken to avoid a collision at sea, that action must be taken. Please clarify. Response: Requirements R6-R8 are translated from IRO-016-1, Requirement R1. If an RC sees a problem and another does not see the same problem, then there may be an issue with someone's model or processes or procedures. The RC's are supposed to have coordinated Operating Plans, Processes or Procedures to operate reliably. R6-R8 are only applicable if one of the two (or more) RCs do not see that a problem exists. It would be a detriment to reliability for both RCs to take no action. RCs are required to coordinate actions under existing IRO-016-1, R1. If one RC identifies a problem and provides an action plan to another RC to mitigate the problem, the second RC is obligated under R8 to implement it. We have revised the R8 to clarify this intent. IRO-014-2, Revised R8. During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact , each Reliability Coordinator shall implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact unless such actions would violate safety, equipment, regulatory or statutory requirements. o Please review all the implementation plans to be sure the applicable entities match those in the standards. Response: The Implementation Plans have been modified to address this concern.

Response: The RCSDT thanks you for your comment. Please see responses above.				
Paul Benjamin Kerr	Shell Energy North America (US), L.P.	6	Affirmative	The introduction of the definition of “Reliability Directive” and its connection to the definition of “Emergency” within this Project brings much needed clarity for the sector and will promote consistency between Regional Entities and within the audits of Registered Entities. Shell Energy supports the removal of Purchasing Selling Entities as a function to which IRO-001 applies. This removal recognizes that PSEs do not play a role in reliability coordination under this standard since they have no authorities and no abilities to assume or perform responsibilities associated with reliability coordination. This conclusion is reinforced by the adoption of the defined term “Reliability Directive”. Where a RC, TOP, or BA needs to address an Emergency they do not contact, consult, or direct a PSE to take action that would address the Emergency. Rather, where the PSE is a user of the grid to perform or execute transactions, it is subject to the actions of these other entities that have the authority to stop, curtail, or alter the submitted transactions of the PSE in a way that aids in resolving the problem. With the fitting adoption of “Reliability Directive” into COM-002 as well, Shell Energy does not believe it is necessary or appropriate for the applicability of this standard to include Purchasing Selling Entities, as is contained in the current draft proposal. This standard does not apply to PSEs today, however, during the progression of Project 2006-06 this applicability was added to an early draft version that preceded the discussions and clarification that comes from the definition of a Reliability Directive in the standard. Shell Energy does not support the inclusion of PSEs in the current draft version of COM-002, and feels that it should be removed. The purpose of this standard is, “To ensure Emergency communications between operating personnel are effective” and relates directly to the capabilities and authorities established for the RC, TOP, or BA that requires actions to be taken by a recipient of a Reliability Directive. As noted previously, PSEs are acted upon by the entities with the necessary authority, and are not in a role that would initiate or fulfil the required actions. As additional matters related to the clarification and cleanup of the standards in this project, the implementation plans for both IRO-001 and COM-001 erroneously contain references to PSEs in the sections “Functions that Must Comply with the Requirements”. These references need to be removed.
Response: The RCSDT thanks you for your comment. The applicability of COM-001, and COM-002 were revised to be consistent and only include the RC, TOP, BA, DP and GOP. The Implementation Plans have been corrected.				
Robert A Schaffeld	Southern Company	1	Affirmative	Please see comments

	Services, Inc.			
Response: The RCSDT thanks you for your comment. Please see response to those comments.				
Ronald L Donahey	Tampa Electric Co.	3	Negative	Our only disagreement is with the use of the term "Reliability" in defining a directive.
Response: The RCSDT thanks you for your comment. The term "Reliability Directive" was chosen to specifically delineate between other types of directives, such as market directives. It is imperative that reliability standards relate to reliability concerns.				
Steve Eldrige	Umatilla Electric Cooperative	3	Negative	Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities

				that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of Communication capabilities impacted entities will be notified of the past loss and current status of Communication." We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.
Response: The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u>." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.				
Jonathan Appelbaum	United Illuminating Co.	1	Negative	See UI Comment form, In General: 1. COM-001-2 does not specify the amount of time a DP has to reestablish the Interpersonal Communication Capability after the capability fails before it is assessed non-compliance for not having the communication. Response: The DP or GOP has access to additional Interpersonal Communications, in all likelihood, to make notifications for failure. There is not a requirement for an alternative, but it is highly unlikely that someone couldn't use their cell phone to make the notification. The RCSDT is proposing to add Part 7.3 and 8.3 to the requirements as follows: 7.3 Each Distribution Provider that experiences a failure of its Interpersonal Communication capabilities shall consult with their Transmission Operator or Balancing Authority to determine a mutually agreeable time to restore its Interpersonal Communication capability. 8.3 Each Generator Operator that experiences a failure of its Interpersonal Communication capabilities shall consult with their Transmission Operator or Balancing Authority to determine a mutually agreeable time to restore its Interpersonal Communication capability.

				2. VSL for R7 should have a time component Response: The VSL represents a single violation of the requirement. For this requirement, the DP must have Interpersonal Communication with its TOP and BA. The VSL was revised to remove “or more” to conform to the requirement. Because the Requirement does not have a time component, the SDT cannot add a time component to the VSL – this would violate one of the FERC Guidelines for setting VSLs. 3. R7 should address the instance if the DP is not required to have communication with the BA, because the BA communicates thru the TOP. Response: The RCSDT believes that Interpersonal Communication between the DP and its BA and the TOP is required for reliability. 4. COM-002 R2 seems awkwardly worded. R2 as it is written says the repeat is confirming the accuracy of the message itself. I think it is agreed that the repeat back in R2 is to allow the issuer of the Directive to confirm that the message was received accurately understood by the recipient. Response: The RCSDT has revised the requirement and has removed “with enough details that the accuracy of the message was confirmed” from the requirement. 5. The VSL for Com-002 R2 is severe and states "The responsible entity that was the recipient of a Reliability Directive failed to repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message was confirmed." The purpose of the R2 repeat-back is to allow the Issuer verify the message was accurately received. This VSL penalizes the responsible entity for not accurately receiving the message. The VSL should penalize the refusal of the registered entity to repeat back the message not for receiving the message incorrectly. Response: The RCSDT agrees and has removed “with enough details that the accuracy of the message was confirmed” from the VSL.
Response: The RCSDT thanks you for your comment. Please see responses above.				
Allen Klassen	Westar Energy	1	Negative	The new definition of Alternative Interpersonal Communication in COM-001 appears to rule out the use of redundant systems that happen to be used daily, which might be done to ensure that they function when needed.

Response: The RCSDT thanks you for your comment. The intent of Alternative Interpersonal Communication (AIC) is to make sure there is an alternative in case the Interpersonal Communication fails. If you have two, you may designate one as the AIC regardless of how often you use it.				
Forrest Brock	Western Farmers Electric Coop.	1	Negative	COM-001 - Definition of Interpersonal Communication needs more clarification. For example, would this include data exchanged via ICCP? Examples of what constitutes "Interconnection and operating information" would help as much "information" can be interpreted as fitting into this - or not. Response: Interpersonal Communication does not include data exchange. Severe VSL for R9 - second part after the "OR" is a virtual repetition of the wording in the Lower VSL for R9. Response: The Severe VSL was revised to remove "within 2 hours". It now reads: "The responsible entity tested the Alternative Interpersonal Communications capability and identified a problem but didn't initiate action to repair or designate a replacement Alternative Interpersonal Communications." COM-003 - R3 contains a typographical or grammar error. "...Reliability Directive as per Requirement R2 IS correct..." not AS correct... Response: Assuming you meant COM-002-3, the SDT agrees and has made the correction.
Response: The RCSDT thanks you for your comment. Please see responses above.				
Anthony Jankowski	Wisconsin Energy Corp.	4	Affirmative	Please correct the clean version of IRO-005 R1 to match the red-line.
Response: The RCSDT thanks you for your comment. We have made the corrections.				
Michael Ibold	Xcel Energy, Inc.	3	Affirmative	While we appreciate the drafting team's efforts to clarify the multiple effective dates, we feel it is still daunting and complex, which leaves too much room for miscalculation. We recommend that NERC and/or the drafting team publish what the actual effective dates are, as soon as FERC (and again when the other regulatory authorities) have approved it. This could either be done in the effective

				date section of the standard itself, or as a stand-alone reference document posted along with the standard on NERC's website.
Response: The RCSDT thanks you for your comment. We will pass your comment on the NERC Standards Process Manager for consideration.				
James A Maenner		8	Negative	In comments (Reliability Coordination - Project 2006-06) Midwest ISO raised a number of issues that need to be addressed prior to passage of these standards.
Response: The RCSDT thanks you for your comment. Please see responses to comments made by MISO on the initial ballot as well as the regular comment form.				

END OF REPORT

Consideration of Comments

Reliability Coordination – Project 2006-06

The Reliability Coordination Drafting Team thanks all commenters who submitted comments on the fifth formal posting for Project 2006-06—Reliability Coordination. These standards were posted for a 30-day public comment period from January 9, 2012 through February 8, 2012. Stakeholders were asked to provide feedback on the standards and associated documents through a special electronic comment form. There were 62 sets of comments, including comments from approximately 170 different people from approximately 106 companies representing 9 of the 10 Industry Segments, as shown in the table on the following pages.

Summary Consideration

The RCSDT received comments from stakeholders, where a majority of those comments were focused on compliance elements of the standards, various errors, and other ambiguities. The RCSDT believes it has been responsive to the many comments and has either provided adequate explanation, where applicable, as well as incorporating the needed clarifications or corrections. There were no strong minority issues revealed in the comments which the RCSDT could not address. Revisions made to the standards are summarized in the following sections by standard.

COM-001-2

In the last posting and successive ballot, the standard received approval from about half of the ballot body with numerous comments. The RCSDT made substantive changes to the standard based on comments. The changes to COM-001-2, R3 and R4 require the standard to undergo a second successive ballot. The RCSDT believes it has addressed stakeholder comments and concerns in such a way that the standard is improved and meets the expectation expressed in comments for reliability and industry approval. Upon achieving industry consensus, this standard will advance to a recirculation ballot.

Purpose: Removed the text “for the exchange of Interconnection and operating information” based on comments received and due to the fact that the standard is for capability, which enables information exchange under other standards.

Effective Date: The language in the effective date was made consistent with current Standard Drafting Guidelines.

Requirements: Most changes were minor. In places where the capitalized word “Adjacent” began the requirement Parts, the RCSDT added the word “Each” and made “Adjacent” lowercase to avoid the perception of a defined glossary term. This change occurred in Parts 1.2, 2.2, 3.5, 4.3, 5.5, and 6.3. A significant change occurred in requirements R3 and R4. The RCSDT addressed stakeholders concerns

about the use of “synchronously connected within the same Interconnection.” This was addressed by removing the phrase “within the same Interconnection;” however, other comments were concerned that synchronously did not address DC ties. The RCSDT addressed this by adding a Part, which reads, “Each Transmission Operator asynchronously connected” to Requirements R3 and R4. Requirement R10 was updated to more accurately reflect the reference to other requirements. It should not have referenced R1 through R6; but, rather, R1, R3, and R5. Requirement R11 was updated to address stakeholder concerns about reaching a “mutually agreeable time,” so was changed to “mutually agreeable action.” Other minor changes included making plural terms singular and replacing “per” for “each” for readability and understanding.

Some commenters had concerns about conditions of non-compliance if the entity’s Interpersonal Communication capability failed. To address this concern, the RCSDT added conforming language to Requirements R1, R3, R5, R7 and R8 that bridges the potential gap in non-compliance for a failed Interpersonal Communication capability.

Measures: Most changes to the measures were non-substantive and provided better formatting for readability. Measures M3 and M4 were updated to align with the changes to the parts of Requirements R3 and R4 regarding synchronous and asynchronous. Several measures had inconsistent example evidence for the performance of the requirement. For example, time (hour/minute) based elements are introduced in R9 and R10; however, the measures did not note using dated and “time-stamped” evidence. Likewise, previous requirements did make use of “time-stamped” where there was no time based (hour/minute) performance. The RCSDT found this an unnecessary compliance burden. Other minor changes included making plural terms singular and replacing “per” for “each,” for readability and understanding.

Compliance, Compliance Enforcement Authority: The language in the CEA section was made consistent with current Standard Drafting Guidelines.

Compliance, Data Retention: The language in the data retention section was made consistent with current Standard Drafting Guidelines. The bulleted items were reformatted for consistency and readability.

Violation Severity Levels: Clarifying changes were made to the VSLs. Terms were made singular, the word “Requirement” added to appropriately designate the applicable requirement, and added the two newly-created parts from Requirements R3 and R4. The RCSDT added High VSLs for Requirements R1 through R8 to conform with VSL Guidelines. Requirements R1 through R8 are not binary only.

COM-002-3

The changes to COM-002-3 are considered non-substantive; therefore, the standard will advance to a recirculation ballot. The RCSDT believes it addressed stakeholder comments and concerns in such a

way that the updated sections of the standard is improved and overall meets industry's expectation for approval. Following approval, this standard will be submitted for adoption by the NERC Board of Trustees

Effective Date: The language in the effective date was made consistent with current Standard Drafting Guidelines.

Requirements: For the named functional entities in Requirements R2 and R4, the conjunction "and" previously used has been changed to "or," based on comments received from stakeholders.

Measures: Corresponding changes to Measures M2 and M3 were made in regards to Requirement R2 and R3. Measure M2 received an addition to include the phrasing, "restated, rephrased, or recapitulated" for consistency with Requirement R2.

Compliance, Compliance Enforcement Authority: The language in the CEA section was made consistent with current Standard Drafting Guidelines.

Compliance, Data Retention: The language in the data retention section was made consistent with current Standard Drafting Guidelines. Some bulleted items were corrected to accurately align them with the respective requirements.

Violation Severity Levels: One clarifying change was made to the R3 VSL. The RCSDT added a High VSL to accurately capture the condition where the entity failed to confirm the response of the recipient and removed the first part of the Severe VSL.

IRO-001-3

The changes to IRO-001-3 are considered nonsubstantive; therefore, the standard will advance to a recirculation ballot. The RCSDT believes it addressed stakeholder comments and concerns in such a way that the updated sections of the standard are improved and overall meets industry's expectation for approval. Following approval, this standard will be submitted for adoption by the NERC Board of Trustees

Effective Date: The language in the effective date was made consistent with current Standard Drafting Guidelines.

Requirements: In requirement R1, the last word (glossary term) was made singular for clarity and consistency with the definition. Requirement R2 was missing a conjunction in the functional entities, and this has been added.

Measures: Measure M1 was updated to use past tense language, consistent with drafting guidelines. Also, the parenthetical on “Reliability Directive(s)” was removed and the glossary term made singular for consistency with R1. Measure M2 addressed stakeholder comments by adding the word “physically,” phrase now reads, “physically implemented” to be consistent with Requirement R2, as well as making the term “direction” singular.

Compliance, Compliance Enforcement Authority: The language in the CEA section was made consistent with current Standard Drafting Guidelines.

Compliance, Data Retention: The language in the data retention section was made consistent with current Standard Drafting Guidelines. Some bulleted items were corrected to accurately align them with the respective requirements and remove inaccurate bullets from previous postings.

Violation Severity Levels: Clarifying changes were made to the R1 VSL. The phrase, “exercise its authority” was added, based on stakeholder comment, to more accurately reflect Requirement R1. The RCSDT removed the High VSL from R2, and more accurately incorporated it into the Sever VSL.

Additional Information

All comments submitted may be reviewed in their original format on the standard’s project page:

http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President of Standards and Training, Herb Schrayshuen, at 404-446-2560, or at herb.schrayshuen@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.¹

¹ The appeals process is in the Standard Processes Manual: http://www.nerc.com/files/Appendix_3A_StandardsProcessesManual_20120131.pdf

Index to Questions, Comments, and Responses

1. The RCSDT has revised the applicability of the standards and implementation plans by aligning COM-001-2, COM-002-3, and IRO-001-2 to apply to the same entities and by removing LSE, PSE and TSP as applicable entities from the COM standards. Additionally, the Interchange Coordinator has been removed as an applicable entity from the standards. Do you agree with this change in applicability to the three standards? If not, please explain in the comment area below. ... 14
2. Do you agree with the addition of “Adjacent” entities in COM-001-2, Parts 3.5, 4.3, 5.5 and 6.3 of COM-001-2? If not, please explain in the comment area below. 28
3. The RCSDT removed the phrase "to exchange Interconnection and operating information" in COM-001-2, Requirements R1 through R8 based on stakeholder comments. Do you agree with the revision? If not, please explain in the comment area below. 39
4. A new requirement was added for clarity regarding what is required of Distribution Providers and the Generator Operators: R11. Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability. [Violation Risk Factor: Medium][Time Horizon: Real-time Operations] This requirement requires collaboration between entities to restore a failed communications capability. Do you agree with the new requirement? If not, please explain in the comment area below..... 47
5. The proposed definition of Reliability Directive shown in COM-002-3 was revised to include Adverse Reliability Impact as shown to more fully address emergencies or events that might lead to instability or Cascading: Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact. Do you agree with the proposed definition? If not, please explain in the comment area below. 76
6. Do you have any other comment, not expressed in questions above, for the RC SDT?..... 96

The Industry Segments are:

- 1 — Transmission Owners
- 2 — RTOs, ISOs
- 3 — Load-serving Entities
- 4 — Transmission-dependent Utilities
- 5 — Electric Generators
- 6 — Electricity Brokers, Aggregators, and Marketers
- 7 — Large Electricity End Users
- 8 — Small Electricity End Users
- 9 — Federal, State, Provincial Regulatory or other Government Entities
- 10 — Regional Reliability Organizations, Regional Entities

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
1.	Group	Gerald Beckerle	SERC OC Standards Review Group	X		X							
Additional Member Additional Organization Region Segment Selection													
1.	Mike Hirst	Cogentrix	SERC	5									
2.	Jeff Harrison	AECI	SERC	1, 3, 5, 6									
3.	Sam Holeman	Duke Energy	SERC	1, 3, 5, 6									
4.	Michael Belle	SCE&G	SERC	1, 3, 5, 6									
5.	Bob Dalrymple	TVA	SERC	1, 3, 5, 6									
6.	Joel Wise	TVA	SERC	1, 3, 5, 6									
7.	Jake Miller	Dynegy	SERC	5									
8.	Robert Thomasson	BREC	SERC	1									
9.	Alvis Lanton	SIPC	SERC	1									
10.	Tim Hattaway	PowerSouth	SERC	1, 5									
11.	Shardra Scott	Southern	SERC	1, 5									
12.	Greg Stone	Duke Energy	SERC	1, 3, 5, 6									
13.	Tom Burns	PJM	SERC	2									

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
14.	Steve Corbin	SERC Reliability Corp.	SERC 10										
15.	Brad Young	LGE/KU	SERC 3										
16.	Wayne Van Liere	LGE/KU	SERC 3										
17.	Gary Hutson	SMEPA	SERC 1, 3, 4, 5										
18.	Scott Brame	NCEMC	SERC 1, 3, 4, 5										
19.	Devan Hoke	SERC Reliability Corp.	SERC 10										
20.	Jim Case	Entergy	SERC 1, 3, 6										
21.	William Berry	OMU	SERC 3, 5										
22.	John Troha	SERC Reliability Corp.	SERC 10										
2.	Group	Ron Sporseen	Pacific Northwest Generating Cooperative	X		X	X				X		
Additional Member		Additional Organization	Region	Segment	Selection								
1.	Bud Tracy	Blachly-Lane Electric Cooperative	WECC	3									
2.	Dave Markham	Central Electric Cooperative	WECC	3									
3.	Dave Hagen	Clearwater Power Company	WECC	3									
4.	Roman Gillen	Consumers Power Inc.	WECC	1, 3									
5.	Roger Meader	Coos-Curry Electric Cooperative	WECC	3									
6.	Dave Sabala	Douglas Electric Cooperative	WECC	8									
7.	Bryan Case	Fall River Electric Cooperative	WECC	3									
8.	Rick Crinklaw	Lane Electric Cooperative	WECC	3									
9.	Ray Ellis	Lincoln Electric Cooperative	WECC	8									
10.	Annie Terracciano	Northern Lights Inc.	WECC	3									
11.	David Gottula	Okanogan Electric Cooperative	WECC	8									
12.	Aleka Scott	PNGC Power	WECC	4									
13.	Heber Carpenter	Raft River Electric Cooperative	WECC	3									
14.	Steve Eldrige	Umatilla Electric Cooperative	WECC	1, 3									
15.	Marc Farmer	West Oregon Electric Cooperative	WECC	4									
16.	Margaret Ryan	PNGC Power	WECC	8									
3.	Group	Guy Zito	Northeast Power Coordinating Council										X
Additional Member		Additional Organization	Region	Segment	Selection								
1.	Alan Adamson	New York State Reliability Council, LLC	NPCC	10									
2.	Greg Campoli	New York Independent System Operator	NPCC	2									

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
3.	Sylvain Clermont	Hydro-Quebec TransEnergie	NPCC	1									
4.	Chris de Graffenried	Consolidated Edison Co. of New York, Inc.	NPCC	1									
5.	Gerry Dunbar	Northeast Power Coordinating Council	NPCC	10									
6.	Brian Evans-Mongeon	Utility Services	NPCC	8									
7.	Mike Garton	Dominion Resources Services, Inc.	NPCC	5									
8.	Peter Yost	Consolidated Edison Co. of New York, Inc.	NPCC	3									
9.	Chantel Haswell	FPL Group, Inc.	NPCC	5									
10.	David Kiguel	Hydro One Networks Inc.	NPCC	1									
11.	Michael R. Lombardi	Northeast Utilities	NPCC	1									
12.	Randy MacDonald	New Brunswick Power Transmission	NPCC	9									
13.	Bruce Metruck	New York Power Authority	NPCC	6									
14.	Lee Pedowicz	Northeast Power Coordinating Council	NPCC	10									
15.	Robert Pellegrini	The United Illuminating Company	NPCC	1									
16.	Si Truc Phan	Hydro-Quebec TransEnergie	NPCC	1									
17.	David Ramkalawan	Ontario Power Generation, Inc.	NPCC	5									
18.	Saurabh Saksena	National Grid	NPCC	1									
19.	Michael Schiavone	National Grid	NPCC	1									
20.	Wayne Sipperly	New York Power Authority	NPCC	5									
21.	Tina Teng	Independent Electricity System Operator	NPCC	2									
22.	Donald Weaver	New Brunswick System Operator	NPCC	2									
23.	Ben Wu	Orange and Rockland Utilities	NPCC	1									
4.	Group	Will Smith	MRO NSRF		X	X	X	X	X	X			X
Additional Member Additional Organization Region Segment Selection													
1.	Mahmood Safi	OPPD	MRO	1, 3, 5, 6									
2.	Chuck Lawrence	ATC	MRO	1									
3.	Tom Webb	WPS	MRO	3, 4, 5, 6									
4.	Jodi Jenson	WAPA	MRO	1, 6									
5.	Ken Goldsmith	ALTW	MRO	4									
6.	Alice Ireland	XCEL/NSP	MRO	1, 3, 5, 6									
7.	Dave Rudolph	BEPC	MRO	1, 3, 5, 6									
8.	Eric Ruskamp	LES	MRO	1, 3, 5, 6									
9.	Joe DePoorter	MGE	MRO	3, 4, 5, 6									

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
10. Scott Nickels		RPU	MRO 4										
11. Terry Harbour		MEC	MRO 3, 5, 6, 1										
12. Marie Knox		MISO	MRO 2										
13. Lee Kittelson		OTP	MRO 1, 3, 4, 5										
14. Scott Bos		MPW	MRO 1, 3, 5, 6										
15. Tony Eddleman		NPPD	MRO 1, 3, 5										
16. Mike Brytowski		GRE	MRO 1, 3, 5, 6										
17. Richard Burt		MPC	MRO 1, 3, 5, 6										
5.	Group	Claire Lloyd	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	X		X	X	X	X				
No additional members listed.													
6.	Group	Brenda Powell	CCG, CPG, CECD						X				
Additional Member		Additional Organization		Region	Segment Selection								
1. C. J. Ingersol		Constellation Energy Control & Dispatch		SERC	3								
2. A. Y. Hammad		Constellation Power Source Generation, Inc.		RFC	5								
3.				ERCOT	5, 6								
4.				FRCC	6								
5.				MRO	6								
6.				NPCC	5, 6								
7.				SPP	6								
8.				WECC	5, 6								
9.				RFC	6								
10.				SERC	6								
7.	Group	Brent Ingebrigtsen	LG&E and KU Services Company	X		X		X	X				
No additional members listed.													
8.	Group	Chris Higgins	Bonneville Power Administration	X		X		X	X				
Additional Member		Additional Organization		Region	Segment Selection								
1. Huy		Ngo	WECC	1									
2. Paul		Blake	WECC	1									
3. Ted		Snodgrass	WECC	1									
9.	Group	Annette M. Bannon	PPL Electric Utilities and PPL Supply NERC	X				X	X				

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
			Registered Organizations										
Additional Member		Additional Organization		Region Segment Selection									
1.	Annette Bannon	PPL Generation, LLC on behalf of NERC Registered Entities	RFC	5									
2.			WECC	5									
3.	Mark Heimbach	PPL EnergyPlus, LLC	MRO	6									
4.			NPCC	6									
5.			RFC	6									
6.			SERC	6									
7.			SPP	6									
8.			WECC	6									
9.	Brenda Truhe	PPL Electric Utilities Corp.	RFC	1									
10.	Group	Robert Rhodes	SPP Standards Review Group	X	X	X	X	X	X				
Additional Member		Additional Organization		Region Segment Selection									
1.	John Allen	City Utilities of Springfield	SPP	1, 4									
2.	Michelle Corley	CLECO Power	SPP	1, 3, 5									
3.	Jonathan Hayes	Southwest Power Pool	SPP	2									
4.	Allen Klassen	Westar Energy	SPP	1, 3, 5, 6									
5.	Terri Pyle	Oklahoma Gas & Electric	SPP	1, 3, 5									
11.	Group	Mike Garton	Dominion	X		X		X	X				
Additional Member		Additional Organization		Region Segment Selection									
1.	Michael Gildea	Dominion Resource Services, Inc.	NPCC	5, 6									
2.	Louis Slade	Dominion Resource Services, Inc.	RFC	5, 6									
3.	Connie Lowe	Dominion Resource Services, Inc.	MRO	5, 6									
4.	Michael Crowley	Virginia Electric and Power Company	SERC	1									
12.	Group	Steve Rueckert	Western Electricity Coordinating Council										X
No additional members listed.													
13.	Group	Emily Pennel	Southwest Power Pool Regional Entity										X
No additional members listed.													
14.	Group	Sam Ciccone	FirstEnergy	X		X	X	X	X				
Additional Member		Additional Organization		Region Segment Selection									

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
1.	John Reed	FE	RFC	1									
2.	Mark Pavlick	FE	RFC	1, 3, 4, 5, 6									
3.	Doug Hohlbaugh	FE	RFC	1, 3, 4, 5, 6									
4.	Brian Orians	FE	RFC	5									
5.	Bill Duge	FE	RFC	5									
6.	Kevin Querry	FE	RFC	5									
15.	Group	Marie Knox	MISO Standards Collaborators		X								
Additional Member Additional Organization Region Segment Selection													
1.	Jim Cyrulewski	JDRJC Associates, LLC	RFC	8									
2.	Barb Kedrowski	We Energies	RFC	3, 4, 5									
3.	Joe O'Brien	NIPSCO	RFC	1, 3, 5, 6									
16.	Group	Frank Gaffney	Florida Municipal Power Agency	X		X	X	X	X				
Additional Member Additional Organization Region Segment Selection													
1.	Timothy Beyrle	City of New Smyrna Beach	FRCC	4									
2.	Jim Howard	Lakeland Electric	FRCC	3									
3.	Greg Woessner	Kissimmee Utility Authority	FRCC	3									
4.	Lynne Mila	City of Clewiston	FRCC	3									
5.	Joe Stonecipher	Beaches Energy Services	FRCC	1									
6.	Cairo Vanegas	Fort Pierce Utility Authority	FRCC	4									
7.	Randy Hahn	Ocala Utility Services	FRCC	3									
17.	Group	Mary Jo Cooper	Global Engineering and Energy Solutions			X							
Additional Member Additional Organization Region Segment Selection													
1.	Colin Murphey	City of Ukiah	WECC	3									
2.	Elizabeth Kirkley	City of Lodi	WECC	3									
3.	Salmon River Electric Coop	Salmon River Electric Coop	WECC	3									
18.	Group	Jason Marshall	ACES Power Marketing Standards Collaborators						X				
Additional Member Additional Organization Region Segment Selection													
1.	Mark Ringhausen	Old Dominion Electric Cooperative	SERC	3, 4									
2.	Susan Sosbe	Wasbash Valley Power Association	RFC	3									
19.	Group	Michael Gammon	Kansas City Power & Light	X		X		X	X				

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
Additional Member		Additional Organization	Region	Segment Selection									
1.	Jessi Tucker	Kansas City Power & Light	SPP	1, 3, 5, 6									
2.	Brett Holland	Kansas City Power & Light	SPP	1, 3, 5, 6									
20.	Individual	Chris Chavez	Salt River Project	X		X		X	X				
21.	Individual	Janet Smith, Regulatory Affairs Supervisor	Arizona Public Service Company	X		X		X	X				
22.	Individual	Antonio Grayson	Southern Company	X		X		X	X				
23.	Individual	Jennifer Wright	San Diego Gas & Electric	X		X		X					
24.	Individual	Steve Alexanderson	Central Lincoln			X	X					X	
25.	Individual	Paul Kerr	Shell Energy North America						X				
26.	Individual	Keira Kazmerski	Xcel Energy	X		X		X	X				
27.	Individual	Edward J Davis	Entergy Services, Inc	X		X		X	X				
28.	Individual	Michael Falvo	Independent Electricity System Operator		X								
29.	Individual	Si Truc PHAN	Hydro-Quebec TransEnergie	X									
30.	Individual	Daniel Duff	Liberty Electric Power LLC					X					
31.	Individual	Joe O'Brien	NIPSCO	X		X		X	X				
32.	Individual	Darryl Curtis	Oncor Electric Delivery Company LLC	X									
33.	Individual	Chris de Graffenried	Consolidated Edison Co. of NY, Inc.	X		X		X	X				
34.	Individual	Anthony Jankowski	We Energies			X	X	X					
35.	Individual	J. S. Stonecipher, PE	City of Jacksonville Beach dba/ Beaches Energy Services	X								X	
36.	Individual	Scott Berry	Indiana Municipal Power Agency				X						
37.	Individual	Jeff Longshore	Luminant Energy Company LLC						X				
38.	Individual	Brian J. Murphy	NextEra Energy, Inc.	X		X		X	X				
39.	Individual	David Thorne	Pepco Holdings Inc.	X		X							
40.	Individual	John Bee	Exelon	X		X		X					
41.	Individual	Joe Petaski	Manitoba Hydro	X		X		X	X				

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
42.	Individual	Michael Brytowski	Great River Energy	X		X		X	X				
43.	Individual	David Burke	Orange and Rockland Utilities, Inc.	X		X							
44.	Individual	Michael Schiavone	Niagara Mohawk (dba National Grid)			X							
45.	Individual	Thad Ness	American Electric Power	X		X		X	X				
46.	Individual	RoLynda Shumpert	South Carolina Electric and Gas	X		X		X	X				
47.	Individual	Jason Snodgrass	Georgia Transmission Corporation	X									
48.	Individual	Bill Keagle	BGE	X									
49.	Individual	Don Schmit	Nebraska Public Power District	X		X		X					
50.	Individual	Neil Phinney	Georgia System Operations			X	X						
51.	Individual	Michelle D'Antuono	Ingleside Cogeneration LP					X					
52.	Individual	Greg Rowland	Duke Energy	X		X		X	X				
53.	Individual	Kathleen Goodman	ISO New England		X								
54.	Individual	H. Steven Myers	ERCOT ISO		X								
55.	Individual	Anthony Jablonski	ReliabilityFirst										X
56.	Individual	Randall McCamish	City of Vero Beach	X		X						X	
57.	Individual	Rich Salgo	NV Energy	X		X		X					
58.	Individual	Rebecca Moore Darrah	Midwest Independent Transmission System Operator		X								
59.	Individual	Don Jones	Texas Reliability Entity										X
60.	Individual	David Kiguel	Hydro One Networks Inc.	X		X							
61.	Individual	Gregory Campoli	New York Independent System Operator		X								
62.	Individual	Andrew Z. Pusztai	American Transmission Company, LLC	X									

1. The RCSDT has revised the applicability of the standards and implementation plans by aligning COM-001-2, COM-002-3 and IRO-001-3 to apply to the same entities and by removing LSE, PSE and TSP as applicable entities from the COM standards. Additionally, the Interchange Coordinator has been removed as an applicable entity from the standards. Do you agree with this change in applicability to the three standards? If not, please explain in the comment area below.

Summary Consideration: Most commenters agreed with removing the LSE, PSE, and TSP from the three standards. Some did not agree with keeping the Distribution Provider (DP) within the standards. The RCSDT in being responsive to the FERC directive in Order No. 693, Paragraph 487, considered the DP entity; however, concluded having the DP is appropriate in responding to the directive to allow for reliable operations in normal and emergency situations. In reference to the implementation for DPs and GOPs, the RCSDT believes there is not a significant burden for most DP and GOP entities to implement an Interpersonal Communication capability. Some comments referenced the NERC Functional Model V5 concerning DP and GOP entities; however, the model is clear on the basic activities and supports the DP and GOP being applicable to the standards. The model also supports the removal of LSEs, for example. The RCSDT did not modify the applicability of the standards with regard to functional entities.

Organization	Yes or No	Question 1 Comment
ACES Power Marketing Standards Collaborators	No	While we agree with removing LSE, PSE, and TSP, we do not agree with the need to include Distribution Provider in all the standards. For example, in IRO-001-3, the Distribution Provider will likely never receive a Reliability Directive directly from its Reliability Coordinator. More likely, the Reliability Directive will be issued by the Transmission Operator or Balancing Authority depending on if the issue is security or adequacy related.
Response: The RCSDT is addressing a FERC directive (P487, Order 693) to include the DP in COM-001, and the RCSDT has included the DP in COM-002 and IRO-001 applicability because these standards are related to reliability communications. The RCSDT agrees with the point that communication will most likely be from the BA or TOP; however, the communications may come from the RC. No change made.		
Entergy Services, Inc	No	R3 adds additional responsibilities for the TOP to have Interpersonal Communications capability with EACH DP and GOP in its footprint. Similarly, R4 gives the TOP responsibility to have alternative

Organization	Yes or No	Question 1 Comment
		communications capability with each of these entities. This is a significant additional responsibility for the TOP to document and perhaps arrange for additional means of communication with these entities. The RCSDT is addressing a FERC directive (P487, Order 693) to include the DP and GOP. The intent is to have Interpersonal Communication capability with the DP and GOP, and not to build additional communication facilities, but to be able “to interact, consult, or exchange information.” In contrast to R3, R4 does not include the DP or GOP. No change made. The short time frame provided for implementation of these requirements is not consistent with the additional effort and compliance documentation that is necessary to implement these requirements. Entergy recommends that the implementation time frame for these new requirements that apply to new entities, or expand the application of COM-001 for existing entities have an effective date 12 months beyond the applicable regulatory approval. Additionally, the implementation of the requirements that apply to the DP and GOP will represent an increase in the amount of documentation that must be retain to demonstrate compliance, and in some cases may also result in their having to purchase equipment or install new alternate means of communication. The RCSDT believes that six months is adequate, considering additional facilities should not have to be built to establish communications with the DP and GOP; similarly, compliance documentation should not impose significant work on the entities part. No change made. What is the improvement in reliability expected as a result of these new requirements? The expected reliability result is addressed in the FERC directive (P487, Order 693), “...ensure there is no reliability gap during normal and

Organization	Yes or No	Question 1 Comment
		emergency operations. For example, during a blackstart when normal communications may be disrupted, it is essential that the Transmission Operator, Balancing Authority and Reliability Coordinator maintain communications with their Distribution Providers and Generator Operators.” No change made.
Response: See response above.		
Independent Electricity System Operator	No	In COM-001, we commented earlier that the entities in R4 and R6 (now R5 and R6) should be the same, i.e. the BA needs to have the Interpersonal Communication capability as well as the Alternative Interpersonal Communication capability with the same entities. The SDT’s response indicates that the suggested change is not needed since additionally requiring DP and GOP entities to have Alternative Interpersonal Communication capability would impose more cost on smaller DP and GOP entities that have little or no risk impact to the bulk electric system. We disagree with this assessment since the need to have Alternative Interpersonal Communication capability should be assessed from the viewpoint that whether or not the absence of such capability can adversely affect reliability. If Interpersonal Communication capability is needed between a BA and a DP/GOP to communicate reliability instructions or directives, then it is deemed necessary that such communication be provided at all times, which indicates the need for an alternative capability. We once again urge the SDT to make the list of entities in R5 and R6 to be the same.
Response: The RCSDT asserts the standard meets FERC Order 693 regarding DP and GOP entities by requiring these entities to have Interpersonal Communication capability. Additionally, requiring DP and GOP entities to have Alternative Interpersonal Communication capability only imposes more cost on smaller DP and GOP entities that have little or no risk impact to the Bulk Electric System. No change made.		

Organization	Yes or No	Question 1 Comment
Georgia System Operations	No	While we agree with removing LSE, PSE, and TSP, we do not agree with the need to include Distribution Provider in all the standards. For example, in IRO-001-3, the Distribution Provider will likely never receive a Reliability Directive directly from its Reliability Coordinator. More likely, the Reliability Directive will be issued by the Transmission Operator or Balancing Authority depending on if the issue is security or adequacy related. The RCSDT is addressing a FERC directive (P487, Order 693) to include the DP in COM-001, and the RCSDT has included the DP in COM-002 and IRO-001 applicability because these standards are related to reliability communications. The RCSDT agrees with the point that communication will most likely be from the BA or TOP; however, the communications may come from the RC. No change made. Accordingly, NERC's Reliability Functional Model V5² describes and identifies the DP's relationships with other Functional Entities to the TOP and BA with respect to Real Time. Real Time³ 7. Implements voltage reduction and sheds load as directed by the Transmission Operator or Balancing Authority. 8. Implements system restoration plans as coordinated by the Transmission Operator. 9. Directs Load-Serving Entities to communicate requests for voluntary load curtailment. With respect to the Functional Model V5, please see Page 31, "18. Issues

² NERC Functional Model Version 5, (http://www.nerc.com/files/Functional_Model_V5_Final_2009Dec1.pdf)

³ NERC Functional Model Version 5, "Functional Entity – Distribution Provider," pg 47, (http://www.nerc.com/files/Functional_Model_V5_Final_2009Dec1.pdf)

Organization	Yes or No	Question 1 Comment
		corrective actions and emergency procedures directives (e.g., curtailments or load shedding) to Transmission Operators, Balancing Authorities, Generator Operators, Distribution Providers, and Interchange Coordinators.” No change made.
Response: See response above.		
ERCOT ISO	No	Some concern for removal of LSE in particular from R2 and R3 from current IRO-001-2 R7 for the ERCOT region. ERCOT Region has QSE’s ⁴ that manage Load Resources. There may be some QSEs that are not registered as a GOP that deploy Load Resources. Per the current LSE JRO, QSEs with Load Resources are registered as LSEs. Not requiring them to deploy Load Resource directives could be perceived as a reliability gap created from previous version to this version. PSEs could be removed as long as they fall under BA authority.
Response: The RCSDT believes the DP is the correct entity because the LSE does not own assets. The definition of LSE is, “The functional entity that secures energy and transmission service (and reliability related services) to serve the electrical demand and energy requirements of its end use customers.” In contrast, the definition of a DP is, “The functional entity that provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer.” Additionally, the Functional Model V5 demonstrates this under the Reliability Coordinator, “18. Issues corrective actions and emergency procedures directives (e.g., curtailments or load shedding) to Transmission Operators, Balancing Authorities, Generator Operators, Distribution Providers, and Interchange Coordinators.” No change made.		
City of Green Cove Springs	Affirmative	COM-001-2: In R5.3, should a BA have communications with a DP or LSE? For the TOP, it is the DP because the load influence is very local; however, for a BA the supply / demand balance is not local and in markets that allow retail competition, I'm thinking LSE is the right functional entity. For Florida,

⁴ Qualifying Scheduling Entities, (<http://www.ercot.com/services/rq/qse/>)

Organization	Yes or No	Question 1 Comment
		it doesn't really matter. If the LSE is the "correct" entity, then R7 would need to be changed and a new requirement specific to LSE's would need to be added. The RCSDT believes the DP should be included and that the LSE should not because the Functional Model V5 addresses this case. See Page 47, "Distribution Provider," of the Functional Model V5, Item 9. "Directs Load-Serving Entities to communicate requests for voluntary load curtailment." The DP is the asset owner and would direct the LSE to perform actions. No change made. COM-001-2, R9 – "Each ... shall test its Alternative Interpersonal Communications capability", suggest adding the phrase "to each entity for which Alternative Interpersonal Communications is required" to add clarity. The RCSDT believes the additional phrasing has little value to the overall requirement. The requirement specifically applies to those responsible entities listed, and it further aligns with R2, R4 and R6. No change made.
Response: See response above.		
Beaches Energy Services	Affirmative	COM-001-2: In R5.3, should a BA have communications with a DP or LSE? For the TOP, it is the DP because the load influence is very local; however, for a BA the supply/demand balance is not local and in markets that allow retail competition, I'm thinking LSE is the right functional entity. For Florida, it doesn't really matter. If the LSE is the "correct" entity, then R7 would need to be changed and a new requirement specific to LSE's would need to be added.
Response: The RCSDT believes the DP should be included and not the LSE because the Functional Model V5 addresses this case. See Page 47, "Distribution Provider," of the Functional Model V5, Item 9. "Directs Load-Serving Entities to communicate requests for voluntary load curtailment." With regard to R7, the DP is the asset owner and would direct the LSE to perform actions. No		

Organization	Yes or No	Question 1 Comment
change made.		
MISO Standards Collaborators	Yes	(1) In COM-001, the entities in R4 and R6 (now R5 and R6) should be the same, i.e. the BA needs to have the Interpersonal Communication capability as well as the Alternative Interpersonal Communication capability with the same entities. Although the need to have Alternative Interpersonal Communication capability should be assessed from the viewpoint that whether or not the absence of such capability can adversely affect reliability, the proposed standard does not require the capability in all cases. At the same time, this standard does not preclude such capability. Even though Interpersonal Communication capability is needed between a BA and a DP/GOP to communicate reliability instructions or directives, there are other communications paths which can be used in the case of the loss of that capability. Since TOPs are also required to have the capability, the BA can call the TOP and ask the TOP to contact the DP/GOP for them until they can implement capability. In addition, it is difficult to visualize entities which would not have the public telephone system or even cell phones available for use in the event of the loss of the capability.
Response: The RCSDT stresses the standard meets FERC Order 693 regarding DP and GOP entities by requiring these entities to have Interpersonal Communication capability. Additionally, requiring DP and GOP entities to have Alternative Interpersonal Communication capability only imposes more cost on smaller DP and GOP entities that have little or no risk impact to the Bulk Electric System. No change made.		
Florida Municipal Power Agency	Yes	In COM-001-2 R5.3, should a BA have communications with a DP or LSE? For the TOP, it is the DP because the load influence is very local; however, for a BA the supply / demand balance is not local and in markets that allow retail competition, it may be that the LSE is the more appropriate functional entity. For instance, the Functional Model when discussing LSE on page 55

Organization	Yes or No	Question 1 Comment
		states that one of the LSE's real time duties is: "12. Receives requests from the Balancing Authority and Distribution Provider for voluntary load curtailment."⁵ The RCSDT believes the DP should be included and not the LSE because the Functional Model V5 addresses this case. See Page 47, "Distribution Provider," of the Functional Model V5, Item 9. "Directs Load-Serving Entities to communicate requests for voluntary load curtailment." In this case (COM-001), the load curtailment is voluntary and would generally be for economics, the exchange of operating information and not reliability actions. No change made. If the LSE is the more appropriate entity, then R7 would need to be changed and a new requirement specific to LSE's would need to be added. For Florida, which does not have retail competition, it doesn't matter whether the DP or the LSE is more appropriate; hence, the "yes" answer. With regard to R7, the DP is the asset owner and would direct the LSE to perform actions. No change made.
Response: See response above.		
Georgia Transmission Corporation	Yes	While we agree with removing LSE, PSE, and TSP, we do not agree with the need to include Distribution Provider in all the standards. For example, in IRO-001-3, the Distribution Provider will likely never receive a Reliability Directive directly from its Reliability Coordinator. Reliability Directives received by Distribution Providers will be issued by the Transmission Operator or Balancing Authority depending on if the issue is security or adequacy related. Accordingly, NERC's Reliability Functional Model V5

⁵ NERC Functional Model Version 5, "Functional Entity – Load Serving Entity," pg 55, (http://www.nerc.com/files/Functional_Model_V5_Final_2009Dec1.pdf)

Organization	Yes or No	Question 1 Comment
		describes and identifies the DP's relationships with other Functional Entities to the TOP and BA with respect to Real Time. Real Time⁶ 7. Implements voltage reduction and sheds load as directed by the Transmission Operator or Balancing Authority. 8. Implements system restoration plans as coordinated by the Transmission Operator. 9. Directs Load-Serving Entities to communicate requests for voluntary load curtailment. The RCSDT is addressing a FERC directive (P487, Order 693) to include the DP in COM-001, and the RCSDT has included the DP in COM-002 and IRO-001 applicability because these standards are related to reliability communications. The RCSDT agrees with the point that communication will most likely be from the BA or TOP; however, the communications may come from the RC. With respect to the Functional Model V5, please see Page 31, "18. Issues corrective actions and emergency procedures directives (e.g., curtailments or load shedding) to Transmission Operators, Balancing Authorities, Generator Operators, Distribution Providers, and Interchange Coordinators." No change made. Lastly, we believe that Distribution Providers requirements with respect to complying with Reliability Directives received by TOPs and BAs are adequately covered by Reliability Standards TOP-001 and COM-002. The RCSDT agrees that TOP-001 and COM-002 apply to DP complying with Reliability Directives; however, IRO-001 applies to having the authority to act or direct others act and may not necessarily be done by issuing a

⁶ NERC Functional Model Version 5, "Functional Entity – Distribution Provider," pg 47, (http://www.nerc.com/files/Functional_Model_V5_Final_2009Dec1.pdf)

Organization	Yes or No	Question 1 Comment
		Reliability Directive. No change made.
Response: See response above.		
Ingleside Cogeneration LP	Yes	Ingleside Cogeneration LP believes that the intent of these three standards is to ensure reliable normal and emergency communications between BES operating entities. It should be the rare exception that BES-critical information must be communicated directly to an LSE, PSE, and TSP and IC. The impact of the Standards would be lessened if diffusely applied to multiple entities who do not normally engage in operations communications.
Response: Thank you for your comment.		
City of Vero Beach	Yes	In COM-001-2 R5.3, should a BA have communications with a DP or LSE? For the TOP, it is the DP because the load influence is very local; however, for a BA the supply / demand balance is not local and in markets that allow retail competition, it may be that the LSE is the more appropriate functional entity. For instance, the Functional Model when discussing LSE on page 55 states that one of the LSE's real time duties is: "12. Receives requests from the Balancing Authority and Distribution Provider for voluntary load curtailment."⁷ The RCSDT notes that the LSE should not be included because the Functional Model V5 addresses this case. See Page 47, "Distribution Provider," of the Functional Model V5, Item 9. "Directs Load-Serving Entities to communicate requests for voluntary load curtailment." No change made.

⁷ NERC Functional Model Version 5, "Functional Entity – Load Serving Entity," pg 55, (http://www.nerc.com/files/Functional_Model_V5_Final_2009Dec1.pdf)

Organization	Yes or No	Question 1 Comment
		If the LSE is the more appropriate entity, then R7 would need to be changed and a new requirement specific to LSE's would need to be added. For Florida, which does not have retail competition, it doesn't matter whether the DP or the LSE is more appropriate; hence, the "yes" answer. With regard to R7, the DP is the asset owner and directs the LSE to perform actions. No change made.
Response: See response above.		
SERC OC Standards Review Group	Yes	
Pacific Northwest Generating Cooperative	Yes	
MRO NSRF	Yes	
City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Yes	
LG&E and KU Services Company	Yes	
Bonneville Power Administration	Yes	
SPP Standards Review Group	Yes	
Dominion	Yes	
Western Electricity Coordinating Council	Yes	

Organization	Yes or No	Question 1 Comment
Southwest Power Pool Regional Entity	Yes	
FirstEnergy	Yes	
Global Engineering and Energy Solutions	Yes	
Kansas City Power & Light	Yes	
Salt River Project	Yes	
Southern Company	Yes	
San Diego Gas & Electric	Yes	
Central Lincoln	Yes	
Shell Energy North America	Yes	
Xcel Energy	Yes	
Liberty Electric Power LLC	Yes	
NIPSCO	Yes	
Oncor Electric Delivery Company LLC	Yes	
Consolidated Edison Co. of NY, Inc.	Yes	
We Energies	Yes	

Organization	Yes or No	Question 1 Comment
Luminant Energy Company LLC	Yes	
NextEra Energy, Inc.	Yes	
Pepco Holdings Inc.	Yes	
Exelon	Yes	
Manitoba Hydro	Yes	
Great River Energy	Yes	
Orange and Rockland Utilities, Inc.	Yes	
Niagara Mohawk (dba National Grid)	Yes	
American Electric Power	Yes	
South Carolina Electric and Gas	Yes	
BGE	Yes	
Nebraska Public Power District	Yes	
Duke Energy	Yes	
ISO New England	Yes	
ReliabilityFirst	Yes	
NV Energy	Yes	

Organization	Yes or No	Question 1 Comment
Midwest Independent Transmission System Operator	Yes	
Texas Reliability Entity	Yes	
Hydro One Networks Inc.	Yes	
New York Independent System Operator	Yes	
American Transmission Company, LLC	Yes	
City of Jacksonville Beach dba/ Beaches Energy Services		In R5.3, should a BA have communications with a DP or LSE? For the TOP, it is the DP because the load influence is very local; however, for a BA the supply/demand balance is not local and in markets that allow retail competition, I'm thinking LSE is the right functional entity. For Florida, it doesn't really matter. If the LSE is the "correct" entity, then R7 would need to be changed and a new requirement specific to LSE's would need to be added
Response: The RCSDT notes that the LSE not should be included because the Functional Model V5 addresses this case. See Page 47, "Distribution Provider," of the Functional Model V5, Item 9. "Directs Load-Serving Entities to communicate requests for voluntary load curtailment." With regard to R7, the DP is the asset owner and directs the LSE to perform actions. No change made.		
Indiana Municipal Power Agency		No comment.

2. Do you agree with the addition of “Adjacent” entities in COM-001-2, Parts 3.5, 4.3, 5.5 and 6.3 of COM-001-2? If not, please explain in the comment area below.

Summary Consideration: The majority of comments were regarding COM-001-2, R3 and R4. Concerns included issues with the use of “Adjacent Transmission Operators” and “synchronously connected within the same Interconnection.” The capitalized word “Adjacent,” beginning the requirement gives the appearance of an undefined glossary term. Therefore, the RCSDT addressed this by starting the applicable Parts of those requirements with “Each” to form “Each adjacent Transmission Operator...” and avoiding the need for another glossary term for something that is widely understood within the industry. The RCSDT made an additional clarifying change to address the issue that some Transmission Operators may not be adjacent for situations other than synchronously connected within the same Interconnection in the traditional understanding. For example, some entities have connections beyond the interconnection and some connections are asynchronous. To address this concern, the RCSDT separated the requirements to identify “synchronously connected” and “asynchronously connected,” and removed the “within the same Interconnection” criteria. Other minor formatting and reference errors were noted and corrected.

Organization	Yes or No	Question 2 Comment
SERC OC Standards Review Group	No	We are concerned regarding communications between Transmission Operators on opposite ends of DC ties, which may or may not be in the same interconnection. Similarly, COM-001, R1.2 limits the requirement of adjacent Reliability Coordinators to the same interconnection and this should not be limited to the same interconnection whether it is synchronous or non-synchronous. The measures should also be verified to ensure that they align properly with the final requirements.
Response: The RCSDT has made clarifying changes by adding a Part to R3 and R4 to address asynchronous connections between Transmission Operators, and has eliminated the phrase “within the same interconnection.” See change in COM-001-2, R3 and R4. Requirement R1 addresses a reliability need for adjacent Reliability Coordinators synchronously connected within the same Interconnection to have Interpersonal Communication capability; however, it does not preclude or limit the Reliability Coordinator from establishing Interpersonal Communication capability with others. The RCSDT does not see where there is a need to communicate with other Reliability Coordinator’s from one interconnection to another. No change made.		

Organization	Yes or No	Question 2 Comment
Northeast Power Coordinating Council	No	NERC uses the terms “adjacent” and “neighboring” in various standards. It is generally believed that those terms have the same meanings, but there are those who believe those terms, as used, are intended to have different meanings. To ensure a consistent usage and understanding, the definition of the term adjacent must be made known before its addition to the standard. Consideration should be given to using only one term in all standards if adjacent and neighboring are intended to mean the same thing. Both terms are used in NERC Standards, sometimes both in the same standard. For example, EOP-001-2b uses “neighboring” in R5, and “adjacent” in R3.3.
Response: The RCSDT thanks you for your comment and recognizes the confusion created by having “Adjacent” start the sentence. This gave the appearance of a defined NERC glossary term. The RCSDT has made clarify changes to the requirements and measures to eliminate this problem. See changes to COM-001-2, R1.2, R2.2, R3.5, R4.3, R5.5, and R6.3.		
MRO NSRF	No	NERC has formally defined “Adjacent Balancing Authority” in the NERC Glossary of Terms, but not “Adjacent Transmission Operator.” The MRO NSRF recommends that “Adjacent Transmission Operator” be defined similar to the “Adjacent Balancing Authority” definition in the NERC Glossary of Terms.
Response: The RCSDT thanks you for your comment and recognizes the confusion created by having “Adjacent” start the sentence. This gave the appearance of a defined NERC glossary term. The RCSDT has made clarify changes to the requirements and measures to eliminate this problem. See changes to COM-001-2, R1.2, R2.2, R3.5, R4.3, R5.5, and R6.3.		
Kansas City Power & Light	No	Requirements R4.3 and R6.3 require TOP’s and BA’s to establish alternative means of “interpersonal communications” with other TOP’s and BA’s without regard to the reliability impact each TOP or BA has on the interconnection. Why would it be necessary for a TOP with one 161kv transmission line or a BA with 100 MW of total load, or one GOP with a 30MW unit to realize additional costs when the facilities they operate have little reliability impact? Rationale criteria should be included here to identify the TOP’s and BA’s where

Organization	Yes or No	Question 2 Comment
		alternative means of “interpersonal communications” should be implemented. Furthermore, these requirements do not recognize the condition when another party refuses to install alternative communication equipment. TOP’s and BA’s have no authority over other TOP’s and BA’s to establish alternative means of communication. Requirements that are dependent on the actions of other parties over which you have no control or authority are poor requirements. In addition, most RC’s have established satellite telephone systems as back-up communication with TOP’s and BA’s. Some RC’s may have to establish additional communication systems with some BA’s as these requirements impose to avoid Standards of Conduct issues.
Response: The RCSDT has not placed any limiting applicability on entities in being responsive to the FERC directive (P487, Order 693), “...ensure there is no reliability gap during normal and emergency operations. For example, during a blackstart when normal communications may be disrupted, it is essential that the Transmission Operator, Balancing Authority and Reliability Coordinator maintain communications with their Distribution Providers and Generator Operators.” The RCSDT does not prescribe the criteria for alternative means of Interpersonal Communication capability, so each entity may determine its own needs to meet the requirement. With regard to requiring other BAs or TOPs to install Alternative Interpersonal Communication capability as registered entities, other BAs or TOPs have the same responsibility to comply with the requirement. Having a satellite backup is an acceptable form of communication; however, the RCSDT does not understand the comment about the Standards of Conduct issues. No change made.		
Southern Company	No	We are concerned regarding communications between Transmission Operators on opposite ends of DC ties, which may or may not be in the same interconnection. Similarly, COM-001, R1.2 limits the requirement of adjacent Reliability Coordinators to the same interconnection and this should not be limited to the same interconnection whether it is synchronous or non-synchronous. The measures should also be verified to ensure that they align properly with the final requirements.
Response: The RCSDT has made clarifying changes by adding Parts to R3 and R4 to address asynchronous connections between		

Organization	Yes or No	Question 2 Comment
Transmission Operators and have eliminated the phrase “within the same interconnection.” See change in COM-001-2, R3 and R4. Requirement R1 addresses a reliability need for adjacent Reliability Coordinators synchronously connected within the same Interconnection to have Interpersonal Communication capability; however, it does not preclude or limit the Reliability Coordinator from establishing Interpersonal Communication capability with others. The RCSDT does not see where there is a need to communicate with other Reliability Coordinators from one Interconnection to another. No change made.		
Xcel Energy	No	In COM-001-2, R4.3. Adjacent Transmission Operators synchronously connected within the same Interconnection. This new requirement has a term that is not defined Adjacent Transmission Operators.
Response: The RCSDT thanks you for your comment and recognizes the confusion created by having “Adjacent” start the sentence. This gave the appearance of a defined NERC glossary term. The RCSDT has made clarifying changes to the requirements and measures to eliminate this problem. See changes to COM-001-2, R1.2, R2.2, R3.5, R4.3, R5.5, and R6.3.		
Independent Electricity System Operator	No	(1) We agree with the addition of “Adjacent” entities in the quoted parts except the qualifier “synchronously connected within the same Interconnection” need to be removed from Parts 3.5 and 4.3 since TOPs do communicate with other TOPs even in another Interconnection (e.g. between Quebec and all of its asynchronously interconnected neighbors). Even in the case of ERCOT, TOPs on the two sides of a DC tie do communicate with each other for daily operations. The RCSDT has made clarifying changes by adding a Part to R3 and R4 to address asynchronous connections between Transmission Operators and has eliminated the phrase “within the same interconnection.” See change in COM-001-2, R3 and R4. (2) Measure M3 does not cover the added R3.5 condition (having Interpersonal Communications capability with each adjacent TOP). M3 needs to be revised. The RCSDT thanks you for catching this oversight. The corresponding TOP entity in R3.5 has been added to the Measure M3.
Response: See response above.		

Organization	Yes or No	Question 2 Comment
Exelon	No	May have an unintended effect on registrations as some GOPs use an intermediately dispatch organization that perform actions on behalf of the generating units.
Response: Having an intermediary dispatching actions for generation units is okay; however, the responsible GOP should have adequate agreements to perform these activities; for example, a Joint Registration Organization (Type 1) or Coordinated Functional Registration (Formerly Type 2). No change made.		
ISO New England	No	ISO-NE does not believe COM-001, in its entirety, is a results-based standards and therefore does not support the draft as written. We believe such "requirements" (i.e. capabilities) should be verified through an entity certification process. Additionally, results-based requirements should be the driver to have the capability to achieve them; on other words, there is no other way to reliably dispatch than to have communications facilities (electronic or voice).
Response: Although this is not a results-based standard, the RCSDT believes it is a significant improvement over the current COM-001 standard. No change made.		
Texas Reliability Entity	No	(1) Requirements R1, R2, R3 and R4 should apply to all adjacent Reliability Coordinators and Transmission Operators, regardless of whether they are in the same Interconnection. The ERCOT Interconnection is asynchronously connected to adjacent Interconnections, and it is imperative that Functional Entities within Texas RE's purview be able to exchange operating information with Transmission Operators and Reliability Coordinators in those adjacent areas, even if they are in a different Interconnection. The RCSDT has made clarifying changes by adding a Part to R3 and R4 to address asynchronous connections between Transmission Operators and has eliminated the phrase "within the same Interconnection." See change in COM-001-2, R3 and R4. (2) Requirement parts R5.5 and R6.3 refer to "Adjacent Balancing Authorities."

Organization	Yes or No	Question 2 Comment
		Measures M5 and M6 refer to “adjacent Balancing Authority” - note the small “a” on adjacent. “Adjacent Balancing Authority” is a defined term in the NERC Glossary, which has a more specific meaning than “adjacent Balancing Authority.” Which term is intended in R5.5 and R6.3? If you don’t intend to use the defined term, perhaps use a word like “contiguous” or “neighboring” rather than “adjacent.” The RCSDT thanks you for your comment and recognizes the confusion created by having “Adjacent” start the sentence. This gave the appearance of a defined NERC glossary term. The RCSDT has made clarifying changes to the requirements and measures to eliminate this problem. See changes to COM-001-2, R1.2, R2.2, R3.5, R4.3, R5.5, and R6.3.
Response: See response above.		
Hydro One Networks Inc.	No	(1) We agree with the addition of “Adjacent” entities in the quoted parts except the qualifier “synchronously connected within the same Interconnection” need to be removed from Parts 3.5 and 4.3 since TOPs do communicate with other TOPs even in another Interconnection (e.g. between Quebec and all of its asynchronously interconnected neighbors). Even in the case of ERCOT, TOPs on the two sides of a DC tie do communicate with each other for daily operations. The RCSDT has made clarifying changes by adding a Part to R3 and R4 to address asynchronous connections between Transmission Operators and has eliminated the phrase “within the same Interconnection.” See change in COM-001-2, R3 and R4. (2) Measure M3 does not cover the added R3.5 condition (having Interpersonal Communications capability with each adjacent TOP). M3 needs to be revised. The RCSDT thanks you for catching this oversight. The corresponding TOP entity in R3.5 has been added to the Measure M3.
Response: See response above.		

Organization	Yes or No	Question 2 Comment
SPP Standards Review Group	Yes	We concur with the addition of “Adjacent” but ask that the SDT give some consideration to allowing an exemption in R6.3 for relatively small loads, less than 20 MW, that are pseudo tied into a Balancing Authority. Loss of these facilities would not place a burden on the BES and should not require Alternative Interpersonal Communications capabilities.
Response: The RCSDT has not placed any limiting applicability on entities in being responsive to the FERC directive (P487, Order 693), “...ensure there is no reliability gap during normal and emergency operations. For example, during a blackstart when normal communications may be disrupted, it is essential that the Transmission Operator, Balancing Authority and Reliability Coordinator maintain communications with their Distribution Providers and Generator Operators.” The RCSDT does not prescribe the criteria for alternative means of Interpersonal Communication capability so each entity may determine its own needs to meet the requirement. With regard to requiring other BAs or TOPs to install Alternative Interpersonal Communication capability as registered entities, other BAs or TOPs have the same responsibility to comply with the requirement. Having a satellite backup is an acceptable form of communication. No change made.		
MISO Standards Collaborators	Yes	(1) We agree with the addition of “Adjacent” entities in the quoted parts. However, there are some entities which may need the capability even though they are not “synchronously connected within the same Interconnection.” This standard does not require them to have the capability, but it does not preclude such capability. In these cases, those entities should evaluate whether the need for the capability is a reliability need or market coordination. If the entities were connected synchronously, actions taken by an entity could have immediate effect upon other entities. However, if not synchronously connected, changes in flows across the asynchronous ties would have to follow the interchange scheduling process with approval by all involved entities before changes could be enacted. Some TOPs do communicate with other TOPs even in another Interconnection (e.g. between Quebec and all of its asynchronously interconnected neighbors). The RCSDT has made clarifying changes by adding a Part to R3 and R4 to address asynchronous connections between Transmission Operators and has eliminated the

Organization	Yes or No	Question 2 Comment
		phrase “within the same Interconnection.” See change in COM-001-2, R3 and R4. (2) Measure M3 does not cover the added R3.5 condition (having Interpersonal Communications capability with each adjacent TOP). M3 needs to be revised. The RCSDT thanks you for catching this oversight. The corresponding TOP entity in R3.5 has been added to the Measure M3.
Response: See response above.		
Entergy Services, Inc	Yes	Entergy agrees with the inclusion of the term “Adjacent” in these requirements to limit the entities that the BA or TOP must have communications capability with to those that they border.
Response: Thank you for your comment.		
Duke Energy	Yes	However, we believe that the phrase “synchronously connected within the same Interconnection” should be struck, because TOPs are controlling DC ties and should be required to have communications with each other.
Response: The RCSDT has made clarifying changes by adding a Part to R3 and R4 to address asynchronous connections between Transmission Operators and has eliminated the phrase “within the same Interconnection.” See change in COM-001-2, R3 and R4.		
ERCOT ISO	Yes	These changes will clarify intentions regarding the undefined term "adjacent."
Response: The RCSDT thanks you for your comment and recognizes the confusion created by having “Adjacent” start the sentence. This gave the appearance of a defined NERC glossary term. The RCSDT has made conforming measures to eliminate this problem. See changes to COM-001-2, R1.2, R2.2, R3.5, R4.3, R5.5, and R6.3.		
ReliabilityFirst	Yes	ReliabilityFirst agrees with adding the term adjacent but is unclear what the term adjacent is referring to. Does it mean directly connected or is it more than one layer out.

Organization	Yes or No	Question 2 Comment
Response: The RCSDT thanks you for your comment and recognizes the confusion created by having “Adjacent” start the sentence. This gave the appearance of a defined NERC glossary term. The RCSDT has made conforming measures to eliminate this problem. See changes to COM-001-2, R1.2, R2.2, R3.5, R4.3, R5.5, and R6.3.		
Pacific Northwest Generating Cooperative	Yes	
City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Yes	
LG&E and KU Services Company	Yes	
Bonneville Power Administration	Yes	
Dominion	Yes	
Western Electricity Coordinating Council	Yes	
Southwest Power Pool Regional Entity	Yes	
FirstEnergy	Yes	
Florida Municipal Power Agency	Yes	
Global Engineering and	Yes	

Organization	Yes or No	Question 2 Comment
Energy Solutions		
ACES Power Marketing Standards Collaborators	Yes	
Salt River Project	Yes	
San Diego Gas & Electric	Yes	
Liberty Electric Power LLC	Yes	
NIPSCO	Yes	
Oncor Electric Delivery Company LLC	Yes	
We Energies	Yes	
City of Jacksonville Beach dba/ Beaches Energy Services	Yes	
Luminant Energy Company LLC	Yes	
NextEra Energy, Inc.	Yes	
Pepco Holdings Inc.	Yes	
Manitoba Hydro	Yes	
Niagara Mohawk (dba	Yes	

Organization	Yes or No	Question 2 Comment
National Grid)		
American Electric Power	Yes	
South Carolina Electric and Gas	Yes	
Georgia Transmission Corporation	Yes	
BGE	Yes	
Nebraska Public Power District	Yes	
Georgia System Operations	Yes	
City of Vero Beach	Yes	
NV Energy	Yes	
Midwest Independent Transmission System Operator	Yes	
American Transmission Company, LLC	Yes	
Indiana Municipal Power Agency		No comment.

3. The RCSDT removed the phrase "to exchange Interconnection and operating information" in COM-001-2, Requirements R1 through R8 based on stakeholder comments. Do you agree with the revision? If not, please explain in the comment area below.

Summary Consideration: Several commenters noted the phrase “to exchange Interconnection and operating information” should also be removed from the Purpose statement. The RCSDT agrees and removed this phrase from the Purpose statement. Some concerns also noted COM-001-2 should also add additional language to clarify the standard is not for the exchange of data. Since the standard focuses on having communication capability, the additional clarity is not needed; therefore, the RCSDT made no change. Some commenters noted items which have been addressed in the questions above.

Organization	Yes or No	Question 3 Comment
Global Engineering and Energy Solutions	No	
Independent Electricity System Operator	No	In the last posting, we suggest removing the phrase “within the same Interconnection” from R1 (now R2.2) since there are RCs between two Interconnections that need to communication with each other for reliability coordination (e.g. between Quebec and the RCs the Northeast such as IESO, NYISO, NBSO and ISO-NE, and between the RCs in WECC with the RCs in the Eastern Interconnection). Such coordination may include but not limited to curtailing interchange transactions crossing Interconnection/RC boundary, as stipulated in IRO-006. The SDT’s response to our comments citing that the phrase was added to address the ERCOT situation leaves a reliability gap to the other situations. We again urge the SDT to remove the phrase. If necessary, the ERCOT situation can be addressed by a regional variance.
Response: The RCSDT has made clarifying changes by adding a Part to R3 and R4 to address asynchronous connections between Transmission Operators and has eliminated the phrase “within the same Interconnection.” See change in COM-001-2, R3 and R4.		

Organization	Yes or No	Question 3 Comment
Great River Energy	No	"to exchange interconnection and operation information" was removed from the requirements in COM-001-2 but remains in the purpose. For consistency, it needs to be removed. It could read, <i>"To establish Interpersonal Communication capabilities for the exchange of information necessary to maintain reliability."</i>
Response: The SDT agrees and has made a conforming change to the Purpose of COM-001. See revised Purpose statement.		
Ingleside Cogeneration LP	No	In the background section of this ballot, the project team indicates that the removal of the phrase is intended to signal that these requirements do NOT apply to the exchange of data. Although Ingleside Cogeneration LP agrees that the phrase is not a helpful description of the need for inter-entity communications - and should be removed - we do not see how the remaining language achieves the project team's purpose. It seems the confusion stems from the multitude of data communication types. Email messages between operating entities may be a valid communications path under COM-001-2, while telemetry/control is covered under other Standards. We believe that a technical guideline may be an appropriate vehicle to distinguish what types of communications are subject to these requirements, and which are not.
Response: The RCSDT has drafted performance requirements that are intended to be flexible enough to accommodate different technologies and innovation by industry. It is not the intent of the drafting team to establish all the possible methods of communicating. Drafting teams generally do not create guidelines. No change made.		
ISO New England	No	ISO-NE does not believe COM-001, in its entirety, is a results-based standards and therefore does not support the draft as written. We believe such "requirements" (i.e. capabilities) should be verified through an entity certification process. Additionally, results-based requirements should be the driver to have the capability to achieve them; on other words, there is no other way to reliably dispatch than to

Organization	Yes or No	Question 3 Comment
		have communications facilities (electronic or voice).
Response: Although this is not a results-based standard, the RCSDT believes it is a significant improvement over the current COM-001 standard. No change made.		
Hydro One Networks Inc.	No	(1) In the last posting, there were suggestions of removing the phrase “within the same Interconnection” from R1 (now R2.2) since there are RCs between two Interconnections that need to communication with each other for reliability coordination (e.g. between Quebec and the RCs the Northeast such as IESO, NYISO, NBSO and ISO-NE, and between the RCs in WECC with the RCs in the Eastern Interconnection). Such coordination may include but not limited to curtailing interchange transactions crossing Interconnection/RC boundary, as stipulated in IRO-006. The SDT’s response to our comments citing that the phrase was added to address the ERCOT situation leaves a reliability gap to the other situations. We again urge the SDT to remove the phrase. If necessary, the ERCOT situation can be addressed by a regional variance.
Response: Requirement R1 addresses a reliability need for adjacent Reliability Coordinators synchronously connected within the same interconnection to have Interpersonal Communication capability; however, it does not preclude or limit the Reliability Coordinator from establishing Interpersonal Communication capability with others. The RCSDT does not see where there is a need to communicate with other Reliability Coordinators from one Interconnection to another. No change made.		
SERC OC Standards Review Group	Yes	We suggest that this phrase should also be removed from the “Purpose” statement.
Response: The SDT agrees and has made a conforming change to the Purpose of COM-001: See revised Purpose statement.		
MISO Standards Collaborators	Yes	We urge the SDT to remove the phrase. If necessary, regional situations can be addressed by a regional variance.
Response: The SDT agrees and has made a conforming change to the Purpose of COM-001: See revised Purpose statement.		

Organization	Yes or No	Question 3 Comment
ACES Power Marketing Standards Collaborators	Yes	We thank the drafting team for making this change and for the clear communication that the intent of this standard is not for data exchange in the response to comments. However, we do believe one additional change is necessary to make the intent absolutely clear. The purpose of statement of COM-001-2 still includes the phrase “to exchange Interconnection and operating information.” Since a standard must stand on its own, we believe it is necessary to remove that phrase from the purpose statement to avoid misinterpretations in the future. Auditors and enforcement personnel are not required to understand the development history when enforcing the standard. Furthermore, the purpose is really to enable communications between these functional entities.
Response: The SDT agrees and has made a conforming change to the Purpose of COM-001: See revised Purpose statement.		
Southern Company	Yes	We suggest that this phrase should also be removed from the “Purpose” statement.
Response: The SDT agrees and has made a conforming change to the Purpose of COM-001: See revised Purpose statement.		
Entergy Services, Inc	Yes	Yes, the requirements of this standard pertain to having communications capability. The specific content of that communication should not be the subject of the standard.
Response: The SDT agrees and has made a conforming change to the Purpose of COM-001: See revised Purpose statement.		
We Energies	Yes	Please add "does not include telemetered or derived data"
Response: The standard COM-001 is for Interpersonal Communication capability, which facilitates the communication (i.e., “... to interact, consult, or exchange information.”) and not the exchange of data which is addressed in IRO-010. No change made.		
Duke Energy	Yes	However, the definition of Interpersonal Communication should also be expanded to clearly include the drafting team’s intent that the capability is NOT for the exchange

Organization	Yes or No	Question 3 Comment
		of data. The phrase “for the exchange of Interconnection and operating information” should also be struck from the Purpose statement.
Response: The SDT agrees and has made a conforming change to the Purpose of COM-001: See revised Purpose statement. The standard COM-001 is for Interpersonal Communication capability, which facilitates the communication (i.e., “... to interact, consult, or exchange information.”) and not the exchange of data which is addressed in IRO-010. No change made.		
Pacific Northwest Generating Cooperative	Yes	
MRO NSRF	Yes	
City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Yes	
LG&E and KU Services Company	Yes	
Bonneville Power Administration	Yes	
SPP Standards Review Group	Yes	
Dominion	Yes	
Western Electricity Coordinating Council	Yes	

Organization	Yes or No	Question 3 Comment
Southwest Power Pool Regional Entity	Yes	
FirstEnergy	Yes	
Florida Municipal Power Agency	Yes	
Kansas City Power & Light	Yes	
Salt River Project	Yes	
San Diego Gas & Electric	Yes	
Central Lincoln	Yes	
Xcel Energy	Yes	
Liberty Electric Power LLC	Yes	
NIPSCO	Yes	
Oncor Electric Delivery Company LLC	Yes	
Consolidated Edison Co. of NY, Inc.	Yes	
City of Jacksonville Beach dba/ Beaches Energy Services	Yes	

Organization	Yes or No	Question 3 Comment
Luminant Energy Company LLC	Yes	
NextEra Energy, Inc.	Yes	
Pepco Holdings Inc.	Yes	
Exelon	Yes	
Manitoba Hydro	Yes	
Orange and Rockland Utilities, Inc.	Yes	
Niagara Mohawk (dba National Grid)	Yes	
American Electric Power	Yes	
South Carolina Electric and Gas	Yes	
BGE	Yes	
Nebraska Public Power District	Yes	
ERCOT ISO	Yes	
ReliabilityFirst	Yes	
City of Vero Beach	Yes	

Organization	Yes or No	Question 3 Comment
NV Energy	Yes	
Midwest Independent Transmission System Operator	Yes	
Texas Reliability Entity	Yes	
American Transmission Company, LLC	Yes	
Indiana Municipal Power Agency		No comment.

4. **A new requirement was added for clarity regarding what is required of Distribution Providers and the Generator Operators:**
R11. Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability. [Violation Risk Factor: Medium][Time Horizon: Real-time Operations] This requirement requires collaboration between entities to restore a failed communications capability. Do you agree with the new requirement? If not, please explain in the comment area below.

Summary Consideration: Most of the comments pertain to compliance and clarity concerns; for example, the use of “any of” in the requirement. The phrase “any of” has been eliminated to resolve this concern. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure. Other comments recommended using the terms, such as, “primary,” “secondary,” “device,” “means,” and “medium” with regard to the proposed definitions. The RCSDT emphasizes the requirements are for “capability” and adding such proposed terms is not needed to achieve the necessary clarity. Some commenters raised concerns about being able to reach “mutually agreeable time” for restoration. The RCSDT addressed these concerns by revising the phrase to “mutually agreeable action,” which allows the applicable entities to reach consensus on the effort needed to restore communications. This change also provides flexibility to the entities in addressing the steps to restore communications rather than focusing on the time for restoration. The requirement does not limit the sources of information. Allowing the DP and GOP to reach a mutually agreeable action, eliminates the need for Alternative Interpersonal Communication capability considering the limited impact a failure might have on DPs and GOPs overall. From a compliance standpoint, the DP or GOP that is working to restore its Interpersonal Communication capability is not out of compliance as far as the entity is meeting the requirement for taking action to restore its capability. Other similar concerns pertained to having 24/7 dispatch, which is an operational function. The requirements are constructed around having communication capability. The RCSDT understands there may be entities that have certain operations where there is not 24/7 staffing and these cases should be addressed by their operation with other entities through agreements, procedures or other means as needed for reliable operations. Other minor corrections and formatting issues noted were reviewed and corrected accordingly.

Some commenters were concerned that large entities would not be capable of meeting the 60-minute notification upon the loss of their Interpersonal Communication capability. The RCSDT notes this pertains to the BA, RC, and TOP, which are required to have an Alternative Interpersonal Communication capability, and should have the ability to accomplish the required notification. Also, the loss of Interpersonal Communication capability may not always impact the entire capability. This time frame does not apply to the DP and GOP since the Alternative Interpersonal Communication capability is not required for these functional entities. Other minor formatting and corrections to references were made, such as, focusing on using the singular form of words rather than the plural to avoid confusion.

Organization	Yes or No	Question 4 Comment
Alliant Energy Corp. Services, Inc.	Negative	COM-001-2: Alliant Energy is opposed to the use of the word "any" as it is too broad. It should be revised to the primary Interpersonal Communication capabilities with the Transmission Operator or Balancing Authority.
Response: The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure. The RCSDT emphasizes the requirement refers only to Interpersonal Communication capabilities. Adding the phrase “to the primary” is not needed. Please refer to the definitions of Interpersonal Communication and Alternative Interpersonal Communication for clarification. No change made.		
Wisconsin Electric Power Marketing; Wisconsin Electric Power Co.	Negative	R11 is not clear on the purpose of the statement “determine a mutually agreeable time for restoration” this could be driven by forces outside the control any of the entities. I think, “provide estimated restoration and actual restoration time and determine mutually agreeable alternative during outage” would be better.
Response: The RCSDT has made clarifying changes to R11 to use mutually agreeable action rather than time for restoration.		
Lakeland Electric	Negative	Use of the term "any" in the new R11 and immediate non-compliance if there is a failure in a communication system.
Response: The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure.		
SERC OC Standards Review Group	No	We suggest Requirement 11 should be deleted as the generic nature of the term “...any of its Interpersonal Communications capabilities...” could be interpreted to include communications capabilities used for internal DP/GO purposes. Such DP/GO internal communications capability would not be critical to BES reliability. Also, no BES reliability benefit is realized by the parties simply agreeing to a time for the

Organization	Yes or No	Question 4 Comment
		restoration of the failed Interpersonal Communication capability.
Response: The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure.		
Pacific Northwest Generating Cooperative	No	As per COM-001-2, R7, “Each Distribution Provider shall have Interpersonal Communications capability with the following entities...” R11 states that the DP or GOP that experiences a failure of its Interpersonal Communications ability shall consult with TOPs and BAs and agree on how to restore Interpersonal Communications. We believe better language might be, “Restore Interpersonal Communications with your TOP/BA as soon as operationally feasible.”
Response: The RCSDT notes that R11 does not limit the sources of information used by the DP or GOP in establishing a mutually agreeable restoration time for its Interpersonal Communication capability with its TOP or BA. That is precisely why R11 is written in this manner. This allows flexibility on the part of the TOP and BA in determining when the Interpersonal Communication capability must be restored. In situations where there is little or no impact to the reliability of the BES, some flexibility could be allowed without requiring the acquisition of Alternative Interpersonal Communication capability. The RCSDT has made clarifying changes to R11 to use mutually agreeable action rather than time for restoration.		
MRO NSRF	No	Please note that the use of the word “any” as in “Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities...” will be viewed as meaning every Interpersonal Communication medium that an Entity has or uses. The NSRF recommends that the word “any” be removed from this Requirement. The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure. The NSRF recommends that R11 be revised to read:

Organization	Yes or No	Question 4 Comment
		<i>“Each Distribution Provider and Generator Operator that experiences a failure of any of its primary (or defined) Interpersonal Communication capabilities with its Transmission Operator or Balancing Authority...”</i> In that way it focuses it down to the communications issues with the TOP or BA. In lieu of “primary” the SDT could state “defined” as long as it is not meant to be “any.” The RCSDT emphasizes the requirement refers only to Interpersonal Communication capabilities. Adding the phrase “to the primary” is not needed. Please refer to the definitions of Interpersonal Communication and Alternative Interpersonal Communication for clarification. No change made. The latter part of R11 states; “...shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability.” This ambiguous statement does not support reliability. Consulting with a TOP or BA does not solve the problem of the lack of Interpersonal Communication capabilities. The NSRF recommends this be rewritten as: <i>“...shall consult with inform their Transmission Operator or Balancing Authority as applicable as to the status of the Interpersonal Communication capability.”</i> So the new R11 would read: <i>“Each Distribution Provider and Generator Operator that experiences a failure of its primary (or designated) Interpersonal Communication with their Transmission Operator or Balancing Authority shall inform them, as applicable, as to the status of the Interpersonal Communication capability.”</i> The RCSDT has made clarifying changes to R11 to use mutually agreeable action rather than time for restoration.
Response: See response above.		

Organization	Yes or No	Question 4 Comment
LG&E and KU Services Company	No	Regarding R11, as written it is unclear when the DP and GOP are required to consult with their TOP or BA. “[A] failure of any of its Interpersonal Communication capabilities” could be construed to mean any internal phone line of either the DP or GOP failing. Internal phone lines do not affect either the DP’s or GOP’s ability to communicate with the TOP or BA. If the DP or GOP loses its Interpersonal Communication with an entity it is required to have the capability with, then the entity must consult with that entity to determine a mutually agreeable action (was time) to restore. A failure of the entity’s capability means the entity is no longer able to communicate with its BA or TOP, then it must consult with the affected entity. It is also unclear whether a failure of an interpersonal communication capability would require consultation if there were multiple other interpersonal communication capabilities that were still fully functional. Furthermore, what exactly is required in “consultation” and who would be responsible if the “consulting” entities did not come to a “mutually agreeable time” are questions that are left unanswered. LG&E and KU Services Company suggest the following language: <i>R11. Each Distribution Provider and Generator Operator that experiences a failure of more than one of its Means for Interpersonal Communications or failure of its Alternative Means for Interpersonal Communication with their Transmission Operator or Balancing Authority shall notify their Transmission Operator or Balancing Authority regarding the time to restore the impacted Means for Interpersonal Communication or Alternative Means for Interpersonal Communication.</i> The RCSDT thanks you for your comment; however, great lengths were taken in communicating mediums regarding IC and AIC and finds that adding “Means” to the proposed terms being defined diminishes clarity of the definition. No change made.

Organization	Yes or No	Question 4 Comment
Response: See response above.		
PPL Electric Utilities and PPL Supply NERC Registered Organizations	No	PPL has concerns with the use of the word “any” in this requirement. PPL recommends striking the words “any of” and instead using “its primary” as follows: The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure. <i>Each Distribution Provider and Generator Operator that experiences a failure of its primary Interpersonal Communication capabilities with its Transmission Operator or Balancing Authority...” In the current version, it is unclear when the DP and GOP are required to consult with their TOP or BA.</i> The RCSDT notes that the requirement refers only to Interpersonal Communication capabilities. Adding the phrase “to the primary” is not needed. Please refer to the definitions of Interpersonal Communication and Alternative Interpersonal Communication for clarification. No change made. “[A] failure of any of its Interpersonal Communication capabilities” could be construed to mean an internal phone line of either the DP or GOP failing. Internal phone lines do not affect either the DP’s or the GOP’s ability to communicate with the TOP or BA. It is also unclear whether a failure of an interpersonal communication capability would require consultation if there were multiple other interpersonal communication capabilities that were still fully functional. The RCSDT believes an entity meets the intent of the requirement when it has Interpersonal Communication capability, whether through a single capability or multiple capabilities. A single failure of an entity’s capability would not require any consultation if the entity continues to have the capability. The drafting team has removed the phrase “any of” as a clarifying change. Additionally, the RCSDT made a

Organization	Yes or No	Question 4 Comment
		clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure.
Response: See response above.		
SPP Standards Review Group	No	We would suggest deleting the phrase ‘any of’ in the Requirement. It would then read: <i>‘Each DP and GOP that experiences a failure of its Interpersonal Communication...’</i> The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure. Also, how does the DP or GOP consult with its TOP or BA when it loses its Interpersonal Communications capability? To do this wouldn’t they have to have an Alternative Interpersonal Communications capability? The RCSDT believes each entity must determine how to accomplish this (R11) and having another requirement or change would be overly prescriptive. No change made.
Response: See response above.		
Western Electricity Coordinating Council	No	We have two concerns with R11 as worded. First, the term "as applicable" is undefined. Who decides what is applicable. We suggest that words clarifying which entity, TOP or BA, the DP and GO experiencing a failure of any of its Interpersonal Communication capabilities must consult with. The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “as applicable” in COM-001, R11.

Organization	Yes or No	Question 4 Comment
		Second, the inclusion of the "mutually agreeable" time to restore the Interpersonal Communication capability is problematic. Although unlikely, two entities could "mutually agree" to an exceptionally long time frame for restoration (two years) and that unreasonable timeframe would meet the requirement as long as they both agreed. Suggest some finite time limit be included. The RCSDT has made clarifying changes to R11 to reference "mutually agreeable action," rather than "time" for restoration. The use of "action" eliminates the need for a timeframe. New information regarding the restoration parameters may change under a mutually agreeable action.
Response: See response above.		
FirstEnergy	No	Although we agree with the intent of the requirement, we are concerned with the use of "any of its Interpersonal Communication." The word "any" is very inclusive and the team should consider narrowing it down to those capabilities that may adversely impact reliability.
Response: The RCSDT appreciates your comment and has made clarifying changes by removing the phrase "any of" in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure.		
Florida Municipal Power Agency	No	By use of the term "any" in the phrase "a failure of any of its Interpersonal Communication" the standard will actually create a disincentive for redundant communications with DPs and GOPs due to compliance risk. The RCSDT appreciates your comment and has made clarifying changes by removing the phrase "any of" in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure. To truly further the goals of reliability, the requirement should align with R3.3 and R3.4 which requires a primary Interpersonal Communications capability and R4 which

Organization	Yes or No	Question 4 Comment
		does not require DPs or GOPs to have Alternative Interpersonal Communications capability. A possible solution is through use of the terms “Primary” for R3 and “Alternate” for R4 and then make R11 applicable to Primary only. The term “Interpersonal Communication” is a defined term in this standard. As such, it has a different meaning than “Alternative Interpersonal Communication,” thus there should be no confusing of the two. In addition, the word “primary” purposely does not exist in the requirements since the RCSDT did not intend to create a requirement for redundancy. Redundancy continues to be a good practice, but it is not required by this standard except that some entities must have both an Interpersonal Communication capability and a designated Alternative Interpersonal Communication capability. No change made.
Response: See response above.		
Global Engineering and Energy Solutions	No	We are pleased that the drafting team addition provides addition description on the process for communicating failed Interpersonal Communication. However additional clarity should be made regarding if there is an expectation that the Interpersonal Communication should be available 24x7. There are many Distribution Providers that do not have a 24x7 managed facility that can view and respond to a communication received in real time on the Interpersonal Communication device. These DPs rely on on-call personnel for off-hour emergencies such as an outage on the distribution system. The on-call personnel may use a cell phone, pager, etc. In other cases, the Transmission Operator or Balancing Authority may communicate by email and response is provided during business hours. In these cases, if the Transmission Operator or Balancing Authority had a system emergency they have the ability to isolate the distribution system from the grid and therefore do not require a 24x7 manned distribution. If the intent of the Standard is for ensuring real-time communication than the

Organization	Yes or No	Question 4 Comment
		applicability should be limited to those Distribution Providers who have been required by the Transmission Operator or Balancing Authority to have a manned 24x7 manned facility. Many of the DPs referred to here have not received a real-time call in the last 20 years. Requiring them to staff 24x7 for a condition likely not to occur is cost prohibited and does not improve reliability.
Response: The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The Purpose of COM-001-2 is, “To establish Interpersonal Communication capabilities necessary to maintain reliability. No change made.		
ACES Power Marketing Standards Collaborators	No	Requirement R11 does not fully address the issue of what is required by Distribution Providers and Generator Operators and introduces new issues. The RCSDT notes that R11 grants the DP and GOP flexibility in determining, in conjunction with its TOP or BA, when its Interpersonal Communication capability requires restoration. This would provide allowances for those entities, which have little or no impact on the reliability of the BES. No change made. First, while the standard is intended to clarify that the Distribution Provider and Generator Operator do not need backup communications capability, it simply does not. Distribution Providers and Generator Operators are required to have an Interpersonal Communications capability in Requirement R7 and R8 respectively. Unfortunately, the effectiveness of these requirements persists even when the Distribution Provider or Generator Operator experiences a failure of its Interpersonal Communications capability. When Requirement R11 applies, the Distribution Provider or Generator Operator will still be obligated to comply with Requirements R7 and R8 respectively and will, in fact, be in violation of these requirements because the Distribution Provider or Generator Operator no longer has the capability. The RCSDT thanks you for your comment. Requirements R7 and R8 have been revised to account for the failure of Interpersonal Communication capability. The

Organization	Yes or No	Question 4 Comment
		intent of R11 is to require the responsible entity to take action upon the failure of its Interpersonal Communication. Second, capability is used inconsistently between Requirement R7 and R11, which leads to confusion. In Requirement R7, it is singular while in Requirement R11 is plural. It needs to be clear that only the failure of the capability identified in R7 and R8 needs to be reported by the Distribution Provider and Generator Operator respectively. The RCSDT thanks you for your observation and has modified COM-001-2 R11 to be singular and to more clearly address the entities being consulted with upon a failure. Third, if the requirements focused on communications devices rather than capabilities, they would come closer to communicating the intent. Requirement R11 would better complement Requirement R7 and R8 if the focus was on having a communication medium or device. The RCSDT believes that prescribing a device or medium would limit an entity. In regards to a device not functioning properly is contrary to R10, notification of Interpersonal Communication capability failure. Please refer to the definition of Interpersonal Communication and Alternative Interpersonal Communication. No change made. A Generator Operator with an installed communications device or medium still has that device or medium even when it is not functioning properly and could still meet Requirements R7 and R8. However, they don't have the Interpersonal Communications capability if the device is not functioning properly. The RCSDT thanks you for your comment. Requirements R7 and R8 have been revised to account for the failure of Interpersonal Communication capability. The intent of R11 is to require the responsible entity to take action upon the failure of its Interpersonal Communication.

Organization	Yes or No	Question 4 Comment
Response: See response above.		
Kansas City Power & Light	No	How does a DP or GOP experiencing a failure of its “interpersonal communications” consult with its TOP or BA to determine a mutually agreeable time for restoration of “interpersonal communications”? There are no requirements that require alternative “interpersonal communications” for the DP and GOP. This requirement cannot be fulfilled and should be removed.
Response: The RCSDT notes that R11 does not limit the sources of information used by the DP or GOP in establishing a mutually agreeable restoration time for its Interpersonal Communication capability with its TOP or BA; that is precisely why R11 is written in this manner. This allows flexibility on the part of the TOP and BA in determining when the Interpersonal Communication capability must be restored. In situations where there is little or no impact to the reliability of the BES, some flexibility could be allowed without requiring the acquisition of Alternative Interpersonal Communication capability. The RCSDT has made clarifying changes to R11 to use mutually agreeable action, rather than time for restoration.		
Southern Company	No	We suggest the following changes: 1. Requirement 10 should include Distribution Providers and Generator Operators, The RCSDT stresses that R11 grants the DP and GOP flexibility in determining, in conjunction with its TOP or BA, when its Interpersonal Communication capability must be restored. This would provide allowances for those entities, which have little or no impact on the reliability of the BES, while not requiring them to obtain Alternative Interpersonal Communication capabilities. Making the proposed changes would eliminate this flexibility. Removing R11 takes away the RCSDT’s effort to include those provisions in the standard. No change made. 2. Entities to be notified should be “as identified in requirements R1 through R8”, The RCSDT thanks you for pointing this out. The RCSDT has modified the language of R10 to refer to R1, R3, and R5, rather than “R1 through R6” since the responsible entities are limited to the RC, the TOP, and the BA in these requirements.

Organization	Yes or No	Question 4 Comment
		3. Requirement 11 should be deleted, and, The RCSDT thanks you for your comment. COM-001-2 R11 requires the entity to consult with its BA or TOP when it experiences a failure of its Interpersonal Communication capability. The BA or TOP need to know communication is compromised between the DP or GOP. 4. Measures (M10) and VSLs should be adjusted accordingly. The RCSDT did not elect to include the DP and GOP in R10; therefore, Measure, M10 and the corresponding VSLs were not adjusted. No change made.
Response: See response above.		
Central Lincoln	No	The new requirement presents us with a paradoxical situation. The communication has failed, so we must consult; yet consultation requires communication. We note that the SDT used the word “any”, implying that multiple communication paths are required. The reality of the situation at Central Lincoln, due to our remote location, is that a single back hoe incident at the right location can take out all of our of our communication capability (including the terrestrial portion of the cellular networks) with our BA/TO; making this requirement impossible to meet for this circumstance using our present capabilities. The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure. Furthermore, R11 addresses the direction given in Order 693 that DP and GOP entities do not necessarily need to have Alternative Interpersonal Communication capability. The requirement allows flexibility in “consult with” by not naming the method. If all communications are out, then the DP or GOP may have to meet the requirement by an in-person consultation.

Organization	Yes or No	Question 4 Comment
		We also note that no time limit was indicated. Most interruptions are brief, and fixed before consultation could reasonably take place. CEAs will be finding entities non-compliant for quickly fixing problems at their end without first consulting to ensure the restoration time was agreeable. To avoid non-compliance, entities will be forced delay repairs while they investigate alternative communication paths for consultation purposes. We fail to see how such an outcome improves reliability. The DP and GOP are only required to have Interpersonal Communication capability. If the DP or GOP restores its Interpersonal Communication capability before it could reasonably contact the affected entity by another method, there is no failure to comply. The DP or GOP could then consult with the affected entity to determine a mutually agreeable action. In this case, the RCSDT believes the "action" would then be the entities acknowledging the failure and the repair; therefore, no mutually agreeable action is needed. The RCSDT recognizes there is no way to account for all the various circumstances in a failure. To comply, the DP and GOP are still required to consult the entity which the failure affected regardless of whether the Interpersonal Communication capability was restored or is still failed. No change made. The new requirement is one sided, requiring the DP and GOP to consult with no corresponding requirement for the TO or BA to have personnel available for such a consultation. Consultation failure or failure to mutually agree due to actions or inactions on the part of the TO or BA should not result in an enforcement action against the DP or GOP, yet that is how the requirement is written. The RCSDT notes that once the failure has been detected, the responsible entity must make the consultation with the BA or TOP; that relieves the compliance burden. While the RCSDT understands your concern about single points of failure, the question becomes should this relieve the DP or GOP of the requirement for having Interpersonal Communication capabilities. No change made. The new requirement fails to add any "clarity" to the other requirements, and we don't see that the stakeholders thought there was a problem with DP/GOP obligation

Organization	Yes or No	Question 4 Comment
		clarity. Instead, it adds new obligations with no justification for how they enhance reliability. We suggest removing the requirement. Based on the RCSDT's understanding of the comments received on the previous posting, the industry desired additional clarity on specifically what communication capabilities the DP and GOP were required to have. There was confusion that the standard did not specifically say that the DP and GOP were required to have Alternative Interpersonal Communication capabilities. R11 clarifies that a DP and GOP are not required to have Alternative Interpersonal Communication capability if the DP or GOP consult with their TOP or BA, whichever is applicable in the given situation, and they mutually agree that the restoration action does not adversely impact the reliability of the BES. No change made.
Response: See response above.		
Entergy Services, Inc	No	The DP or GOP should have to notify the TOP and BA of its communications failure, similar to the requirement in R10 for TOP and BA. The DP or GOP should restore the communications capability as soon as possible. Entergy does not agree that the TOP or BA should have to negotiate the restoration time with the DP or GOP. This is an unreasonable burden on the BA and TOP.
Response: The RCSDT notes that R11 does not exempt the DP or GOP from notifying its TOP or BA when they experience a communication failure. There is nothing in R11 that says a DP or GOP does not have to restore its communications capability. What is in R11 is flexibility. The RCSDT has gone to great lengths to provide some flexibility for those DPs and GOPs with little or no impact on the reliability of the BES. FERC directed NERC to provide for this consideration. While one could consider this a negotiation, the notification is required so some sort of communication must be made. All that is being asked of the BA and TOP is to give some consideration for the entities involved and the overall situation. The SDT modified the requirement so mutual agreement must be reached on an "action" for restoration rather than a "time" for restoration.		
Liberty Electric Power LLC	No	The phrase "mutually agreeable time" needs to be replaced in order to make this standard acceptable. This phrasing creates a potential violation if equipment functionality cannot be restored in the time frame preferred by another entity, even

Organization	Yes or No	Question 4 Comment
		if the time of repair is beyond the control of the RE. This phrase should be replaced with "inform their TO or BA as applicable of the failure, and provide estimates as to the time the Interpersonal Communication capabilities will be restored."
Response: The RCSDT has gone to great lengths to provide some flexibility for those DPs and GOPs with little or no impact on the reliability of the BES. FERC directed NERC to provide for this consideration. Therefore, we use the language as proposed in R11. Mutually agreeable implies that both parties are willing to accept the outcome. It doesn't mean that a DP or GOP must comply with the wishes of its TOP or BA because as you state that could be beyond the control of the DP or GOP. However, what transpires in the consultation is a realization of what the situation is, what the impacts to reliability are and a determination of what is amicable to both parties. The RCSDT has made clarifying changes to R11 to use mutually agreeable action rather than time for restoration.		
We Energies	No	R11 Implies that R8 and R9 are independent and redundant to R5.3, R5.4 and R3.3 and R3.4. R11 is not clear on the purpose of the statement "determine a mutually agreeable time for restoration" this could be driven by forces outside the control any of the entities. I think" provide estimated restoration and actual restoration time and determine mutually agreeable alternative during outage" would be better. Update M9 accordingly.
Response: The RCSDT has made clarifying changes to R11 to use mutually agreeable action, rather than time for restoration.		
Indiana Municipal Power Agency	No	IMPA does not believe that this requirement is necessary in order to ensure communication lines are restored by Distribution Providers and Generator Operators. If this requirement is kept, IMPA does not think the use of the words "a failure of any of its Interpersonal Communication capabilities" is acceptable. The RCSDT notes the intent of this requirement is not to ensure that DP and GOP communication lines are restored. The intent of this requirement is to provide some flexibility for the DP or GOP that does not have an impact on the reliability of the BES. Depending on the impact of the given entity, the TOP or BA can be flexible in specifying when the Interpersonal Communication capability must be restored,

Organization	Yes or No	Question 4 Comment
		rather than requiring the availability and use of an Alternative Interpersonal Communication capability. No change made. The wording is too inclusive and should apply to only primary Interpersonal Communication capabilities. IMPA is also concerned about how entities are supposed to know when the telephone companies may have equipment repaired in order to determine a mutually agreeable time to restore Interpersonal Communication capability. The entity may have no control over the restoration and hence would not be able to set a time other than whenever the capabilities are restored by for instance the telephone company. The RCSDT deliberately avoided the use of primary and secondary mediums and elected to use communications capabilities. As such, R11 applies to Interpersonal Communication capabilities of the DP and GOP. The RCSDT has gone to great lengths to provide some flexibility for those DPs and GOPs with little or no impact on the reliability of the BES. FERC directed NERC to provide for this consideration. Therefore, we use the language as proposed in R11. No change made. It does not mean that a DP or GOP must comply with the wishes of its TOP or BA because as you state that could be beyond the control of the DP or GOP. However, what transpires in the consultation is a realization of the situation, what the impacts to reliability are and a determination of what is amicable to both parties. No change made. The RCSDT has made clarifying changes to R11 to use mutually agreeable action rather than time for restoration. In addition, entities will have to keep evidence to show that a “mutually” agreeable time was reached by two or more entities. The most workable solution would be to require notification if primary Interpersonal Communication is lost and a follow-up notification when that capability is restored. The RCSDT notes that R11 does not limit the sources of information used by the DP or GOP in establishing a mutually agreeable restoration action for its Interpersonal Communication capability with its TOP or BA; that is precisely why R11 is written in

Organization	Yes or No	Question 4 Comment
		this manner. This allows flexibility on the part of the TOP and BA in determining when the Interpersonal Communication capability must be restored. In situations where there is little or no impact to the reliability of the BES, some flexibility could be allowed without requiring the acquisition of Alternative Interpersonal Communication capability. No change made.
Response: See response above.		
NextEra Energy, Inc.	No	NextEra Energy, Inc. (NextEra), which includes Florida Power & Light Company, believes that Requirement 11 of COM-001-2, as drafted, is too vague to be adopted as a mandatory Reliability Standard. For example, it is unclear what is meant by “shall consult.” The North American Electric Reliability Corporation’s (NERC) Rules of Procedure state that a foundation of any Reliability Standard is that: “. . . [the] reliability standard shall be stated using clear and unambiguous language. Responsible entities, using reasonable judgment and in keeping with good utility practices, are able to arrive at a consistent interpretation of the required performance.” The term “shall consult” is not a term generally understood or used in the electric utility industry, and, therefore, does not enable a consistent interpretation of the performance required. Accordingly, NextEra requests that Requirement 11 either: (i) be deleted; or (ii) be redrafted to read more like Requirement 10.
Response: The RCSDT believes the term, “consult,” is well understood. Basically, entities must have a conversation. No change made.		
Manitoba Hydro	No	COM-001-2 R11 does not specify a timeline in which entities have to come up with a ‘mutually agreeable’ time to restore Interpersonal Communication capability. Manitoba Hydro believes this omission creates a reliability gap and suggests that wording be revised as follows: ‘... shall consult with their Transmission Operator or

Organization	Yes or No	Question 4 Comment
		Balancing Authority as applicable and determine a mutually agreeable time to restore the Interpersonal Communication capability within 24 hours of experiencing the failure.'
Response: The RCSDT has made clarifying changes to R11 to use mutually agreeable action rather than time for restoration. The RCSDT believes R11 grants the DP and GOP flexibility in determining, in conjunction with its TOP or BA, when its Interpersonal Communication capability must be restored. This would provide allowances for those entities, which have little or no impact on the reliability of the BES while not requiring them to obtain Alternative Interpersonal Communication capabilities. No change made.		
Great River Energy	No	Capability is not used consistently in R7 and R11. It changes from singular to plural.
Response: The RCSDT thanks you for your observation. Generally, the singular implies the plural or vice-versa. The RCSDT has corrected R10 and R11 to be consistent with the singular application.		
American Electric Power	No	Regarding COM-001-02 R10 and R11, some of the entity pairs (for example, BA to a GO) are not required to have alternative inter-personnel communication. How can the notification occur with 60 minutes for example, when primary communication is not available for a role that doesn't require an alternate means of communication? In addition, requiring notification within 60 minutes in Requirement 10 would not be feasible for larger entities that might have hundreds of contacts to make.
Response: The RCSDT thanks you for your comment. The notification within 60 minutes found in R10 pertains to the BA, RC and TOP; therefore, these entities are required to have designated Alternative Interpersonal Communication capability with other entities and more specifically other BA, TOP and RC entities. It is understood by virtue of R11 that the DP and GOP may not have Alternative Interpersonal Communication capability and may not be notified within 60 minutes. No change made.		
Georgia Transmission Corporation	No	The intent of this requirement is not yet clear. Technically, the air we breathe, as well as other mediums like "any" cell phone, fax lines, and/or email accounts would qualify under this proposed definition of Interpersonal Communication. The burden for compliance evidence to demonstrate failure of "any of its Interpersonal Communication capability" would seem unobtainable and could prove to be a daily

Organization	Yes or No	Question 4 Comment
		occurrence (dropped phone calls, etc.). The following is suggested to utilize the singular form of capability rather than plural form of capabilities: <i>R11. Each Distribution Provider and Generator Operator that experiences a failure of its Interpersonal Communication capability shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability.</i>
Response: The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure.		
Nebraska Public Power District	No	We would suggest deleting the phrase ‘any of’ in the Requirement. It would then read: <i>‘Each DP and GOP that experiences a failure of its Interpersonal Communication...’</i> The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure. Also, how does the DP or GOP consult with its TOP or BA when it loses its Interpersonal Communications capability? To do this wouldn’t they have to have an Alternative Interpersonal Communications capability? The RCSDT notes that R11 does not limit the sources of information used by the DP or GOP in establishing mutually agreeable action for restoration for its Interpersonal Communication capability with its TOP or BA; that is precisely why R11 is written in this manner. This allows flexibility on the part of the TOP and BA in determining when the Interpersonal Communication capability must be restored. In situations where there is little or no impact to the reliability of the BES, some flexibility could be

Organization	Yes or No	Question 4 Comment
		allowed without requiring the acquisition of Alternative Interpersonal Communication capability. No change made.
Response: See response above.		
Georgia System Operations	No	The intent of this requirement is not yet clear. Technically, the air we breathe, as well as other mediums like “any” cell phone, fax lines, and/or email accounts would qualify under this proposed definition of Interpersonal Communication. The burden for compliance evidence to demonstrate failure of “any of its Interpersonal Communication capability” would seem unobtainable and could prove to be a daily occurrence (dropped phone calls, etc.). The following is suggested: <i>R11. Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capability shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability.</i>
Response: The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure.		
Ingleside Cogeneration LP	No	Most of Ingleside Cogeneration’s communications capabilities rely on carriers who will immediately deploy technicians to repair land-based or wireless systems when they break. Although we may contact the carrier to inform them that the systems are not available – or to determine their progress – we do not want them waiting for our go-ahead before proceeding. If the intent of this requirement is to validate the operation of the repaired connection, or to establish interim means of communications with other operating entities, then Ingleside Cogeneration believes a re-write is in order. There is no reliability purpose being served otherwise that we can tell.
Response: The RCSDT believes there is nothing in R11 that says repairs by communication technicians should wait on anyone for a		

Organization	Yes or No	Question 4 Comment
		go-ahead. The RCSDT sees it working this way: When a communication link goes down, a communication technician is dispatched as soon as the failure is noted and according to the agreements regarding repair between the provider and the user. When the user contacts the provider, an estimate of the anticipated repair time should be provided. One would expect this type of arrangement in service agreements. The user, DP or GOP, then takes that time to the consultation with the TOP or BA. Based on this anticipated restoration time and the impact the DP or GOP has on the reliability of the BES, a mutually agreed to restoration action is established. No change made.
Duke Energy	No	The phrase “consult with... to determine a mutually agreeable time” makes this requirement too open-ended to be auditable and enforceable. The RCSDT has made clarifying changes to R11 to use mutually agreeable action rather than time for restoration. We question why R11 does not establish a timeframe for notification similar to R10, which requires the RC, TOP or BA to make notification within 60 minutes of failure detection. The RCSDT thanks you for your comment. The notification within 60 minutes found in R10 pertains to the BA, RC and TOP; therefore, these entities are required to have designated Alternative Interpersonal Communication capability with other entities and more specifically other BA, TOP and RC entities. It is understood by virtue of R11 that the DP and GOP would not have Alternative Interpersonal Communication capability and would not be notified within 60 minutes. No change made. We also question why DPs and GOPs are not required to have Alternative Interpersonal Communications capability in order to be able to make such notifications. The RCSDT believes that R11 grants the DP and GOP flexibility in determining, in conjunction with its TOP or BA, when its Interpersonal Communication capability must be restored. This would provide allowances for those entities which have little or no impact on the reliability of the BES while not requiring them to obtain Alternative Interpersonal Communication capabilities. The requirement allows flexibility in “consult with” by not naming the method. If all communications are out,

Organization	Yes or No	Question 4 Comment
		then the DP or GOP may have to meet the requirement by an in-person consultation. No change made.
Response: See response above.		
ISO New England	No	ISO-NE does not believe COM-001, in its entirety, is a results-based standards and therefore does not support the draft as written. We believe such “requirements” (i.e. capabilities) should be verified through an entity certification process. Additionally, results-based requirements should be the driver to have the capability to achieve them; on other words, there is no other way to reliably dispatch than to have communications facilities (electronic or voice).
Response: Although this is not a results-based standard, the RCSDT believes it is a significant improvement over the current COM-001 standard. No change made.		
ReliabilityFirst	No	ReliabilityFirst believes Distribution Provider and Generator Operator should be added to Requirement R10 and Requirement R11 should be removed. Finite time frames should be prescribed for each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities. ReliabilityFirst believes that the failure of Interpersonal Communication between Distribution Providers/Generator Operators and Transmission Operators/Balancing Authorities could have the same negative effects similar to the failure of Interpersonal Communication by the Reliability Coordinator, Transmission Operator, and Balancing Authority.
Response: If the RCSDT made the changes proposed, the standards loses the flexibility of the TOP and BA to work with DPs and GOPs which have little or no adverse reliability impact on the BES. The RCSDT feels we need to maintain this flexibility. In fact, FERC directed NERC to do so in Order 693. No change made.		
City of Vero Beach	No	By use of the term “any” in the phrase “a failure of any of its Interpersonal

Organization	Yes or No	Question 4 Comment
		Communication” the standard will actually create a disincentive for redundant communications with DPs and GOPs due to compliance risk. The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure. To truly further the goals of reliability, the requirement should align with R3.3 and R3.4 which requires a primary Interpersonal Communications capability and R4 which does not require DPs or GOPs to have Alternative Interpersonal Communications capability. A possible solution is through use of the terms “Primary” for R3 and “Alternate” for R4 and then make R11 applicable to Primary only. The RCSDT deliberately stayed away from the use of primary and secondary mediums and prefers to use communications capabilities. Further, the RCSDT has gone to great lengths to provide some flexibility for those DPs and GOPs with little or no impact on the reliability of the BES. FERC directed NERC to provide for this consideration. Therefore, we use the language as proposed in R11. Mutually agreeable implies that both parties are willing to accept the outcome. It doesn’t mean that a DP or GOP must comply with the wishes of its TOP or BA because as you state that could be beyond the control of the DP or GOP. But what transpires in the consultation is a realization of what the situation is, what the impacts to reliability are and a determination of what is amicable to both parties. No change made. The RCSDT emphasizes the requirement refers only to Interpersonal Communication capabilities. Adding the phrase “to the primary” is not needed. Please refer to the definitions of Interpersonal Communication and Alternative Interpersonal Communication for clarification. No change made.
Response: See response above.		
Midwest Independent	No	MISO requests clarification regarding

Organization	Yes or No	Question 4 Comment
Transmission System Operator		(1) when Distribution Providers/Generator Operators have an obligation to collaborate with Transmission Operators versus Balancing Authorities; and (2) the obligation of Transmission Operators to inform Balancing Authorities (and vice versa) of an agreed upon time for restoration of Interpersonal Communication capability when collaboration occurs only between Transmission Operators and Distribution Providers/Generator Operators or, conversely, Balancing Authorities and Distribution Providers/Generator Operators.
Response: The RCSDT believes, (1) As specified in R11, the DP and GOP have an obligation to consult with their TOP and/or BA with who they are experiencing an Interpersonal Communication capability failure. If the DP or GOP experiences a failure with the TOP, then they consult with the TOP. If that failure is with the BA, they consult with the BA. If the failure is with both the TOP and BA, they consult with both. (2) There is no such obligation. Both the TOP and BA are required to have Alternative Interpersonal Communication capability, which would be used as a substitute for the Interpersonal Communication capability. No change made.		
Texas Reliability Entity	No	(1) Why does R10 refer to “failure of its Interpersonal Communications capabilities” while R11 refers to “failure of **any of** its Interpersonal Communications capabilities”? What is the distinction that is intended by addition of the words “any of”? The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure. (2) As a Compliance Enforcement Authority, we have several fundamental questions regarding what is intended in this standard. It appears the drafting team is using the defined term “Interpersonal Communications” to refer to a designated primary communication medium, and the term “Alternative Interpersonal Communications” to refer to one or more designated backup communication mediums. Is that correct?

Organization	Yes or No	Question 4 Comment
		This should be clarified in the Standard. (2) The RCSDT deliberately stayed away from the use of primary and secondary mediums and prefers to use communications capabilities. However, you are correct in considering the Alternative Interpersonal Communication capability as a substitute for the Interpersonal Communication capability, as specified in their respective definitions. No change made. (3) There is ambiguity in the current draft because the defined term “Interpersonal Communications” appears to include primary, back-up and all other mediums that may be available (which may include landline phone, cell phone, satellite phone, instant messaging, email, and data links, all in one facility), including any “Alternative Interpersonal Communications.” (3) Interpersonal Communication capability could use any of the mediums mentioned in your comment. Likewise, the Alternative Interpersonal Communication capability could be any of those mediums, as well, provided that it did not use the same infrastructure as the Interpersonal Communication capability. No change made. Do R10 and R11 apply to ALL available mediums, or just to the designated primary and back-up mediums? Does R9 apply to ALL available back-up mediums, or just to a specifically designated back-up medium? The RCSDT deliberately stayed away from the use of primary and secondary mediums and prefers to use communications capabilities. Further, the RCSDT has gone to great lengths to provide some flexibility for those DPs and GOPs with little or no impact on the reliability of the BES. FERC directed NERC to provide for this consideration. Therefore, we use the language as proposed in R11. Mutually agreeable implies that both parties are willing to accept the outcome. It doesn’t mean that a DP or GOP must comply with the wishes of its TOP or BA because as you state that could be beyond the control of the DP or GOP. But what transpires in the consultation is a realization of what the situation is, what the impacts to reliability are

Organization	Yes or No	Question 4 Comment
		and a determination of what is amicable to both parties. No change made.
Response: See response above.		
Dominion	Yes	Dominion agrees with the intent of R11; however, suggest language changes for consistency with R10 as follows: <i>R11. Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability. [Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i>
Response: The RCSDT has made clarifying changes to R11 to use mutually agreeable action, rather than time for restoration.		
NV Energy	Yes	Agree, however, the ability for a DP or GOP to have such consultation with its TOP or BA would likely be hampered by the failure of the Interpersonal Communications itself. DP and GOP are only required to have a single source for this Interpersonal Communications.
Response: RCSDT did not want to burden the DP and GOP with having Alternative Interpersonal Communication capability based on Paragraph 508 of Order No. 693. There are multiple avenues of communication technology available to comply with R11. No change made.		
NIPSCO		If the Interpersonal Communication is down, and no backup is required for the DP and GOP, how are they to consult and collaborate?
Response: RCSDT did not want to burden the DP and GOP with having Alternative Interpersonal Communication capability based on Paragraph 508 of Order No. 693. There are multiple avenues of communication technology available to comply with R11. No change made.		
City of Tacoma, Department	Yes	

Organization	Yes or No	Question 4 Comment
of Public Utilities, Light Division, dba Tacoma Power		
Bonneville Power Administration	Yes	
Southwest Power Pool Regional Entity	Yes	
MISO Standards Collaborators	Yes	
Salt River Project	Yes	
San Diego Gas & Electric	Yes	
Xcel Energy	Yes	
Independent Electricity System Operator	Yes	
Oncor Electric Delivery Company LLC	Yes	
City of Jacksonville Beach dba/ Beaches Energy Services	Yes	
Luminant Energy Company LLC	Yes	
Pepco Holdings Inc.	Yes	

Organization	Yes or No	Question 4 Comment
Exelon	Yes	
Niagara Mohawk (dba National Grid)	Yes	
South Carolina Electric and Gas	Yes	
BGE	Yes	
ERCOT ISO	Yes	
Hydro One Networks Inc.	Yes	
American Transmission Company, LLC	Yes	

5. The proposed definition of Reliability Directive shown in COM-002-3 was revised to include Adverse Reliability Impact as shown to more fully address emergencies or events that might lead to instability or Cascading: Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact. Do you agree with the proposed definition? If not, please explain in the comment area below.

Summary Consideration: There were a significant number of comments about the definition of Reliability Directive with accompanying suggested language; for example, having the definition to prescribe a level of performance. The practice of writing a level of performance within a definition is discouraged and generally prevents future use of the term. Several comments pertained to compliance with the requirements; for example, would an entity be required to use three-part communication for a voltage schedule? The requirements do not preclude an entity from doing so; however, the requirements focus on the situation of addressing an Emergency or Adverse Reliability Impact. Other concerns were raised that the terms “Emergency” and “Adverse Reliability Impact” are the same. The RCSDT believes these terms capture independent conditions. The term “Emergency” implies situations where the event is anticipated or currently happening. Likewise, Adverse Reliability Impact clearly identifies a potential or actual event in the phrase, “an event that results in.” The RCSDT notes the definition of Adverse Reliability Impact is the revised term, which is NERC Board of Trustees adopted and is pending regulatory filing in IRO-014-2. Additionally, using the currently adopted version does not capture the full spectrum of the proposed definition by the RCSDT.

The development of the term Reliability Directive concept places a heightened awareness on actions that are required to avoid an Adverse Reliability Impact. Additionally, the use of “direct” is consistent with the uses of “direct” in other standards. A commenter had a concern about the removal of “issued in a clear, concise, and definitive manner” would lead to repeating the process. The RCSDT believes it to be in the interest of the issuer to do this without the burden of a requirement. Additionally, this type of requirement would be difficult to measure and by virtue of the issuer having to confirm the Reliability Directive; it is to the issuer’s advantage to be clear for efficient communications. Other minor formatting and corrections to references were made to align requirements, measures, and compliance components. Several other comments were made that are addressed in the questions above.

Organization	Yes or No	Question 5 Comment
Constellation Power Source Generation, Inc.	Negative	As we commented on Project 2007-03 TOP-001-2, the definition of Reliability Directive is an improvement but the definition must capture the identification concept that is reflected in the Requirement (R1). As a result, when Reliability

Organization	Yes or No	Question 5 Comment
		Directive is used elsewhere, it would be clear that the communication must be identified as a Reliability Directive. We suggest the following revision to the definition and it should follow through to Project 2006-06 IRO-001-3 and Project 2007-03 TOP-001-2, eventually being added to the Reliability Standards Glossary of Terms. <i>A communication identified as a Reliability Directive by a Reliability Coordinator, Transmission Operator, or Balancing Authority to initiate action by the recipient to address an Emergency or Adverse Reliability Impact.</i> The RCSDT thanks you for your comment; however, the suggested improvement is addressed in the requirement COM-002-3, R1 (see below). Definitions should avoid a structure that identifies an action or performance of an entity. The Standard Processes Manual (SPM), “Process for Developing a Defined Term”, Page 22 states in the first paragraph: “Definitions shall not contain statements of performance Requirements.” No change made. “R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time]” IRO-001-3 uses the term ‘direct’ in its purpose statement, R1, R2 and R3. To avoid confusion with a Reliability Directive (both for auditors and entities), we suggest the following: To establish the authority of Reliability Coordinators to make requests of other entities to prevent an Emergency or Adverse Reliability Impacts to the Bulk Electric System. <i>R1: Each Reliability Coordinator shall have the authority to act or request others to act (which could include issuing Reliability Directives) to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or</i>

Organization	Yes or No	Question 5 Comment
		<i>Adverse Reliability Impacts.</i> <i>R2: Each Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider shall comply with its Reliability Coordinator’s request unless compliance with the request cannot be physically implemented, or unless such actions would violate safety, equipment, regulatory or statutory requirements, or unless the TOP, BA, GOP or DP convey a business reason not to comply with the request but express that they will comply if a Reliability Directive is given.</i> <i>R3: Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to perform as requested in accordance with Requirement R2.</i> The RCSDT feels the use of direct and directed is consistent with the purpose and application of those terms in other standards. The RCSDT believes using the word “request” makes the requirement conditional and is not consistent with the purpose of the standard. No change made.
Response: See response above.		
MidAmerican Energy Co.	Negative	Do not nest definitions. The use of the word “any” in the COM-002-3 and IRO-001-3 definition of “Emergency” is too broad and should be deleted. The use of “any” in regulatory standards almost always causes unintended consequences. The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure. The definition should be shortened to read: <i>“Abnormal system condition that requires automatic or immediate manual actions to prevent or limit Bulk Electric System transmission facility or generation failures that</i>

Organization	Yes or No	Question 5 Comment
		<i>could result in instability, uncontrolled separation, or cascading.”</i> The RCSDT appreciates the suggested rewording of the definition. The suggestion creates a disconnect with the already approved NERC glossary term. Additionally, the proposed definition adds new words which were not included originally. The RCSDT does not propose a new definition of Emergency. No change made.
Response: See response above.		
Tennessee Valley Authority	Negative	We suggest adding the words “and identified as a reliability directive to the recipient” at the end of the definition of Reliability Directive. The RCSDT thanks you for your comment; however, the suggested improvement is addressed in the requirement COM-002-3, R1 (see below). Definitions should avoid a structure that identifies an action or performance of an entity. The Standard Processes Manual (SPM), “Process for Developing a Defined Term”, Page 22 states in the first paragraph: “Definitions shall not contain statements of performance Requirements.” No change made. “R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time]” For R2, we question the phrase “physically implemented” and recommend that the intent be clarified in the language. The RCSDT believes there may be conditions where an entity may not be able to physically implement the direction; for example, an entity that does not have the right to access certain equipment or cannot manually operate a broken apparatus. We feel the proposed language achieves the intended purpose. No change made.
Response: See response above.		

Organization	Yes or No	Question 5 Comment
SERC OC Standards Review Group	No	We suggest adding the words “and identified as a reliability directive to the recipient” at the end of the definition of Reliability Directive. As written, this definition could lead to a dispute of what communications are Reliability Directives; leading to further dispute as to what Requirements are applicable. By adding this clarity in the definition of this term, clarity will not be needed in the application of this definition as is proposed in COM-002-3, Req 1. This would allow the removal of R1 from COM-002-3
Response: The RCSDT thanks you for your comment; however, the suggested improvement is addressed in the requirement COM-002-3, R1 (see below). Definitions should avoid a structure that identifies an action or performance of an entity. The Standard Processes Manual (SPM), “Process for Developing a Defined Term”, Page 22 states in the first paragraph: “Definitions shall not contain statements of performance Requirements.” No change made. “R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time]”		
CCG, CPG, CECD	No	As we commented on Project 2007-03 TOP-001-2, the definition of Reliability Directive is an improvement but the definition must capture the identification concept that is reflected in the Requirement (R1). As a result, when Reliability Directive is used elsewhere, it would be clear that the communication must be identified as a Reliability Directive. We suggest the following revision to the definition and it should follow through to Project 2006-06 IRO-001-3 and Project 2007-03 TOP-001-2, eventually being added to the Reliability Standards Glossary of Terms. <i>“A communication identified as a Reliability Directive by a Reliability Coordinator, Transmission Operator, or Balancing Authority to initiate action by the recipient to address an Emergency or Adverse Reliability Impact.”</i>
Response: The RCSDT thanks you for your comment; however, the suggested improvement is addressed in the requirement COM-		

Organization	Yes or No	Question 5 Comment
002-3, R1 (see below). Definitions should avoid a structure that identifies an action or performance of an entity. The Standard Processes Manual (SPM), “Process for Developing a Defined Term”, Page 22 states in the first paragraph: “Definitions shall not contain statements of performance Requirements.” No change made. “R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time]”		
Arizona Public Service Company	No	There is a risk of not properly identifying an abnormal condition (Emergency or Adverse Reliability Impact) in time to require specific use of the statement ‘this is a Reliability Directive’ when issuing switching on the system in the event of an emergency. The RCSDT believes that it is the responsibility of each entity to identify abnormal conditions when it requires an action to be executed as a Reliability Directive. If conditions are not identified as having Emergency or Adverse Reliability Impact, then the requirement is not applicable. No change made. This is a deviation from consistently using 3-way communication when an emergency occurs. It may not be apparent that an emergency exists and breaking from consistent use of expected 3-way communication could cause confusion. The RCSDT believes this does not preclude an entity from utilizing 3-part communications for activities other than Reliability Directives. No change made.
Response: See response above.		
Southern Company	No	This definition would encompass more communication than is now included. The definition now requires that a directive be declared as a part of the three part communication. For example, sending out the voltage schedule each morning would be included as a directive using the new definition. The RCSDT thanks you for your comment; however, we believe the definition of Reliability Directive is specific in the nature of the communication while providing

Organization	Yes or No	Question 5 Comment
		adequate flexibility for the responsible entity to define those conditions that would rise to the level of a Reliability Directive. No change made. We suggest adding the words “and identified as a reliability directive to the recipient” at the end of the definition of Reliability Directive. This would allow the removal of R1 from COM-002-3 The RCSDT thanks you for your comment; however, the suggested improvement is addressed in the requirement COM-002-3, R1 (see below). Definitions should avoid a structure that identifies an action or performance of an entity. The Standard Processes Manual (SPM), “Process for Developing a Defined Term”, Page 22 states in the first paragraph: “Definitions shall not contain statements of performance Requirements.” No change made. “R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time]”
Response: See response above.		
Entergy Services, Inc	No	An Adverse Reliability Impact is a type of Emergency. Including a new term for Adverse Reliability Impact and including both terms in the definition for Reliability Directive doesn’t add clarity. I suggest changing the definition for Reliability Directive to remove phrase “or Adverse Reliability Impact.”
Response: The RCSDT thanks you for your comment; however, the RCSDT believes the definition captures two independent conditions, anticipated and after or post event. The definition of Emergency implies situations where the event is anticipated or currently happening. Likewise, the definition of Adverse Reliability Impact clearly identifies as a potential or actual event in the phrase, “an event that results in.” Both conditions are important to the definition. The RCSDT notes that the term, “Adverse Reliability Impact,” is a currently defined NERC Glossary term; however, the term as it appears in the standard is the revised term, which is NERC Board of Trustee adopted and pending regulatory filing in IRO-014-2: “The impact of an event that results in Bulk		

Organization	Yes or No	Question 5 Comment
Electric System instability or Cascading.” No change made.		
NextEra Energy, Inc.	No	NextEra objects to the use of “Adverse Reliability Impact” in Reliability Standards COM-002-3 and IRO-001-3. NextEra requests that the use of Adverse Reliability Impact be revised as suggested below or it be deleted from the definition of Reliability Directive. NextEra does not agree with the use of Adverse Reliability Impact in the definition of “Reliability Directive” for the following reasons: 1. This term Adverse Reliability Impact is ambiguous. In part, the term is ambiguous because it includes in its definition the term “instability,” which has lead to considerable misunderstanding and confusion in the industry. There are also differing views on what is (and is not) Cascading, because the definition is not sufficiently clear. For example, some believe instability and Cascading occur when an event affects multiple substations of one Transmission Operator, while others believe instability or Cascading only occur when the event affects more than one Transmission Operator’s system. As mentioned in response to item 4, above, Reliability Standards must be clear and consistently interpreted. It is not appropriate to issue a Standard that perpetuates the use of terms that lack consistent interpretation. 2. While not perfect, the term Emergency is better understood in the industry, and it may include many or all of the instances of instability or Cascading intended to be captured by Adverse Reliability Impact. Consequently, it is not advisable to introduce Adverse Reliability Impact as a new term, when it is not clearly distinguishable from Emergency. NextEra is concerned that an unclear and imprecise term, such as Adverse Reliability Impact, does not promote reliability, and, such a term is particularly troublesome in the context of real time system operations. Therefore, for the reasons stated above, NextEra believes that the term Adverse Reliability Impact should be deleted from the definition of Reliability Directive. In the alternative, if Adverse Reliability Impact is not deleted from the definition of Reliability Directive in Reliability Standards COM-002-3 and IRO-001-3, NextEra

Organization	Yes or No	Question 5 Comment
		requests that Adverse Reliability Impact be revised to read: <i>“an event or condition on the Bulk Electric System that may, or is leading to, Cascading over more than one Bulk Electric System transmission system.”</i>
Response: The RCSDT thanks you for your comment; however, the RCSDT believes the definition captures two independent conditions, anticipated and after or post event. The definition of Emergency implies situations where the event is anticipated or currently happening. Likewise, the definition of Adverse Reliability Impact clearly identifies as a potential or actual event in the phrase, “an event that results in.” Both conditions are important to the definition. The RCSDT notes that the term, “Adverse Reliability Impact,” is a currently defined NERC Glossary term; however, the term as it appears in the standard is the revised term, which is NERC Board of Trustee adopted and pending regulatory filing in IRO-014-2: “The impact of an event that results in Bulk Electric System instability or Cascading.” No change made.		
Niagara Mohawk (dba National Grid)	No	The "adverse reliability impact" definition is not clear, is this an actual event or contingency? The words imply it is an actual event, which is already covered in the "Directive" definition. If the intent is to apply directives to potential stability or cascading contingencies it should say so.
Response: The RCSDT notes that the term, “Adverse Reliability Impact,” is a currently defined NERC Glossary term; however, the term as it appears in the standard is the revised term, which is NERC Board of Trustee adopted and pending regulatory filing in IRO-014-2: “The impact of an event that results in Bulk Electric System instability or Cascading.” The pending definition covers the application to potential instability and cascading conditions. The RCSDT included the phrase “to address” in the proposed definition of “Reliability Directive” to account for (1) potential and (2) actual events leading to an Emergency or Adverse Reliability Impact.” No change made.		
BGE	No	BGE would prefer that the definition of Reliability Directive include the requirement to identify the fact that a Reliability Directive is being issued. See the following proposed definition: <i>Reliability Directive: A communication initiated and identified as a Reliability Directive, by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an Emergency or Adverse</i>

Organization	Yes or No	Question 5 Comment
		<i>Reliability Impact.</i>
Response: The RCSDT thanks you for your comment; however, the suggested improvement is addressed in the requirement COM-002-3, R1 (see below). Definitions should avoid a structure that identifies an action or performance of an entity. The Standard Processes Manual (SPM), “Process for Developing a Defined Term”, Page 22 states in the first paragraph: “Definitions shall not contain statements of performance Requirements.” No change made. “R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time]”		
Duke Energy	No	-Since FERC has not yet approved the new definition of Adverse Reliability Impact, we believe the term “Adverse Reliability Impact” should be replaced by the words of the BOT-approved definition: “the impact of an event that results in Bulk Electric System instability or Cascading.” The RCSDT notes that the term, “Adverse Reliability Impact,” is a currently defined NERC Glossary term; however, the term as it appears in the standard is the revised term, which is NERC Board of Trustee adopted and pending regulatory filing in IRO-014-2: “The impact of an event that results in Bulk Electric System instability or Cascading.” The RCSDT thanks you for your comment; however, by inserting the text of the currently adopted version of the Adverse Reliability Impact definition would create a loss of continuity in the intent of the pending definition. No change made. -Also, add the phrase “and the communication is identified as a reliability directive to the recipient” to the end of the definition of Reliability Directive. This will eliminate potential confusion regarding when a communication is a Reliability Directive, and when a communication is a routine instruction. Revising the definition in this manner may also eliminate the need Requirement R1 of COM-002-3. If R1 is retained, we suggest rewording as follows: <i>“Each Reliability Coordinator, Transmission Operator, or Balancing Authority shall identify a Reliability Directive to the recipient when it issues a Reliability Directive</i>

Organization	Yes or No	Question 5 Comment
		<i>that requires an action or actions to be executed.”</i> The RCSDT thanks you for your comment; however, the suggested improvement is addressed in the requirement COM-002-3, R1 (see below). Definitions should avoid a structure that identifies an action or performance of an entity. The Standard Processes Manual (SPM), “Process for Developing a Defined Term”, Page 22 states in the first paragraph: “Definitions shall not contain statements of performance Requirements.” No change made. “R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time]” -Proposed reworded definition: <i>“Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where action by the recipient is necessary to address an Emergency or the impact of an event that results in Bulk Electric System instability or Cascading, and the communication is identified as a Reliability Directive to the recipient.”</i> The RCSDT thanks you for your comment; however, the suggested improvement is addressed in the requirement COM-002-3, R1 (see below). Definitions should avoid a structure that identifies an action or performance of an entity. The Standard Processes Manual (SPM), “Process for Developing a Defined Term”, Page 22 states in the first paragraph: “Definitions shall not contain statements of performance Requirements.” No change made. “R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time]”

Organization	Yes or No	Question 5 Comment
Response: See response above.		
ReliabilityFirst	No	ReliabilityFirst believes the definition of “Reliability Directive” should be all inclusive and include “all” actions initiated by the Reliability Coordinator, Transmission Operator or Balancing Authority (not just Emergency or Adverse Reliability Impacts). Even though Emergency or Adverse Reliability Impacts are defined, during operations, it may become a gray area to whether or not it falls under the intent of a “Reliability Directive.” The RCSDT appreciates your comment about including all actions initiated by the BA, RC and TOP; however, the RCSDT has determined that the development of the Reliability Directive concept improves reliability by placing a heightened awareness on actions that are required to avoid an Adverse Reliability Impact. Additionally, the industry does not support the proposed suggestion above based on previous postings and comments. No change made. Furthermore, if the system falls under a condition that results in an Adverse Reliability Impact, it may be too late for a Reliability Coordinator, Transmission Operator or Balancing Authority to issue a Reliability Directive. ReliabilityFirst recommends the following for revision to the term “Reliability Directive”: <i>Reliability Directive - A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where an action by the recipient is required.</i> The RCSDT has determined that the development of the Reliability Directive concept as currently drafted, improves reliability by placing a heightened awareness on actions that are required to avoid an Adverse Reliability Impact. Additionally, the industry does not support the proposed suggestion above based on previous postings and comments. No change made.
Response: See response above.		

Organization	Yes or No	Question 5 Comment
Midwest Independent Transmission System Operator	No	The proposed definition of Reliability Directive is unacceptable because the use of the defined terms “Emergency” and “Adverse Reliability Impact” results in an undefined, broadened scope of responsibility for Reliability Coordinators when coupled with the definition of the Bulk Electric System. This may lead to confusion/ambiguity for Reliability Coordinators that must be clarified to ensure compliance. Further, this broadened scope may mis-direct Reliability Coordinator’s attention and mitigation efforts to small-scale, localized issues that represent no true threat to the operation of the Interconnection.
Response: The RCSDT thanks you for your comment; however, the RCSDT believes the definition actually narrows the responsibility by framing the condition(s) within which it is appropriate for anticipated actions necessary to address an Emergency or Adverse Reliability Impact. The IRO standards require the Reliability Coordinator to respond to issues regardless of the scale of issues. No change made.		
Texas Reliability Entity	No	We oppose the definition of Reliability Directive as it is currently being proposed in this standard because three-part communication should not be required only after an Emergency or Adverse Reliability Impact actually occurs. In particular, we object to the removal of the word “expected” (or “anticipated”) from the definition, because Reliability Directives may be required before a situation escalates to an Emergency, in order to prevent the Emergency from occurring. This proposed change potentially undermines efforts required to avoid emergencies and events. We note that there are instances in other Reliability Standards where “anticipated” conditions require actions to be taken (e.g. TOP-001-1 R5 and EOP-002 R4), when clear, concise, and definitive communication, verbal or electronic, is required to avoid or mitigate an impending emergency.
Response: The RCSDT notes that the term, “Adverse Reliability Impact,” is a currently defined NERC Glossary term; however, the term as it appears in the standard is the revised term, which is NERC Board of Trustee adopted and pending regulatory filing in IRO-014-2: “The impact of an event that results in Bulk Electric System instability or Cascading.” The pending definition covers the		

Organization	Yes or No	Question 5 Comment
application to potential instability and cascading conditions. The RCSDT included the phrase “to address” in the proposed definition of “Reliability Directive” to account for (1) potential and (2) actual events leading to an Emergency or Adverse Reliability Impact.” No change made.		
New York Independent System Operator	No	It is not clear the distinction between an Emergency and ARI. We would like to confirm that Since ARI is the impact of an event that results in instability or cascading, that an ARI is a subset of an emergency? Or said differently is an ARI simply instability or cascading? Ultimately, if ARI is a subset of Emergency, then why do we need both in the requirement?
Response: The RCSDT thanks you for your comment; however, the RCSDT believes the definition captures two independent conditions, anticipated and after or post event. The definition of Emergency implies situations where the event is anticipated or currently happening. Additionally, the term “Adverse Reliability Impact” is a currently defined NERC Glossary term; however, the term as it appears in the standard is the revised term, which is NERC Board of Trustee adopted and pending regulatory filing in IRO-014-2: “The impact of an event that results in Bulk Electric System instability or Cascading.” The pending definition covers the application to potential instability and cascading conditions. The RCSDT included the phrase “to address” in the proposed definition of “Reliability Directive” to account for (1) potential impacts of events and (2) actual events leading to an Emergency or Adverse Reliability Impact.” No change made.		
Oncor Electric Delivery	Affirmative	"Oncor requests clarity about what constitutes a “recipient.” For example, if a Transmission Grid Operator performing the functions of a Transmission Operator issues a Reliability Directive to its own field operations personnel to perform an action on behalf of the same entity, does the field operations personnel as the recipient become in affect a “Transmission Operator” subject to R2?"
Response: The term “recipient” in this case is referring to entity-to-entity communication and is inferred by Requirement R2 naming the entities. No change made.		
Constellation Energy	Affirmative	As we commented on Project 2007-03 TOP-001-2, the definition of Reliability

Organization	Yes or No	Question 5 Comment
Commodities Group		Directive is an improvement but the definition must capture the identification concept that is reflected in the Requirement (R1). As a result, when Reliability Directive is used elsewhere, it would be clear that the communication must be identified as a Reliability Directive. We suggest the following revision to the definition and it should follow through to Project 2006-06 IRO-001-3 and Project 2007-03 TOP-001-2, eventually being added to the Reliability Standards Glossary of Terms. <i>“A communication identified as a Reliability Directive by a Reliability Coordinator, Transmission Operator, or Balancing Authority to initiate action by the recipient to address an Emergency or Adverse Reliability Impact.”</i>
Response: The RCSDT thanks you for your comment; however, the suggested improvement is addressed in the requirement COM-002-3, R1 (see below). The definitions should avoid a structure that identifies an action or performance of an entity. The Standard Processes Manual (SPM), “Process for Developing a Defined Term”, Page 22 states in the first paragraph: “Definitions shall not contain statements of performance Requirements.” No change made. “R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time]”		
National Grid	Affirmative	Delete reference to "adverse reliability impact" in R1. The "adverse reliability impact" definition is not clear, is this an actual event or contingency? The words imply it is an actual event which is already covered in the "Directive" definition. If the intent is to apply directives to potential stability or cascading contingencies it should say so.
Response: The RCSDT thanks you for your comment; however, the RCSDT believes the definition captures two independent conditions, anticipated and after or post event. The definition of Emergency implies situations where the event is anticipated or currently happening. Additionally, the term “Adverse Reliability Impact” is a currently defined NERC Glossary term; however, the term as it appears in the standard is the revised term, which is NERC Board of Trustee adopted and pending regulatory filing in IRO-		

Organization	Yes or No	Question 5 Comment
014-2: “The impact of an event that results in Bulk Electric System instability or Cascading.” The pending definition covers the application to potential instability and cascading conditions. The RCSDT included the phrase “to address” in the proposed definition of “Reliability Directive” to account for (1) potential and (2) actual events leading to an Emergency or Adverse Reliability Impact.” No change made.		
Wisconsin Public Service Corp.	Affirmative	The Standards Drafting Team has provided a great deal of clarity regarding Reliability Directives, however we believe BES reliability would be further enhanced if Reliability Directives were still required to be issued in a clear, concise, and definitive manner. Under Emergency conditions, we feel this would enhance communications effectiveness and expedite parties taking necessary actions quickly.
Response: The RCSDT believes the current form of the requirements accomplish this objective. If the issuer is not clear, concise and definitive, it would lead to the issuer having to repeat the process. It is incumbent and beneficial to the issuer to meet this performance without a specific requirement to instruct. Additionally, measuring clear, concise and definitive manner poses significant issues. No change made.		
We Energies	Yes	The definition is acceptable, but as used may imply that all Emergency communications must be Reliability Directives.
Response: The RCSDT thanks you for your comment; however, definitions should avoid a structure that identifies an action or performance of an entity. The Standard Processes Manual (SPM), “Process for Developing a Defined Term”, Page 22 states in the first paragraph: “Definitions shall not contain statements of performance Requirements.” No change made.		
Ingleside Cogeneration LP	Yes	Ingleside Cogeneration agrees that it is important to clearly denote when a directive must be issued. In previous definitions, we believed that imprecise language made it difficult for the BA, RC, or TOP to determine if a gray area situation required a directive or not. With a more precise definition, it will eliminate second guessing by auditors that a directive was necessary because an outcome turned out poorly - even if an Emergency was not declared or an Adverse Reliability Impact did not occur.
Response: Thank you for your comment.		

Organization	Yes or No	Question 5 Comment
ERCOT ISO	Yes	The definition of Reliability Directive appropriately clarifies the importance of knowing the level of importance of any instructions being issued. If there is no room for variance from the specific action required, or if there is no time to further negotiate or discuss the action required, it is important that the instruction be identified as a Reliability Directive and for such instructions to be followed in a timely fashion. Normal operating instructions typically do not rise to this level of urgency and some variation from the words will not result in unmanageable reliability impacts. Also, there typically may be time for addressing the instructions in more than one way.
Response: Thank you for your comment.		
NIPSCO		The question of whether one is in a state of Emergency or Instability, or in an Abnormal Condition can be still be subjective; it may be difficult to provide evidence for an audit.
Response: The responsible entity determines “state of Emergency or instability” and acts accordingly. No change made.		
Pacific Northwest Generating Cooperative	Yes	
MRO NSRF	Yes	
City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Yes	
LG&E and KU Services Company	Yes	
Bonneville Power	Yes	

Organization	Yes or No	Question 5 Comment
Administration		
SPP Standards Review Group	Yes	
Dominion	Yes	
Western Electricity Coordinating Council	Yes	
Southwest Power Pool Regional Entity	Yes	
FirstEnergy	Yes	
MISO Standards Collaborators	Yes	
Florida Municipal Power Agency	Yes	
Global Engineering and Energy Solutions	Yes	
ACES Power Marketing Standards Collaborators	Yes	
Kansas City Power & Light	Yes	
Salt River Project	Yes	
San Diego Gas & Electric	Yes	

Organization	Yes or No	Question 5 Comment
Central Lincoln	Yes	
Shell Energy North America	Yes	
Xcel Energy	Yes	
Independent Electricity System Operator	Yes	
Liberty Electric Power LLC	Yes	
Oncor Electric Delivery Company LLC	Yes	
Consolidated Edison Co. of NY, Inc.	Yes	
City of Jacksonville Beach dba/ Beaches Energy Services	Yes	
Luminant Energy Company LLC	Yes	
Pepco Holdings Inc.	Yes	
Exelon	Yes	
Manitoba Hydro	Yes	
Orange and Rockland Utilities, Inc.	Yes	

Organization	Yes or No	Question 5 Comment
South Carolina Electric and Gas	Yes	
Georgia Transmission Corporation	Yes	
Nebraska Public Power District	Yes	
Georgia System Operations	Yes	
ISO New England	Yes	
City of Vero Beach	Yes	
NV Energy	Yes	
Hydro One Networks Inc.	Yes	
American Transmission Company, LLC	Yes	
Indiana Municipal Power Agency		No comment.

6. Do you have any other comment, not expressed in questions above, for the RC SDT?

Summary Consideration: This question yielded the most comments overall and many are duplicative of previous comments. For those duplicative comments, the RCSDT respectfully directs summary consideration of those comments to the above questions. Several commenters noted these standards are not “results-based” and this is mainly due to the project’s ongoing work. The standard(s), in a way, appear more results-based by not being prescriptive; however, the specific standards do not implement the results-based formatting. There were many comments about aligning the three standards to have the same implementation plan. The RCSDT agrees and aligned all three with the same implementation. Some comments questioned the need to have an authority requirement for the Reliability Coordinator in IRO-001-3, R1 because it appears to be granted under the ERO registration criteria. The ERO criteria does not provide for this authority. Additionally, IRO-001-3 does not limit the Reliability Coordinator’s authority to issuing only Reliability Directives. The Reliability Coordinator has the authority to direct, which could include Reliability Directives (a subset of direction or directing) is the theme carried out in each requirement. Some comments asked about direct, direction, and when an Emergency or Adverse Reliability Impact would be identified. The terms “direct” and “direction” are consistent with the intent of the standard in its authority and “identify” is upon recognition, which is a condition when the Reliability Coordinator would be acting or directing others to act. The requirements do not preclude the Reliability Coordinator from taking action for other situations, even if it is aware of situations beyond its area. A few comments concerned adding a time element to the requirements, such as, preventing events in Real-time; however, the assigned Time Horizons provide for this under Real-time Operations and Same Day Operations.

Comments noted a difference in “shall have” and “shall designate” within the requirements of COM-001-2. The intent of allowing an entity to “designate” allows the entity to designate the Alternative Interpersonal Communication capability providing greater flexibility in meeting the requirement. Additionally, there were comments about testing the Interpersonal Communication capability in addition to the Alternative Interpersonal Communication capability. The RCSDT intentionally omitted testing the Interpersonal Communication capability because routine use is sufficient to demonstrate functionality. The standard COM-001-2 measures have been updated to appropriately reflect the specific requirements and make the evidence examples clearer. There were several concerns about the designating a replacement Alternative Interpersonal Communication capability within two hours. The RCSDT notes the performance is to designate a replacement, not to accomplish the repairs. The reliability need is to designate what the Alternative Interpersonal Communication capability will be, should it be called upon. Commenters raised concerns about most of the VSLs in COM-001-2 being Severe. These VSLs are Severe because there are essential to reliability. By the construction of the requirement, VSLs are binary, which requires the VSLs to be Severe according to NERC VSL Guidelines. Some comments questioned the removal of requirement, R4. This requirement remains enforce until the approval of COM-003-1 under Project 2007-02.

Several commenters noted that COM-002-3 seems to be requiring the “how” to accomplish the communication coordination. The RCSDT emphasizes the requirements state the “what,” rather than “how.” In a basic sense, the “what” is highlighted by R1 by

identifying the communication as a Reliability Directive, next in R2 the recipient responds accordingly, and R3 the issuer confirms the communication. How the process is accomplished is up to the entity.

Some commenters were concerned about the measures and evidence. The measures are examples, and the entity is not limited to the examples provided; including letters of attestation, where appropriate. The RCSDT addressed other document errors, formatting issues, referencing, and mismatch issues raised in the comments. The Effective Date, Compliance, and Data Retention sections have been updated to the most current language used in standards through the standard review process.

Organization	Yes or No	Question 6 Comment
Alberta Electric System Operator	Abstain	IRO-001-3: The Alberta version of IRO-001 will outline limitations to the authority of the RC, that are required by Alberta legislation.
Response: The standard drafting team (SDT) has drafted requirements to address the purpose of the standard, repeated here: To establish the authority of Reliability Coordinators to direct other entities to prevent an Emergency or Adverse Reliability Impacts to the Bulk Electric System. The requirements have been drafted within the context established by the NERC Functional Model V5, and describes interrelationships of the functional entities in accordance with the Functional Model V5. Please address any variations from this structure, which may be required by Alberta legislation, with NERC as the ERO. No change made.		
City Utilities of Springfield, Missouri	Affirmative	City Utilities of Springfield, Missouri supports comments submitted by SPP.
Response: Thank you for your comment.		
United Illuminating Co.	Affirmative	COM-001-2: UI votes Affirmative with the comment that R1 through R9 are requirements in the Planning Horizon not the Real Time Operations horizon. These requirements are scoped to the establishment of communication processes with other entities not with actions taken by operations.
Response: The RCSDT recognizes that, in most instances, the establishment of communications capability and the designation of Alternative Interpersonal Communications capability will have taken place at some time in the past (which could be the operations planning horizon for the present Real-time instance). However, the full reason for such action is to be sure that the communications capability is in place and functional during the Real-time Operations horizon for use in Real-time operating actions. Therefore, the		

Organization	Yes or No	Question 6 Comment
RCSDT has established the applicable time horizon to be the Real-Time Operations horizon. No change made.		
SERC Reliability Corporation	Affirmative	COM-002-3 Comments R2: We recommend that the following phrase (in quotes) be added to R2: Each Balancing Authority, Transmission Operator and Distribution Provider that is the recipient of a Reliability Directive shall repeat, restate, rephrase or recapitulate the Reliability Directive "immediately upon receiving it." As written, there is no limit as to when the entity must repeat it (i.e. they could wait 2 hours) The Standard is not clear as to what each entity is to do when more than one entity receives a Reliability Directive at the same time (e.g. during a RC area teleconference call). For example, is a roll call of receiving entities expected to be held so that they individually can repeat, restate, rephrase or recapitulate the Reliability Directive followed by individual confirmation required in R3?
Response: The requirement aims at being a performance-based requirement, and states a description of “what” communication must take place, but does not prescribe “how” the communication is to be made. Adding the suggested phrase “immediately upon receiving it” introduces the ambiguous term “immediately,” for which there is neither plain meaning nor simple explanation. What must happen is that the recipient must respond in such a way that the issuer may determine whether the message has been properly understood. The RCSDT concludes that the proposed language gives plain meaning. No change made. The question about whether a roll call of receiving entities is expected to be held is asking for prescription of “how” to accomplish what is required. The RCSDT recognizes that there is more than one way to accomplish the confirmation when more than one entity received a Reliability Directive at the same time. What is required is for the recipient to respond in such a way that the issuer may determine whether the message has been properly understood. One way for that to occur would be, as you suggest, for the entities to individually respond. Another way would be for a pre-established protocol or procedure (e.g., roll-call, all-call, etc.) to be in place and used in such cases. The RCSDT has determined that prescribing “how” to ensure that “what” is required has been accomplished is not required and that the individually adopted procedures or protocols could offer many different ways to ensure effectiveness. No change made. The RCSDT concept is that “All Call” compliance is related to having a document that explains how the entity responds. No change made.		

Organization	Yes or No	Question 6 Comment
Alliant Energy Corp. Services, Inc.	Affirmative	COM-002-3: Alliant Energy recommends that the Effective Date be the first day of the second calendar quarter after applicable regulatory approval, to be the same as COM-001-2 and IRO-001-3. In that way all 3 standards would be effective at the same time, making implementation much smoother.
Response: Thank you for your comment. The RCSDT will adjust the standards to have the same implementation date.		
Wisconsin Electric Power Co.	Affirmative	COM-002-3: Since all the Requirements are related to Reliability Directives, is it implied that all “Emergency Communications” are Reliability Directives even if not designated as such per R1? -The M2 measure could be difficult for a recipient such as a Distribution Provider or Generator Operator. A recipient’s phone may not be recorded but an initiator’s always should. If a receiver refused to meet the R2 requirement, an initiator should have an alternative (i.e., repeat the directive and provide potential penalties if recipient refuses to comply). Should the initiator have responsibility for providing the entire 3-way evidence as M3 implies?
Response: The RCSDT would like to highlight that communications is not a defined term in the NERC Glossary of Terms used in Reliability Standards, nor is it defined in this standard. Thus, the plain meaning of communications is intended. The RCSDT has not implied a defined term in the wording of the purpose statement of the standard, nor in the requirements themselves, that any communication is a Reliability Directive unless the issuing functional entity identifies the actions to be taken as a Reliability Directive. Therefore, not all communications during Emergencies will be Reliability Directives. No change made. COM-002, R2: The RCSDT included some examples of how to provide the evidence needed for Measure M2. The examples are not intended to be an all-inclusive list. The RCSDT does point out, though, that dated operator logs could provide such evidence. The RCSDT does not believe that the recipient has the alternative to refuse to perform, as required. However, the RCSDT does bring attention to standard IRO-001-3, which requires entities to comply with directions unless compliance with the direction cannot be physically implemented or unless such actions would violate safety, equipment, regulatory, or statutory requirements. No change made.		

Organization	Yes or No	Question 6 Comment
COM-002 M3: The Measure is correct as written. The issuer only needs the evidence that it confirmed the response was accurate or reissued according to the requirement. Evidence does not necessarily mean the entity must have the entire three-way conversation captured (i.e., recording), but evidence the entity confirmed or reissued according to requirement. No change made.		
Wisconsin Electric Power Marketing	Affirmative	COM-002-3: Since all the Requirements are related to Reliability Directives, is it implied that all “Emergency Communications” are Reliability Directives even if not designated as such per R1. The M2 measure could be difficult for a recipient such as a Distribution Provider or Generator Operator. A recipient’s phone may not be recorded but an initiator’s always should. If a receiver refused to meet the R2 requirement, an initiator should have an alternative. i.e., repeat the directive and provide potential penalties if recipient refuses to comply. Should the initiator have responsibility for providing the entire 3-way evidence as M3 implies?
Response: The RCSDT would like to highlight that communications is not a defined term in the Glossary of Terms used in NERC Reliability Standards, nor is it defined in this standard. Thus, the plain meaning of communications is intended. The RCSDT has not implied in the wording of the purpose statement of the standard, nor in the Requirements statements themselves, that any communication is a Reliability Directive unless the issuing functional entity identifies the actions to be taken as a Reliability Directive. No change made. COM-002, R2: The RCSDT included some examples of how to provide the evidence needed for measure M2. The examples are not intended to be an all-inclusive list. The RCSDT does point out, though, that dated operator logs could provide the evidence. The RCSDT does not believe that the recipient has the alternative to refuse to perform as required. No change made. COM-002 M3: The Measure is correct as written. The issuer only needs the evidence that it confirmed the response was accurate or reissued according to the requirement. Evidence does not necessarily mean the entity must have the entire three-way conversation captured (i.e., recording), but evidence the entity confirmed or reissued according to requirement. No change made.		
Southwest Transmission Cooperative, Inc.	Affirmative	COM-002-3: While COM-002-3 is well written to explain the three-part communications requirements and makes it perfectly clear when a Reliability Directive has been issued, the opening clause leaves the responsible entity open to second guessing on whether they should have issued a Reliability Directive. This

Organization	Yes or No	Question 6 Comment
		problem could be solved by changing the opening clause to “When a Reliability Coordinator, Transmission Operator, or Balancing Authority determines actions need to be executed as a Reliability Directive.” In the second bullet of Requirement R3, we suggest using “Restate” in place of “Reissue.” The responsible entity is not really reissuing the Reliability Directive. They are still in the act of trying to get the Reliability Directive issued and are simply re-communicating it because it was not understood.
Response: The RCSDT believes the offered suggestion does not improve COM-002-3, R1. No change made. COM-002-3, R3: The communications described are not intended to be a once-through process. Effective communications, sometimes referred to as three-part or three-way, often may be effective only after numerous iterations. The RCSDT believes the likely first effort to clarify would be to re-issue the instructions just to determine whether the recipient simply “heard wrong.” Using the word re-state seems to imply that the wording is incorrect in some way or for some other reason needs to be said a different way. The RCSDT believes it is more likely that the issuer is attempting to bet the recipient to understand and therefore believes that reissue is more appropriate. No change made.		
Public Utility District No. 1 of Okanogan County	Affirmative	IRO-001-3: Need to correct language in Data Retention section 1.3. references R3 R4 and M3 and M4. There is no R4 and M4.
Response: The RCSDT agrees and thanks you for your comment. The language has been changed to eliminate R4 and M4 references.		
Sierra Pacific Power Co.	Affirmative	IRO-001-3: R1 appears to be unnecessary due to the authority that is already inherent through the functional model.⁸ Further, the measure for R1 does not properly cover the requirement that the RC "have authority"; rather, it measures whether the RC exercised that authority.

⁸ NERC Functional Model Version 5, (http://www.nerc.com/files/Functional_Model_V5_Final_2009Dec1.pdf)

Organization	Yes or No	Question 6 Comment
Response: The RCSDT agrees that the standard requirements language is consistent with the authority that is inherent in the Functional Model V5. However, the Functional Model V5 does not constitute enforceable requirements for entities to follow. Such requirements are established within the Reliability Standards. The Functional Model V5 provides good guidance for a consistent structure throughout the Reliability Standards. In addition, the Reliability Coordinator's reliability certification is established through Regional Entities and the authority to act is measured. No change made.		
Platte River Power Authority; Portland General Electric Co.; U.S. Army Corps of Engineers	Affirmative	IRO-001-3: Requirement R1 of IRO-001-3, requiring the Reliability Coordinator to have the authority to act or direct actions, appears to be unnecessary because it seems that this authority is granted when the entity is certified as the Reliability Coordinator. Additionally, the associated Measure M1, as worded, does not provide evidence that the Reliability Coordinator has the authority to act or direct other to act, but rather provides evidence that the Reliability Coordinator acted or took action to direct others.
Response: IRO-001-3, R1: The RCSDT agrees that the requirement is consistent with intended functions of a Reliability Coordinator when the entity is recognized as a Reliability Coordinator. The RCSDT has been informed by the ERO that registration criteria do not provide for certification of this authority. In addition, the Reliability Coordinator's reliability certification is established through Regional Entities and the authority to act is measured. No change made.		
National Grid	Negative	- Requiring RCs, TOPs and BAs to state an action as a "reliability directive" complicates communications during a time when response time and clarity are important. If those issuing a directive don't get a repeat back they just need to ask for one. The requirement just needs to define "what" is required not "how." This can be handled by procedures and training. COM-002-3, R1: The requirement states "what" must be done: the action(s) are to be identified as a Reliability Directive. The requirement does not establish "how" the action is to be done. The RCSDT agrees that, under conditions such as you describe, time may be of the essence. Much as in military operations, discussion time is over and action is required when the recipient understands an order has been given.

Organization	Yes or No	Question 6 Comment
		Discussion of disagreement or alternatives may occur later, if and as needed, but no more time can be consumed discussing the directions given. The RCSDT has not prescribed “how” these things must be done, and the RCSDT recognizes there is more than one way. The RCSDT has determined it is appropriate to place the responsibility on the recipient to give a response. The RCSDT agrees that the issuer may ask for a response if one has not been given, but the responsible entity to perform the action is the recipient. The RCSDT agrees that procedures and training are good practices appropriate for this process, but the standard requirements establish what must be done, not how personnel are prepared to do it. No change made. - Delete reference to "adverse reliability impact" from the "Directive" definition. The "adverse reliability impact" definition is not clear, is this an actual event or contingency? The words imply it is an actual event which is already covered in the "Directive" definition. If the intent is to apply directives to potential stability or cascading contingencies it should say so. The RCSDT notes that the term, “Adverse Reliability Impact” is a currently defined NERC Glossary term; however, the term as it appears in the standard is the revised term, which is NERC Board of Trustee adopted and pending regulatory filing in IRO-014-2: “The impact of an event that results in Bulk Electric System instability or Cascading.” The pending definition covers the application to potential instability and cascading conditions. The RCSDT included the phrase “to address” in the proposed definition of “Reliability Directive” to account for (1) potential and (2) actual events leading to an Emergency or Adverse Reliability Impact.” No change made.
Response: See response above.		
SERC Reliability Corporation	Negative	COM-001-2 Comments Definition of Alternative Interpersonal Communication: The proposed definition uses the term "medium."

Organization	Yes or No	Question 6 Comment
		What is the scope of that? Telephony is a "medium", but there is wired, wireless, satellite, etc. Was "medium", intended to differentiate voice, paper, text, email, teletype, or something else? Does the qualifying term "same", when modifying infrastructure mean something like voice versus written? What about situations where the primary telephone system is Voice Over Internet Protocol (VOIP) and it is using the same computer network infrastructure as an email or messaging system. That is the "same infrastructure" but a different "medium." The RCSDT believes that prescribing a device or medium would limit an entity. Please refer to the definition of Interpersonal Communication and Alternative Interpersonal Communication. Medium: the plain meaning of the word medium in noun form is a vehicle for ideas, a means of conveying ideas or information. The RCSDT recognizes there are many differing technologies for accomplishing communications and it is not necessary to prescribe which to use. A common medium is telephony, and the commenter is correct that there are different technological forms of telephony. What is required is that there be a medium in place so that Interpersonal Communication capability exists. No change made. R1 and R2 - We suggest the drafting team look at Standard EOP-008, Requirements R3 and R8 and add appropriate language in Standard COM-001-2, to avoid instantaneous non-compliance for loss of Interpersonal Communications and/or Alternate Interpersonal Communications. The RCSDT reviewed both EOP-008-0 and EOP-008-1, which is subject to future enforcement. In either version, the team believes there is no need to add additional language to the standard. This was not intended by the drafting team. The intent is to give the entity the flexibility in meeting the requirement. A loss of Interpersonal Communication capability is covered by R10, notification of Interpersonal Communication capability failure. No change made. R1 - In later requirements it is proposed that the entity "shall designate an." It is

Organization	Yes or No	Question 6 Comment
		suggested that for consistency and audit ability, this concept be used for R1, R3, R5, R7 and R8. The RCSDT believes the requirements achieve the desired intent of the standard. Each entity listed must “have” an Interpersonal Communication capability and for Alternative Interpersonal Communication capability able to “designate” the alternate. The team established these requirements to provide flexibility to the industry. No change made. In addition, the qualifier of “primary” should be used such that the requirements read: <i>“shall have designated, primary Interpersonal Communications capability with the following entities:”</i> Although it is appropriate that “Alternative” be capitalized since it is used in a defined term (i.e. Alternative Interpersonal Communication) that bounds acceptable alternative methods , we do not see the need to capital “primary.” The term “Interpersonal Communication” is a defined term in this standard. As such, it has a different meaning than “Alternative Interpersonal Communication,” thus there should be no confusing of the two. In addition, the word “primary” purposely does not exist in the requirements since the RCSDT did not intend to create a requirement for redundancy. Redundancy continues to be a good practice, but it is not required by this standard. Only that some entities must have both an Interpersonal Communication capability and a designated Alternative Interpersonal Communication capability. No change made. R9 - The requirement is unclear if the required monthly test is a general functionality test or if there is the expectation of testing the designated Alternative Interpersonal Communications with all of the entities defined in the sub-requirements of R2, R4, and R6. There is no expectation of testing the primary Interpersonal Communications - is this intentional or an oversight? Although functional testing of this should be done as a normal course of business,

Organization	Yes or No	Question 6 Comment
		should an explicit test be required with each entity in the sub-requirements of R1, R3, R5, R7 and R8 to insure, for example, that all the phone numbers are correct? The RCSDT intends each Alternative Interpersonal Communication capability to be verified functional by testing. If an entity has only one such capability, then only one test would be required. You further ask whether the absence of required testing of the “primary” (word is not in the requirement) Interpersonal Communication capability is intentional. The RCSDT intentionally left it out because the communications capability is used routinely and the use is sufficient to demonstrate functionality. With respect to phone numbers, these are procedural matters to be addressed by each individual entity and by including phone numbers it would make the requirement prescriptive. The requirement is to test capability. No change made. R10 - The following scenario seems plausible: The Interpersonal Communications fails and is detected at 14:00 and gets fixed at 14:35. It lasted more than 30 minutes but is fixed. As written the requirement would require the responsible entity to notify entities identified in R1 through R6 by 15:00 (i.e. 60 minutes from detection) even though the problem no longer exists. Is that the expectation? Does COM-001 apply only to primary control centers or back-ups, per EOP-008, as well? Yes, the entity experiencing the failure is required by R10 to notify the entities as identified within the 60-minute time frame. The RCSDT believes these situations would be few in numbers and not overly burdensome to perform. No change made. The RCSDT reviewed both EOP-008-0 and EOP-008-1, which is subject to future enforcement. In either version, the team believes there is no need to add additional language to the standard. No change made. M9 reads “at least on a monthly basis.” We suggest that this be changed to “at least once per calendar month” as written in R9. This change should also be corrected in the VSLs.

Organization	Yes or No	Question 6 Comment
		The RCSDT agrees and has changed the language in COM-001-2, M9 to agree with the language in R9. M8 - We suggest removing the second “that” in the first sentence of the measure. COM-001-2, M8: The RCSDT agrees and the language in M8 has been changed to delete the additional “that”. M10 - We suggest this be revised to coincide with changes made in R10 (deleting impacted and adding as identified in Requirements R1 through R6), therefore M10 should read: <i>“Each Reliability Coordinator, Transmission Operator, and Balancing Authority, shall have and provide upon request evidence that it notified entities as identified in Requirements R1 through R6 within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasted 30 minutes or longer. Evidence could include, but is not limited to dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent evidence. (R10.)”</i> The RCSDT agrees and has changed the language in COM-001-2, M10 to include language consistent with the language in R10. M12 needs to be removed. COM-001-2, M12: The RCSDT agrees that the heading “M12” has no corresponding requirement and was overlooked in format clean-up. The “M12” heading has been removed. We question why the first paragraph of Section 1.3” Data Retention has been included in each of these three standards. We suggest that it should be removed from each standard. The RCSDT thanks you for your comments. The Data Retention language has been updated to be consistent with the Standards Drafting Guidelines.

Organization	Yes or No	Question 6 Comment
Response: See response above.		
Independent Electricity System Operator	Negative	COM-001-2: 1. R1.2 and R2.2: The phrase “within the same Interconnection” is improper; it needs to be removed. RCs between two Interconnections still need to communicate with each other for reliability coordination (e.g. between Quebec and the other RCs in the NPCC region to curtail interchange transactions crossing Interconnection boundary). The SDT’s response that the phrase was added to address the ERCOT situation and citing that ERCOT does not need to communicate with other RCs leaves a reliability gap. Requirement R1 addresses a reliability need for adjacent Reliability Coordinators synchronously connected within the same Interconnection to have Interpersonal Communication capability; however, it does not preclude or limit the Reliability Coordinator from establishing Interpersonal Communication capability with others. The RCSDT does not see where there is a need to communicate with other Reliability Coordinator’s from one interconnection to another. No change made. 2. R3.5 and R4.3: The phrase “synchronously connected within the same Interconnection” is also improper; it needs to be removed. TOPs do communicate with other TOPs including those asynchronously connected and in another Interconnection (e.g. between Quebec and all of its asynchronously interconnected neighbors). The RCSDT has made clarifying changes by adding a Part to R3 and R4 to address asynchronous connections between Transmission Operators and have eliminated the phrase “within the same interconnection.” 3. R4 and R6: not requiring an Alternative Interpersonal Communication capability between the BAs and the DP and GOP can result in a reliability gap. If Interpersonal Communication capability between the BAs and these entities is required to begin with to enable BAs to communicate with these entities (such as operating

Organization	Yes or No	Question 6 Comment
		instructions or Reliability Directives) to ensure reliable operations, then an alternative capability is also needed to ensure this objective is achieved when the primary capability fails. The RCSDT refers the Order No. 693 in Paragraph 508 to clarify the reason the DP and GOP are not required to have Alternative Interpersonal Communication and is as follows: “(1) expands the applicability to include Generator Operators and Distribution Providers and includes Requirements for their telecommunications facilities; (2) identifies specific requirements for telecommunications facilities for use in normal and emergency conditions that reflect the roles of the applicable entities and their impact on Reliable Operation and (3) includes adequate flexibility for compliance with the Reliability Standard, adoption of new technologies and cost-effective solutions.” In addition, R11 requires the DP and GOP to consult with its BA and TOP to determine a mutually agreeable action for restoration. No change made. 4. Measure M3 does not cover the added R3.5 condition (having Interpersonal Communications capability with each adjacent TOP). M3 needs to be revised. The RCSDT thanks you for your comment and has made conforming changes to make to COM-001-2, M3.
Response: See response above.		
Wisconsin Electric Power Marketing; Wisconsin Electric Power Co.	Negative	COM-001-2: Although a great improvement over existing COM-001, and eliminates the data component see comments: -For R5.1 Can the solutions included to meet R1 be included, same R3.2 and R5.2, same R5.3 and R7.2, same R5.4 and R8.1. -For R5.2 Can the solutions included to meet R2 be included, same R4.2 and R6.2. COM-001-2, R5: In a word: Yes. The requirement is to have capability, and that capability does not have to be different from what the entity on the other end has. No change made.

Organization	Yes or No	Question 6 Comment
		-R9 a 2 hour response for a once a month test seems extreme, as would require a secondary Alternate Interpersonal Communications capability. -M9 is reasonable, but should include something about communication actual repair and or time estimates. COM-001-2, R9: The requirement is to “initiate action to repair or designate a replacement Alternative Interpersonal Communication capability...” within two hours. The RCSDT recognizes that many different contracts or other arrangements may exist to address repair. However, the RCSDT finds that entities should know what they have and how to initiate repair and those two hours to do so is reasonable. No change made. COM-001-2, M9: The requirement is to have evidence that either repair was initiated or an Alternative Interpersonal Communication capability was designated within two hours. The RCSDT understands that, in extreme cases, the entity may need to make its initial Alternative Interpersonal Communication capability its Interpersonal Communication capability and then designate another Alternative Interpersonal Communication capability, if the repair times are so long that to continue in that mode for that long would present a reliability risk. Such arrangements, if they exist at all, are very rare. No change made. -R10 The use of R1 through R6 implies notification of both Interpersonal Communications and Alternate Interpersonal Communications failures. Do you notify if you become aware after the link is back up if it was down for GT 30 minutes, and doesn’t address notifying when restored? COM-001-2, R10: The RCSDT thanks you for pointing this out. The RCSDT has modified the language of R10 to refer to R1, R3, and R5, rather than “R1 through R6” since the responsible entities are limited to the RC, the TOP, and the BA in these requirements. Yes, there is no requirement to notify identified entities the Interpersonal Communication have been restored. No change made.

Organization	Yes or No	Question 6 Comment
		-R11 Implies that R8 and R9 are independent and redundant to R5.3, R5.4 and R3.3 and R3.4. Update M9 accordingly. COM-001-2, R11: The RCSDT believes you intended to refer to R7 and R8, rather than R8 and R9. The RCSDT does not believe that the language implies that the communications capability required by R7 and R8 are independent, but they may be. If the entity which is registered as a DP is also registered as a GOP, although unlikely, then the capability could be met by the same medium. Neither does the RCSDT believe that R11 implies that R7 and R8 are redundant to R3.3 and R3.4 or to R5.3 and R5.4. No change made.
Response: See response above.		
Tampa Electric Co.	Negative	COM-001-2: By use of the term “any” in the phrase “a failure of any of its Interpersonal Communication” the standard will actually create a disincentive for redundant communications with DPs and GOPs due to compliance risk. It needs to be limited to primary Interpersonal Communications with its TOP and/or BA.
Response: The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure. The term “Interpersonal Communication” is a defined term in this standard. As such, it has a different meaning than “Alternative Interpersonal Communication,” thus there should be no confusing of the two. In addition, the word “primary” purposely does not exist in the requirements since the RCSDT did not intend to create a requirement for redundancy. Redundancy continues to be a good practice, but it is not required by this standard. Only that some entities must have both an Interpersonal Communication capability and a designated Alternative Interpersonal Communication capability. No change made.		
Cogentrix Energy, Inc.	Negative	COM-001-2:

Organization	Yes or No	Question 6 Comment
		Definition of Alternative Interpersonal Communication: The proposed definition uses the term “medium.” What is the scope of that? Telephony is a “medium” but there is wired, wireless, satellite, etc. Was “medium” intended to differentiate voice, paper, text, email, teletype, or something else? Does the qualifying term “same” when modifying infrastructure mean something like voice versus written? What about situations where the primary telephone system is Voice Over Internet Protocol (VOIP) and it is using the same computer network infrastructure as an email or messaging system. That is the “same infrastructure” but a different “medium” R8 Revision: GOP cannot dictate to the BA or TOP what types of Interpersonal Communication will be used, but they can work with them to establish a common tool. COM-001-2, “Medium”: the plain meaning of the word medium in noun form is a vehicle for ideas, a means of conveying ideas or information. The RCSDT recognizes there are many differing technologies for accomplishing communications, and it is not necessary to prescribe which to use. A common medium is telephony, and the commenter is correct that there are different technological forms of telephony. What is required is that there be a medium in place so that Interpersonal Communication capability exists. Your comment poses compliance questions but does not suggest changes. No change made. COM-001-2, Definition of Alternative Interpersonal Communication: You ask whether the use of the word “same” as a modifier of infrastructure mean something like voice versus written? It could, but is not required to. The RCSDT intends the language to indicate that whatever causes the loss of the Interpersonal Communication capability should not be a common cause of failure of the Alternative Interpersonal Communication capability. Thus, one telephone number could serve as the Interpersonal Communication capability and another telephone

Organization	Yes or No	Question 6 Comment
		number could serve as the Alternative Interpersonal Communication capability, as long as whatever causes the failure of the Interpersonal Communication capability does not automatically cause the failure of the Alternative Interpersonal Communication capability. No change made. R8 Balloting: R8. Each Generator Operator shall have Interpersonal Communications capability with the following entities: R8.1 Balancing Authority R8.2 Transmission Operator R8 Suggestion: <i>R8. Each Generator Operator shall coordinate with the BA and TOP to establish Interpersonal Communications capability as requested by the BA and TOP.</i> The standard establishes requirement for communication capability appropriate to ensure reliability. There is no requirement for it to be different from the Interpersonal Communication capability that its Balancing Authority has with it, nor the Interpersonal Communication capability that its Transmission Operator has with it. Cooperation and coordination is always encouraged and is an excellent practice, but is not required by this standard. Thank you for your suggestion. No change made.
Response: See response above.		
Oncor Electric Delivery	Negative	COM-001-2: Oncor takes the position that contacting all impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer as prescribed in R1 through R6 is not doable within the ERCOT interconnect for a Transmission Operator.

Organization	Yes or No	Question 6 Comment
		The standard establishes requirement for Interpersonal Communication capability between entities for reliability purposes. The RCSDT recognizes that there are many different organizational arrangements and structures within the North American continent. The standard establishes “what” is required, but does not prescribe “how” it must be done. No change made. Oncor takes the position that notification to the RC and BA only is sufficient and that those two entities have the operational functionality to contact within the prescribed time all affected Distribution Providers, Generator Operators, and other Transmission Operators. Oncor also takes the position adding the word “impacted” to R10 will clarify that notification needs to be made only to the entities that are affected by the failure of a communication path. This will also more align with the language in M10." Thank you for your suggestion. The word “impacted” was removed in previous postings. For further clarification, the RCSDT has modified M10 to remove the word “impacted” to be consistent with R10. For additional clarity, the RCSDT also changed the phrase in R10 and M10, “R1 through R6” to “R1, R3, and R5,” to clarify that it applies to the capabilities with the RC, the TOP, and the BA.
Response: See response above.		
National Grid	Negative	COM-001-2: Overly prescriptive, not results-based. R7 & R8 are not necessary. Every entity at a minimum has a contact with a phone as their "Interpersonal Communications capability." Just need to require that every entity has a plan if they lose their primary communication channel ("Interpersonal Communications capability").
Response: The standard establishes requirement for communication capability appropriate to ensure reliability. In addition, R7 and R8 are responsive to FERC Order No. 693. Entities may use the telephone cited in the example as their Interpersonal Communication		

Organization	Yes or No	Question 6 Comment
capability. Requirement R11 as modified addresses the loss of Interpersonal Communication capability. No change made.		
Lincoln Electric System	Negative	COM-001-2: Please clarify whether R10 is intended to address both Interpersonal and Alternative Interpersonal Communications or only Interpersonal Communication. Although R10 identifies only Interpersonal Communication within the requirement, the reference to Requirements R1-R6 appears to include Alternative Interpersonal Communication as well. LES is concerned that if an entity's Interpersonal Communication is fully functional but discovers a failure in its Alternative Interpersonal Communication, the entity would still be required to notify entities per R10.
Response: The RCSDT thanks you for pointing this out. The RCSDT has modified the language of R10 to refer to R1, R3, and R5, rather than "R1 through R6," since the responsible entities are limited to the RC, the TOP, and the BA in these requirements.		
ISO New England, Inc.	Negative	COM-001-2: Please see comments submitted with the project... ISO-NE does not believe COM-001, in its entirety, is a results-based standards and therefore does not support the draft as written. We believe such "requirements" (i.e. capabilities) should be verified through an entity certification process. Additionally, results-based requirements should be the driver to have the capability to achieve them; on other words, there is no other way to reliably dispatch than to have communications facilities (electronic or voice).
Response: Although this is not a results-based standard, the RCSDT believes it is a significant improvement over the current COM-001 standard. The RCSDT will forward your comment to NERC staff for consideration.		
Commonwealth of Massachusetts Department of Public Utilities	Negative	COM-001-2: Primary concern here is with the phrase "within the same interconnection" which appears in R1.2 and R2.2. This removes any standard requirement for adjacent RCs that may not be in the same interconnection from communicating with each other. This constitutes a "gap" in reliability and is a

Organization	Yes or No	Question 6 Comment
		concern.
Response: Requirement R1 addresses a reliability need for adjacent Reliability Coordinators synchronously connected within the same Interconnection to have Interpersonal Communication capability; however, it does not preclude or limit the Reliability Coordinator from establishing Interpersonal Communication capability with others. The RCSDT does not see where there is a need to communicate with other Reliability Coordinator's from one interconnection to another. No change made.		
Detroit Edison Company	Negative	COM-001-2: R9. I believe 2 hours is too short, suggest "within 24 hours." COM-001-2, R9: The requirement is to initiate repair or designate an Alternative Interpersonal Communication capability within two hours. The requirement is NOT to have the repair completed within two hours. The requirement recognizes that the entity may use its Alternative Interpersonal Communication capability now as its Interpersonal Communication capability, and then, if it decides to do so, designate another, if you may, "new" Alternative Interpersonal Communication capability. This is not required, but is an option that the entity can consider. The entity may already have a maintenance and repair agreement in place that will respond and repair the failed capability. No change made. R11. "mutually agreeable time" creates issues. What if TO and BA have differing time frames? Which entity bears the violation if agreement cannot be reached? Alexander Eizans COM-001-2, R11, For, "mutually agreeable time," the "what" is required is to consult and determine a mutually agreeable time and the "How" that is to be done is too prescriptive to be included within a standard because of the great number of possible scenarios, organizational arrangement, and sizes of entities involved. No change made. I am concerned with the evidence listed under the measures (see M6, M7 and M8).

Organization	Yes or No	Question 6 Comment
		Dated equipment specifications and installation documentation is to much. I know this is listed as "could include" but at one point could become "must include." Jeffrey DePriest COM-001-2, M6, M7, and M8, "could include" may some day become "must include": "What" is required is to provide evidence. A list, which could include but is not limited to various forms of evidence is presented for consideration, but the entity may, and is encouraged to do so when it is appropriate, provide other forms of equally appropriate evidence. No change made. R9 define "unsuccessful test." Is it a mechanical failure of equipment or failure of one or more entities to respond to the test? If mechanical failure, does the 2 hour window to initiate repairs mean notification to proper business unit or do repairs have to actually begin (crew investigating). If crews need to be on site 2 hours is too limiting. COM-001-2, R9, define "unsuccessful test": The RCSDT notes that your words are a paraphrase of the actual standard requirement language. In its simple form, a test is unsuccessful when the capability fails to perform as expected. The entity may have an elaborate contract in place with very specific technical specifications within which the capability is to perform. The test may be unsuccessful if it does not meet those technical specifications, although the intent of the standard is for the entities to be able to communicate, usually verbally, with one another so as to operate reliably. The standard does not prescribe the performance expectations for the capability apart from the expectation that communication capability is to exist. The RCSDT recognizes that there may be many variations of service, maintenance, and repair agreement implemented for these communication capabilities. Whatever the agreement provides for initiation of the response and repair is what is required. This standard cannot prescribe all the possible combinations or scenarios. No change made.

Organization	Yes or No	Question 6 Comment
		- R11. Mutual Agreeable time is vague. Barbara Holland COM-001-2, R11, "mutual agreeable time" is too vague: "What" is required is to consult and determine a mutually agreeable time. "How" that is to be done is too prescriptive to be included within a standard because of the great number of possible scenarios, organizational arrangement, and sizes of entities involved. No change made.
Response: See response above.		
Madison Gas and Electric Co.	Negative	COM-001-2: The definition of Interpersonal Communication is: "Any medium that allows two or more individuals to interact, consult, or exchange information." Recommend that the word "any" be removed from Interpersonal Communication and recommend the new definition be "The primary (or designated) medium that allows two or more individuals to interact, consult, or exchange information." The RCSDT appreciates your comment and has made clarifying changes by removing the phrase "any of" in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure. The term "Interpersonal Communication" is a defined term in this standard. As such, it has a different meaning than "Alternative Interpersonal Communication," thus there should be no confusing of the two. In addition, the word "primary" purposely does not exist in the requirements since the RCSDT did not intend to create a requirement for redundancy. Redundancy continues to be a good practice, but it is not required by this standard. Only that some entities must have both an Interpersonal Communication capability and a designated Alternative Interpersonal Communication capability. No change made.

Organization	Yes or No	Question 6 Comment
		R11, Please note that the use of the word “any” as in “Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities...” will be viewed as meaning every Interpersonal Communication medium that an Entity has or uses. The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure. Recommend R11 be updated to read: <i>“Each Distribution Provider and Generator Operator that experiences a failure of any of its primary (or defined) Interpersonal Communication capabilities with its Transmission Operator or Balancing Authority...”</i> In that way it focuses it down to the communications issues with the TOP or BA. In lieu of “primary” the SDT could state “defined” as long as it is not meant to be “any.” The latter part of R11 states; “...shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability.” This ambiguous statement does not support reliability. Consulting with a TOP or BA does not solve the problem of the lack of Interpersonal Communication capabilities. Recommend this to be “...shall consult with inform their Transmission Operator or Balancing Authority as applicable as to determine a mutually agreeable time to restore the status of the Interpersonal Communication capability.” Thus R11 is recommended to read as: <i>“Each Distribution Provider and Generator Operator that experiences a failure of its primary (or designated) Interpersonal Communication with their Transmission Operator or Balancing Authority shall inform them, as applicable, as to the status of the Interpersonal Communication capability.”</i>

Organization	Yes or No	Question 6 Comment
		This allows for situational awareness and supports the reliability of each system. Additionally, the RCSDT notes that the requirement refers only to Interpersonal Communication capabilities. Adding the phrase “to the primary” is not needed. Please refer to the definitions of Interpersonal Communication and Alternative Interpersonal Communication for clarification. No change made.
Response: See response above.		
New York Independent System Operator	Negative	COM-001-2: The drafting team has complicated the requirements by having different requirements between RC/TOP/BA and other entities such as GOP/LSE/DP. The proposal is for redundancy to be required only between RC/TOP/BA. The requirement should be simplified to require all entities to have plans for loss of primary communication channels. This can include third parties as a communication channel.
Response: The term “Interpersonal Communication” is a defined term in this standard. As such, it has a different meaning than “Alternative Interpersonal Communication,” thus there should be no confusing of the two. In addition, the word “primary” purposely does not exist in the requirements since the RCSDT did not intend to create a requirement for redundancy. Redundancy continues to be a good practice, but it is not required by this standard. Only that some entities must have both an Interpersonal Communication capability and a designated Alternative Interpersonal Communication capability. The DP and GOP are not required to have Alternative Interpersonal Communication; however, R11 addresses the loss of communication capability (plan). No change made.		
Public Utility District No. 1 of Lewis County	Negative	COM-001-2: This standard should be combined with COM-002.
Response: The standard COM-001-2 is capability based (equipment) and COM-002-3 is communication and coordination based. Each fulfills independent concepts. No change made.		
Southwest Transmission	Negative	COM-001-2:

Organization	Yes or No	Question 6 Comment
Cooperative, Inc.		We believe that the VSLs could be written to provide more gradations. For example, if a Transmission Operator or Balancing Authority failed to have Interpersonal Communications capability with a Distribution Provider but had Interpersonal Communications capability with all other required entities, it has met the vast majority of the requirement. Since VSLs are a measure of how much the requirement was missed by the responsible entity, jumping to a Severe VSL does not seem to adequately capture that the responsible entity met the vast majority of the requirement. Requirements R4 and R6 even seem to recognize this by not including Distribution Provider in the list of entities to which the Transmission Operator or Balancing Authority are required to designate Alternate Interpersonal Communications capability.
Response: The RCSDT has applied the VSL to the Severe column because not having Interpersonal Communication capability with any entity is detrimental to reliability. No change made.		
Tennessee Valley Authority	Negative	COM-001-2: We suggest the drafting team look at Standard EOP-008, Requirements R3 and R8 and add appropriate language in Standard COM-001-2, to avoid instantaneous non-compliance for loss of Interpersonal Communications and/or Alternate Interpersonal Communications (R1 and R2).
Response: The RCSDT reviewed both EOP-008-0 and EOP-008-1, which is subject to future enforcement. In either version, the team believes there is no need to add additional language to the standard. No change made. This was not intended by the drafting team. The intent is to give the entity the flexibility in meeting the requirement. A loss of Interpersonal Communication capability is covered by R10, notification of Interpersonal Communication capability failure. No change made.		
Southwest Transmission Cooperative, Inc.	Negative	COM-001-2: We thank the drafting team for its efforts but believe there are still issues that need to be addressed. We thank the drafting team for clarifying that the intent of this

Organization	Yes or No	Question 6 Comment
		standard is not for data exchange in the response to comments. However, we do believe one additional change is necessary to make the intent absolutely clear. The purpose of statement of COM-001-2 still includes the phrase “to exchange Interconnection and operating information.” Since a standard must stand on its own, we believe it is necessary to remove that phrase from the purpose statement to avoid misinterpretations in the future. Auditors and enforcement personnel are not required to understand the development history when enforcing the standard. Furthermore, the purpose is really to enable communications between these functional entities. The SDT agrees and has made a conforming change to the purpose of COM-001. Requirement R11 does not fully address the issue of what is required by Distribution Providers and Generator Operators and introduces new issues. For, “mutually agreeable,” the “what” is required is to consult and determine a mutually agreeable time and the “how” that is to be done is too prescriptive to be included within a standard because of the great number of possible scenarios, organizational arrangement, and sizes of entities involved. No change made. First, while the standard is intended to clarify that the Distribution Provider and Generator Operator do not need backup communications capability, it simply does not. Distribution Providers and Generator Operators are required to have an Interpersonal Communications capability in Requirement R7 and R8 respectively. Unfortunately, the effectiveness of these requirements persists even when the Distribution Provider or Generator Operator experiences a failure of its Interpersonal Communications capability. When Requirement R11 applies, the Distribution Provider or Generator Operator will still be obligated to comply with Requirements R7 and R8 respectively and will, in fact, be in violation of these requirements because the Distribution Provider or Generator Operator no longer has the capability. The RCSDT thanks you for your comment. Requirements R7 and R8 have been revised to account for the failure of Interpersonal Communication capability. The

Organization	Yes or No	Question 6 Comment
		intent of R11 is to require the responsible entity to take action upon the failure of its Interpersonal Communication. Second, capability is used inconsistently between Requirement R7 and R11 which leads to confusion. In Requirement R7, it is singular while in Requirement R11 is plural. It needs to be clear that only the failure of the capability identified in R7 and R8 needs to be reported by the Distribution Provider and Generator Operator respectively. The RCSDT thanks you for your observation. Generally, the singular implies the plural or vice-versa. The RCSDT has corrected R10 and R11 to be consistent with the singular application. Third, if the requirements focused on communications devices rather than capabilities, they would come closer to communicating the intent. Requirement R11 would better complement Requirement R7 and R8 if the focus was on having a communication medium or device. A Generator Operator with an installed communications device or medium still has that device or medium even when it is not functioning properly and could still meet Requirements R7 and R8. However, they don't have the Interpersonal Communications capability if the device is not functioning properly. The RCSDT thanks you for your comment. Requirements R7 and R8 have been revised to account for the failure of Interpersonal Communication capability. The intent of R11 is to require the responsible entity to take action upon the failure of its Interpersonal Communication. We recommend striking "capability" from all of the requirements. It is not clear to us how this helps when a definition for Interpersonal Communications is written already and applies to a communication medium. Furthermore, we think it causes confusion and actually contradicts the intent of the standard. Because Requirements R1, R3, R5, R7 and R8 focus on capability, the responsible entity will be in violation anytime its medium that it uses for the primary capability does not function

Organization	Yes or No	Question 6 Comment
		properly. Whereas if the requirement stated that the responsible entity was to designate a primary communications medium, the responsible entity is not in violation if that medium is not functioning properly. It would be clear that Requirement R2, R4 and R6 are intended to be complementary. The RCSDT believes that prescribing a device or medium would limit an entity; therefore, “capability” is used to avoid being prescriptive and to provide flexibility. This was not intended by the drafting team. The intent is to give the entity the flexibility in meeting the requirement. A loss of Interpersonal Communication capability is covered by R10, notification of Interpersonal Communication capability failure. No change made. Furthermore, it is not clear why Requirements R1, R3, R5, R7 and R8 state that the responsible entity shall “have” when the companion Requirements R2, R4, and R6 state “designate.” Each entity listed must “have” an Interpersonal Communication capability and for Alternative Interpersonal Communication capability able to “designate” the alternate. The team established these requirements to provide flexibility to the industry. No change made. Since Requirement R10 deals with a failure of its Interpersonal Communications capabilities and not Alternate Interpersonal Communications capability, it should only refer to the entities in Requirements R1, R3, and R5. Currently, it includes R1 through R6. The RCSDT thanks you for pointing this out. The RCSDT has modified the language of R10 to refer to R1, R3, and R5, rather than “R1 through R6,” since the responsible entities are limited to the RC, the TOP, and the BA in these requirements.
Response: See response above.		
New York Independent	Negative	COM-002-3: The drafting team added a requirement to identify a Reliability Directive is being initiated during an emergency to track 3-part communication for compliance

Organization	Yes or No	Question 6 Comment
System Operator		purposes. This will change and complicate the communication protocols between normal and emergency operations simply to simplify compliance assessments. The NYISO is asking for clarification that an entity may identify Reliability Directives as a category of communications to be communicated through procedures and training; and will not require a different communication protocol between normal and emergency operations. Affective communications can only be achieved through consistent processes for all conditions. Compliance assessments should be made on when we are in an emergency or not, and not on how the dialogue was initiated.
Response: The RCSDT believes the standard allows for this condition, and the method of implementation is up to the entity. No change made.		
Illinois Municipal Electric Agency	Negative	Illinois Municipal Electric Agency supports and encourages SDT consideration of comments submitted by the SERC OC Standards Review Group.
Response: Thank you for your comment. See response to SERC comments.		
Wisconsin Public Service Corp.	Negative	In COM-002-3, the Standards Drafting Team provided great clarity to the industry and also reduced risk to the BES, by clearly defining Reliability Directives and how the RC, TOP, and BA must utilize them. Unfortunately, they failed to maintain this level of clarity in IRO-001-3, where they state: <i>R2. Each Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider shall comply with its Reliability Coordinator's direction unless compliance with the direction cannot be physically implemented or unless such actions would violate safety, equipment, regulatory or statutory requirements. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i> <i>R3. Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to perform as directed in accordance with Requirement R2. [Violation Risk</i>

Organization	Yes or No	Question 6 Comment
		<i>Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i> The use of “direction” and “directed” essentially makes any request equivalent to a Reliability Directive. In addition, IRO-001-3 as written is largely redundant of COM-002-3. Given this, we recommend that the Standards Drafting Team consider granting the RC authority to issue Reliability Directives by adding this requirement to COM-002-3 and then eliminate IRO-001-3. The RCSDT feels the use of direct and directed is consistent with the purpose and application of those terms in other standards. No change made.
Response: See response above.		
Wisconsin Electric Power Marketing; Wisconsin Electric Power Co.	Negative	IRO-001-03: Although a great improvement over existing IRO-001, see comments: -R2 needs to be clear that it is the Reliability Coordinator’s Reliability Directive that must be complied with not just any Reliability Coordinator’s direction as stated. The RCSDT notes that the intent of the standard is not intended to limit the RC authority to Reliability Directives. The Reliability Coordinator issuing the Reliability Directive is the one, which the recipient must comply. It is assumed that a BA or TOP has a relationship with one, and only one, RC for a given Balancing Area or Transmission Operator Area (some may have multiple, disconnected areas, that are subject to different RCs). No change made. -The M2 measure could be difficult, as the operator would have to have access to documents proving the safety, equipment, regulatory or statutory requirements, which may be the assessment of an individual applying the safety rule. Is the measure requiring a deposition of the individual to be performed for each instance? In the RCSDT’s opinion, the Measure M2 does not contemplate depositions. If an entity cannot comply with a Reliability Directive for one of the stated reasons, it should have documentation, such as an attestation, to support that stated reason

Organization	Yes or No	Question 6 Comment
		available during an audit. No change made. With an assumed data retention of 90 day (voice) or 12 month document retention, the deposition would be unlikely to be acquired prior to the retention period ending. Data retention is a significant issue when the data being recorded is voluminous, supporting a 90-day retention period. No change made. -R3 needs to be clear that it is the inability to perform the Reliability Coordinator's Reliability Directive that must be communicated not just any "Reliability Coordinator's as directed." The RCSDT believes R3 contains the full communication set of "action or direction" and the subset, Reliability Directive, is included; therefore, the respective entity is still required to inform the RC. The RCSDT believes the requirement is clear in regards to Reliability Directives. No change made. -The Data Retention section does not align with the standard: The Reliability Coordinator shall retain its evidence for the most recent 90 calendar days for voice recordings or 12 months for documentation for Requirement R2, Measure M2. R2 and M2 apply to the Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider. There is no R4 and M4. Data retention related to IRO-001-2, R2/M2 was changed to agree with your suggestion. The changes were more involved – several sections were changed, including removing the reference to R4/M4.
Response: See response above.		
SERC Reliability Corporation	Negative	IRO-001-3 Comments We recommend that where the verb "direct/directed" or noun "direction" is used in Purpose, R1, R2 and R3, that it be replaced with the verb "instruct/instructed" or

Organization	Yes or No	Question 6 Comment
		noun "instruction", as appropriate. This would help the industry avoid confusion often referred to as "big D" or "little d" directives. It is noted that the term "Reliability Directive" does that to a great degree but avoiding the verb/noun "direct/direction" would augment the difference. The RCSDT feels the use of “direct” and “directed” is consistent with the purpose and application of those terms in other standards. No change made. R1 - At what point in time is "identified" referring to in "to prevent identified events or"? Is it referring to current or future events? The context of “identified” is when a set of system conditions is recognized that could lead to an Emergency or Adverse Reliability Impact, which may require action. See Standards IRO-008 and IRO-009. No change made. One might assume both since the "Time Horizon" is defined as Real-time Operations, Same Day Operations and Operations Planning, but the requirement may be enhanced if explicitly stated ("to prevent events identified in real-time or in the future or to mitigate the magnitude"). For clarity, the scope of the authority should be limited to the Reliability Coordinator Area (that result in an Emergency or Adverse Reliability Impacts within its Reliability Coordinator Area). As written, it implies the authority should extend outside its RC Area. R2 - We question the phrase, “physically implemented,” and recommend that the intent be clarified in the language. The RCSDT believes there may be conditions where an entity might not be able to physically implement the direction. For example, entities that do not have the right to access certain equipment or cannot manually operate a broken apparatus. We feel the proposed language achieves the intended purpose. No change made. We note the following comment and response posted under Consideration of Comments on Initial Ballot , " Reliability Coordination (Project 2006-06) Date of Initial Ballot: February 25, " March 7, 2011:

Organization	Yes or No	Question 6 Comment
		<i>“IRO-001 R2, R3, and R4 have replaced “Directives with the word direction in lower case (while it appears that “Directives is a subset of “directions). We believe that this muddies the waters and could bring numerous conversations and dialog into scope unnecessarily. The end result is that the RC has the right to issue and use “Directives and anything short of this could just be communications. For example, a number of entities that are Reliability Coordinators also facilitate energy markets. There are many communications related to markets that probably should be out of scope with respect to the standards. Furthermore, it might not be clear what role (e.g. Reliability Coordinator, market operator, etc) the staff at these entities is fulfilling.</i> <i>Response: IRO-001 is written to cover both typical daily operating scenarios and also emergency scenarios. The required performance encompasses issuing and responding to Reliability Directives as well as other directions. The requirement language specifically ties back to Requirement R2 which states that the RC “shall take actions or direct actions, which could include issuing Reliability Directives.” This is the “direction in accordance with Requirement R2 stated in R3 and the “direction in accordance with Requirement R3 stated in R4. We believe the entity comments remain valid and the response provided by the SDT does not address all aspects of the concern.</i> We suggest that the language be changed to “Reliability Directive consistent with COM-002. The word “direction” connects with the language in the R1 (act or direct). Reliability Directives is a subset of “direction.” No change made. R3 - The requirement states the responsible entities shall “inform its RC when unable to perform as directed but it is unclear when the notification needs to take place. Although the term “as soon as practical may seem be un-measurable, as written now there is no time deadline to perform the notification” i.e. it could be 4 hours later after recognition. M2,” need to add the following words “compliance with, physically, unless which

Organization	Yes or No	Question 6 Comment
		were included in R2, therefore M2 should read, <i>“Each Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator and Distribution Provider shall have and provide evidence which may include, but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it complied with its Reliability Coordinator's direction(s) per Requirement R1 unless compliance with the direction per Requirement R1 could not be physically implemented or unless such actions would have violated safety, equipment, regulatory or statutory requirements. In such cases, the Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator or Distribution Provider shall have and provide copies of the safety, equipment, regulatory or statutory requirements as evidence for not complying with the Reliability Coordinator direction. (R2)”</i> The RCSDT thanks you for your comment and has added the word “physically” to the IRO-001-2 Measure M2. Section 1.3, the second bullet; need to add calendar to 12 calendar months The RCSDT appreciates your comments and conforming changes have been made to the Data Retention section.
Response: See response above.		
Dominion Virginia Power; Dominion Resources, Inc.	Negative	IRO-001-3: Dominion does not support the use of “Reliability Coordinator’s direction” in IRO-001-3 and would prefer that the language be changed to “Reliability Directive” consistent with the use in COM-002-3.
Response: The word “direction” connects with the language in the R1 (act or direct). Reliability Directives is a subset of “direction.” The RCSDT feels the use of direct and directed is consistent with the purpose and application of those terms in other standards. No		

Organization	Yes or No	Question 6 Comment
change made.		
Constellation Energy Commodities Group	Negative	IRO-001-3: IRO-001-3 uses the term ‘direct’ in its purpose statement, R1, R2 and R3. To avoid confusion with a Reliability Directive (both for auditors and entities), we suggest the following: To establish the authority of Reliability Coordinators to make requests of other entities to prevent an Emergency or Adverse Reliability Impacts to the Bulk Electric System. <i>R1: Each Reliability Coordinator shall have the authority to act or request others to act (which could include issuing Reliability Directives) to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impacts.</i> <i>R2: Each Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider shall comply with its Reliability Coordinator’s request unless compliance with the request cannot be physically implemented, or unless such actions would violate safety, equipment, regulatory or statutory requirements, or unless the TOP, BA, GOP or DP convey a business reason not to comply with the request but express that they will comply if a Reliability Directive is given.</i> <i>R3: Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to perform as requested in accordance with Requirement R2.</i>
Response: This standard provides for the authority of the RC to act or direct actions, and not request. The RCS DT believes by using the word “request” make the requirement conditional and is not consistent with the purpose of the standard. No change made.		
Tampa Electric Co.	Negative	IRO-001-3: R1 VSL should have the phrase "exercise their authority" inserted between "to" and "take" in the first sentence. Otherwise it could be read that the RC would be in violation of the standard requirement for any event that resulted in an Adverse

Organization	Yes or No	Question 6 Comment
		Reliability Impact whether he issued a Reliability Directive or not.
Response: Thank you for your comment. The RCSDT has added the additional clarifying language.		
Independent Electricity System Operator	Negative	IRO-001-3: The IESO is unable to support this standard as written since Data Retention Section does not reflect the revised requirements. For examples: the Electric Reliability Organization is no longer a responsible entity; the Reliability Coordinator should replace the ERO for keeping data for R1; Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider should replace the Reliability Coordinator for keeping data for R2; and there is no R4/M4.
Response: The RCSDT agrees and has made conforming changes in Data Retention.		
Southwest Transmission Cooperative, Inc.	Negative	IRO-001-3: We thank the drafting team for their efforts but believe this standard needs additional work. We disagree with including “authority” in this standard. FERC Order 693a, paragraph 112, made it clear that the authority of a registered entity is established through the approval of the standards by FERC. Thus, a Reliability Coordinator gets its authority to issue Reliability Directives by having a requirement that states it must issue Reliability Directives approved by the Commission. Please change “shall have authority to act” in Requirement R1 back to “shall act.” Please also remove all other vestiges of authority from the standards including in the purpose, measures and VSLs. Requirement R1 should require the use of Reliability Directives. The requirement compels the Reliability Coordinator “to direct others to act to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impact.” Reliability Directives are necessary to address Adverse Reliability Impacts or Emergencies and

Organization	Yes or No	Question 6 Comment
		trigger the use of three-part communications identified in COM-002-3. The RCSDT believes that other standards (i.e., IRO-009 - R3 & R4, EOP-002 - R1 and R8) address the action of others; and if the term “authority” is omitted, creates a generic requirement. Such as what has been suggested puts the RC in a double jeopardy situation. No change made. The word “direction” connects with the language in the R1 (act or direct). Reliability Directives is a subset of “direction.” No change made. COM-002-3 R1 really compels the Reliability Coordinator to use a Reliability Directive for Emergencies and Adverse Reliability Impacts with the opening clause: “When a Reliability Coordinator, Transmission Operator, or Balancing Authority determines actions need to be executed as a Reliability Directive.” What else could be more important for a Reliability Coordinator to issue a Reliability Directive than for an Emergency or Adverse Reliability Impact? Thus, not requiring the use of Reliability Directives for Adverse Reliability Impacts and Emergencies makes IRO-001-3 R1 and COM-002-3 R1 inconsistent. For clarity and consistency, Requirement R2 and R3 should also be clear that the responsible entities will respond to the Reliability Coordinator’s Reliability Directives. The RCSDT notes that IRO-001-3 addresses direction, which may include a Reliability Directive. The responsible entity receiving the direction, at a minimum, must comply with the RC’s direction, unless the receiver cannot physically implement or unless such actions would violate safety, equipment, regulatory, or statutory requirements. The standard IRO-001-3 is not limited to only actions that are Reliability Directives. On the other hand, the standard COM-002-3 requires the BA, RC, and TOP to identify the communication as a Reliability Directive and to use three-part communication when actions are required to be executed as a Reliability Directive. No change made. Furthermore, this would make the standard consistent with how Reliability Directives are handled by the Transmission Operator in the draft TOP-001-2 standard proposed by the Real-Time Operations drafting team (Project 2007-03). We do not agree with

Organization	Yes or No	Question 6 Comment
		the need to include Distribution Provider in IRO-001-3. The Distribution Provider will likely never receive a Reliability Directive directly from its Reliability Coordinator. More likely, the Reliability Directive will be issued by the Transmission Operator or Balancing Authority depending on if the issue is security or adequacy related. The RCSDT notes that IRO-001-3 is an authority standard, the DP may not likely receive a Reliability Directive from the RC; however, in the case they do, they are required to comply with the requirement. No change made.
Response: See response above.		
Northeast Utilities	Negative	NU contributed in and joins on the comments submitted by NPCC.
Response: Thank you for your comment.		
MidAmerican Energy Co.	Negative	COM-001-2: The definition of Interpersonal Communication is too broad and should be revised to read, <i>"the primary defined communication system used to communicate between NERC defined reliability entities when operating the Bulk Electric System."</i> Examples may include a telephone system as a primary system and an email system as an alternative system. R11 is too broad and should either be deleted or revised to read: <i>"Each Distribution Provider and Generator Operator that experiences a failure of its defined primary Interpersonal Communication capabilities with its Transmission Operator or Balancing Authority..."</i> The RCSDT deliberately avoided the use of primary and secondary mediums and elected to use communications capabilities. As such, R11 applies to Interpersonal Communication capabilities of the DP and GOP. The RCSDT has gone to great lengths

Organization	Yes or No	Question 6 Comment
		to provide some flexibility for those DPs and GOPs with little or no impact on the reliability of the BES. FERC directed NERC to provide for this consideration. Therefore, we use the language as proposed in R11. Mutually agreeable implies that both parties are willing to accept the outcome. It doesn't mean that a DP or GOP must comply with the wishes of its TOP or BA because as you state that could be beyond the control of the DP or GOP. No change made. The use of the word "any" could end up applying to an intercom and not to a primary mode of communication such as telephone system or email system. The RCSDT appreciates your comment and has made clarifying changes by removing the phrase "any of" in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure. The latter part of R11 states; "...shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability." This ambiguous statement does not support reliability. Consulting with a TOP or BA does not solve the problem of the lack of Interpersonal Communication capabilities. This statement should be deleted or revised to read: <i>"Each Distribution Provider and Generator Operator that experiences a failure of its defined primary Interpersonal Communication with their Transmission Operator or Balancing Authority shall notify the applicable TOP or BA as to the status of the Interpersonal Communication capability."</i> The RCSDT believes non-compliance is not due solely to the failure of any Interpersonal Communication capability, but must be accompanied by a failure to consult with the applicable Transmission Operator or Balancing Authority to establish mutually agreeable action for restoration. No change made.
Response: See response above.		

Organization	Yes or No	Question 6 Comment
SERC OC Standards Review Group		COM-001-2 Comments Definition of Alternative Interpersonal Communication: The proposed definition uses the term “medium.” What is the scope of that? Telephony is a “medium” but there is wired, wireless, satellite, etc. Was “medium” intended to differentiate voice, paper, text, email, teletype, or something else? Does the qualifying term “same” when modifying infrastructure mean something like voice versus written? What about situations where the primary telephone system is Voice Over Internet Protocol (VOIP) and it is using the same computer network infrastructure as an email or messaging system. That is the “same infrastructure” but a different “medium” R1 and R2 – The RCSDT believes that prescribing a device or medium would limit an entity; therefore, “capability” is used to avoid being prescriptive and to provide flexibility. This was not intended by the drafting team. The intent is to give the entity the flexibility in meeting the requirement. A loss of Interpersonal Communication capability is covered by R10, notification of Interpersonal Communication capability failure. No change made. We suggest the drafting team look at Standard EOP-008, Requirements R3 and R8 and add appropriate language in Standard COM-001-2, to avoid instantaneous non-compliance for loss of Interpersonal Communications and/or alternate Interpersonal communications. The RCSDT reviewed both EOP-008-0 and EOP-008-1, which is subject to future enforcement. In either version, the team believes there is no need to add additional language to the standard. The RCSDT believes that prescribing a device or medium would limit an entity;

Organization	Yes or No	Question 6 Comment
		therefore, “capability” is used to avoid being prescriptive and to provide flexibility. This was not intended by the drafting team. The intent is to give the entity the flexibility in meeting the requirement. A loss of Interpersonal Communication capability is covered by R10, notification of Interpersonal Communication capability failure. No change made. R1 - In later requirements it is proposed that the entity “...shall designate an...” It is suggested that for consistency and audit ability, this concept be used for R1, R3, R5, R7 and R8. In addition, the qualifier of “primary” should be used such that the requirements read: <i>“... shall have designated, primary Interpersonal Communications capability with the following entities:”</i> Although it is appropriate that “Alternative” be capitalized since it is used in a defined term (i.e. Alternative Interpersonal Communication”) that bounds acceptable alternative methods , we do not see the need to capital “primary.” Each entity listed must “have” an Interpersonal Communication capability and for Alternative Interpersonal Communication capability able to “designate” the alternate. The team established these requirements to provide flexibility to the industry. No change made. R9 - The requirement is unclear if the required monthly test is a general functionality test or if there is the expectation of testing the designated Alternative Interpersonal Communications with all of the entities defined in the sub-requirements of R2, R4, and R6. There is no expectation of testing the primary Interpersonal Communications - is this intentional or an oversight? Although functional testing of this should be done as a normal course of business, should an explicit test be required with each entity in the sub-requirements of R1,

Organization	Yes or No	Question 6 Comment
		R3, R5, R7 and R8 to insure, for example, that all the phone numbers are correct? COM-001-2, R9: The requirement is to initiate repair or designate an Alternative Interpersonal Communication capability within two hours. The requirement is not to have the repair completed within two hours. The requirement recognizes that the entity may use its Alternative Interpersonal Communication capability now as its Interpersonal Communication capability, and then, if it decides to do so, designate another, if you may, “new” Alternative Interpersonal Communication capability. This is not required, but is an option that the entity can consider. The entity may already have a maintenance and repair agreement in place that will respond and repair the failed capability. No change made. R10 - The following scenario seems plausible: The Interpersonal Communications fails and is detected at 14:00 and gets fixed at 14:35. It lasted more than 30 minutes but is fixed. As written the requirement would require the responsible entity to notify entities identified in R1 through R6 by 15:00 (i.e. 60 minutes from detection) even though the problem no longer exists. Is that the expectation? The RCSDT proposes that upon detection of failure that continues at least 30 minutes, starts the 60-minute clock. The 30 minutes allows an entity time to restore or determine if they can restore its Interpersonal Communication capability before the clock starts. No change made. Does COM-001 apply only to primary control centers or back-ups, per EOP-008, as well? The RCSDT reviewed both EOP-008-0 and EOP-008-1, which is subject to future enforcement. In either version, the team believes there is no need to add additional language to the standard. No change made. The RCSDT believes that prescribing a device or medium would limit an entity; therefore, “capability” is used to avoid being prescriptive and to provide flexibility. This was not intended by the drafting team. The intent is to give the entity the

Organization	Yes or No	Question 6 Comment
		flexibility in meeting the requirement. A loss of Interpersonal Communication capability is covered by R10, notification of Interpersonal Communication capability failure. No change made. M9 reads <i>“at least on a monthly basis.”</i> We suggest that this be changed to <i>“at least once per calendar month”</i> as written in R9. This change should also be corrected in the VSLs. The RCSDT agrees and the language in M9 has been changed to agree with the language in R9 and the VSL. M8 - We suggest removing the second <i>“that”</i> in the first sentence of the measure. COM-001-2, M8: The RCSDT agrees and the language in M8 has been changed to delete the additional <i>“that.”</i> M10 - We suggest this be revised to coincide with changes made in R10 (deleting impacted and adding as identified in Requirements R1 through R6), therefore M10 should read: <i>“Each Reliability Coordinator, Transmission Operator, and Balancing Authority, shall have and provide upon request evidence that it notified entities as identified in Requirements R1 through R6 within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasted 30 minutes or longer. Evidence could include, but is not limited to dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent evidence. (R10.)”</i> The word <i>“impacted”</i> was removed in previous postings. For further clarification, the RCSDT has modified M10 to remove the word <i>“impacted”</i> to be consistent with R10. For additional clarity, the RCSDT also changed the phrase in R10 and M10, <i>“R1 through R6”</i> to <i>“R1, R3, and R5,”</i> to clarify that it applies to the capabilities with the RC, the TOP and the BA. M12 needs to be removed.

Organization	Yes or No	Question 6 Comment
		The RCSDT appreciates your comment and has deleted Measure M12 that was left in error. We question why the first paragraph of Section 1.3 - Data Retention has been included in each of these three standards. We suggest that it should be removed from each standard. The RCSDT thanks you for your comments. The Data Retention language has been updated to be consistent with the Standards Drafting Guidelines. COM-002-3 Comments R2 - We recommend that the following phrase (in quotes) be added to R2: Each Balancing Authority, Transmission Operator and Distribution Provider that is the recipient of a Reliability Directive shall repeat, restate, rephrase or recapitulate the Reliability Directive “immediately upon receiving it.” As written, there is no limit as to when the entity must repeat it (i.e. they could wait 2 hours)The Standard is not clear as to what each entity is to do when more than one entity receives a Reliability Directive at the same time (e.g. during a RC area teleconference call). For example, is a roll call of receiving entities expected to be held so that they individually can repeat, restate, rephrase or recapitulate the Reliability Directive followed by individual confirmation required in R3? The requirement is aimed at being a performance-based requirement and states a description of “what” communication must take place, but does not prescribe “how” the communication is to be made. Adding the suggested phrase “immediately upon receiving it” introduces the ambiguous term “immediately,” for which there is neither plain meaning nor simple explanation. What must happen is that the recipient must respond in such a way that the issuer may determine whether the message has been properly understood. The RCSDT concludes that the proposed language gives plain meaning. No change made. IRO-001-3 Comments

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		We recommend that where the verb “direct/directed” or noun “direction” is used in Purpose, R1, R2 and R3, that it be replaced with the verb “instruct/instructed” or noun “instruction”, as appropriate. This would help the industry avoid confusion often referred to as “big D” or “little d” directives. It is noted that the term “Reliability Directive” does that to a great degree but avoiding the verb/noun “direct/direction” would augment the difference. The RCSDT feels the use of “direct” and “directed” is consistent with the purpose and application of those terms in other standards. No change made. R1 - At what point in time is “identified” referring to in “...to prevent identified events or...?” Is it referring to current or future events? One might assume both since the “Time Horizon” is defined as Real-time Operations, Same Day Operations and Operations Planning, but the requirement may be enhanced if explicitly stated (“...to prevent events identified in real-time or in the future or to mitigate the magnitude...”). The context of “identified” is when a set of system conditions is recognized that could lead to an Emergency or Adverse Reliability Impact, which may require action. See standards IRO-008 and IRO-009. No change made. For clarity, the scope of the authority should be limited to the Reliability Coordinator Area (“...that result in an Emergency or Adverse Reliability Impacts within its Reliability Coordinator Area”). As written, it implies the authority should extend outside its RC Area. The RCSDT believes that limiting the scope to the RC’s area would be too limiting and not account for potential conditions where an adjacent RC may have lost its wide-area view and requests the assistance of another RC or vice-versa. No change made. R2 - We question the phrase “physically implemented” and recommend that the intent be clarified in the language. The RCSDT believes there may be conditions where an entity may not be able to physically implement the direction. For example, an entity that does not have the

Organization	Yes or No	Question 6 Comment
		right to access certain equipment or cannot manually operate a broken apparatus. We feel the proposed language achieves the intended purpose. No change made. We note the following comment and response posted under Consideration of Comments on Initial Ballot - Reliability Coordination (Project 2006-06) Date of Initial Ballot: February 25 - March 7, 2011: <i>"IRO-001 R2, R3, and R4 have replaced "Directives" with the word direction in lower case (while it appears that "Directives" is a subset of "directions"). We believe that this muddies the waters and could bring numerous conversations and dialog into scope unnecessarily. The end result is that the RC has the right to issue and use "Directives" and anything short of this could just be communications. For example, a number of entities that are Reliability Coordinators also facilitate energy markets. There are many communications related to markets that probably should be out of scope with respect to the standards. Furthermore, it might not be clear what role (e.g., Reliability Coordinator, market operator, etc) the staff at these entities is fulfilling. Response: IRO-001 is written to cover both typical daily operating scenarios and also emergency scenarios. The required performance encompasses issuing and responding to Reliability Directives as well as other directions. The requirement language specifically ties back to Requirement R2 which states that the RC "shall take actions or direct actions, which could include issuing Reliability Directives." This is the "direction in accordance with Requirement R2" stated in R3 and the "direction in accordance with Requirement R3" stated in R4."We believe the entity's comments remain valid and the response provided by the SDT does not address all aspects of the concern.</i> The word "direction" connects with the language in the R1 (act or direct). Reliability Directives is a subset of "direction." No change made. We suggest that the language be changed to "Reliability Directive" consistent with COM-002. R3 - The requirement states the responsible entities shall "inform" its RC when

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		unable to perform as directed but it is unclear when the notification needs to take place. Although the term “as soon as practical” may seem be un-measureable, as written now there is no time deadline to perform the notification - i.e. it could be 4 hours later after recognition. The proposed requirement uses the term “upon recognition.” No change made. M2 - need to add the following words “compliance with, physically, unless” which were included in R2, therefore M2 should read: The RCSDT thanks you for your comment and has added the word “physically” to the IRO-001-2, Measure M2. <i>“Each Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator and Distribution Provider shall have and provide evidence which may include, but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it complied with its Reliability Coordinator’s direction(s) per Requirement R1 unless compliance with the direction per Requirement R1 could not be physically implemented or unless such actions would have violated safety, equipment, regulatory or statutory requirements. In such cases, the Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator or Distribution Provider shall have and provide copies of the safety, equipment, regulatory or statutory requirements as evidence for not complying with the Reliability Coordinator’s direction”</i> (R2) “Section 1.3, the second bullet; need to add calendar to 12 calendar months.” The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Standards Review group only and should not be construed as the position of SERC Reliability Corporation, its board or its officers.” The RCSDT appreciates your comments and conforming changes have been made to the Data Retention section.

Organization	Yes or No	Question 6 Comment
Response: See response above.		
Pacific Northwest Generating Cooperative		The PNGC Comment Group believes COM-002-3, R2, lacks justification for applicability to a Distribution Provider (DP). RCs in the WECC region do not communicate reliability directives to DP only entities. Having this requirement apply to DPs seems to indicate that we will need 24/7 communications capability to record and respond to calls that will never come in order to satisfy the requirement with no improvement to reliability. The SDT's response from the last round of comments: "It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive." Nowhere is this expectation provided for in the written standard. If the issuer of a reliability directive has already called the DP, are they going to then re-issue the reliability directive after the DP calls them back?
Response: In COM-002-3, the DP may or may not receive a Reliability Directive from the RC; however, in the case they do, they are required to comply with the requirement. The measures do not require recordings. Evidence may include things like dated operator logs. No change made.		
Northeast Power Coordinating Council		For COM-001: 1. R1.2 and R2.2: The phrase "within the same Interconnection" is improper; it needs to be removed. RCs between two Interconnections still need to communicate with each other for reliability coordination (e.g. between Quebec and the other RCs in the NPCC region to coordinate reliability issues including curtailing interchange transactions crossing an Interconnection boundary). The SDT's response to industry comments on the previous posting that the phrase was added to address the ERCOT situation (that ERCOT does not need to communicate with other RCs and that such coordination takes place between TOPs) leaves a reliability gap. Requirement R1 addresses a reliability need for adjacent Reliability Coordinators synchronously connected within the same Interconnection to have Interpersonal

Organization	Yes or No	Question 6 Comment
		Communication capability; however, it does not preclude or limit the Reliability Coordinator from establishing Interpersonal Communication capability with others. The RCSDT does not see where there is a need to communicate with other Reliability Coordinator's from one interconnection to another. No change made. 2. R3.5 and R4.3: The phrase "synchronously connected within the same Interconnection" is also improper; it needs to be removed. TOPs do communicate with other TOPs including those asynchronously connected and in another Interconnection (e.g. between Quebec and all of its asynchronously interconnected neighbors). The reason that was used in response to the above comments (coordination among TOPs for DC tie operation) contradicts with the inclusion of this phrase in R3.5 and R4.3. The RCSDT has made clarifying changes by adding Parts to R3 and R4 to address asynchronous connections between Transmission Operators and have eliminated the phrase "within the same interconnection." COM-001-2, R3.5 and R4.3: Use of the phrase "within the same interconnection." The RCSDT recognizes that operating activities occurring inside an interconnection that is not synchronously interconnected with another interconnection cannot cause immediate effects upon that interconnection. Any changes in flow across any asynchronous tie between those interconnections must take place through a coordinated interchange energy scheduling process, except for contingency loss the asynchronous ties. In the case of the latter, there is no other path which can be used to address the loss of the asynchronous tie, nor is any synchronous tie immediately affected. The standard does not require such involved RCs to have Interpersonal Communication capability, but does not preclude it. Any rearrangement of scheduled flows on other asynchronous ties must be done through a pre-existing interchange energy scheduling process. No change made. 3. R4 and R6: Not requiring an Alternative Interpersonal Communication capability between the BAs and the DP and GOP can result in a reliability gap. If Interpersonal Communication capability between the BAs and these entities is required to begin

Organization	Yes or No	Question 6 Comment
		with to enable BAs to communicate with these entities (such as operating instructions or Reliability Directives) to ensure reliable operations, then an alternative capability is also needed to ensure this objective is achieved when the primary capability fails. The RCSDT refers the Order No. 693 in Paragraph 508 to clarify the reason the DP and GOP are not required to have Alternative Interpersonal Communication and is as follows: “(1) expands the applicability to include Generator Operators and Distribution Providers and includes Requirements for their telecommunications facilities; (2) identifies specific requirements for telecommunications facilities for use in normal and Emergency conditions that reflect the roles of the applicable entities and their impact on Reliable Operation and (3) includes adequate flexibility for compliance with the Reliability Standard, adoption of new technologies and cost-effective solutions.” In addition, R11 requires the DP and GOP to consult with its BA and TOP to determine a mutually agreeable action for restoration. No change made. 4. To preclude the possibility of problems arising from having different languages spoken between entities, COM-001-1.1 R4 should remain as it was or those ideas kept in the revised requirement. R4 read: <i>“R4. Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations.”</i> According to the proposed implementation plan for COM-001-2, R4 pertaining to the use of English will remain in effect upon the effective date of COM-001-3. This requirement is being revised and will be included in Standard COM-003-1, Operating Personnel Communications Protocols. COM-001-1.1, R4 will be retired at midnight the day before COM-003-1 becomes effective. No change made.

Organization	Yes or No	Question 6 Comment
		5. Measure M3 does not cover the added R3.5 condition (having Interpersonal Communications capability with each adjacent TOP). M3 needs to be revised. The RCSDT thanks you for your comment and has made conforming changes to make to Measure, M3. For IRO-001: The Data Retention Section does not reflect the revised requirements. As examples: the Electric Reliability Organization is no longer a responsible entity; the Reliability Coordinator should replace the ERO for keeping data for R1. Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider should replace the Reliability Coordinator for keeping data for R2. And, in the Data Retention Section, R4 and M4 are mentioned. However, there are only three requirements with their corresponding measures in the standard.
Response: The RCSDT thanks you for your comment and has made conforming changes to IRO-001-3.		
MRO NSRF		Has the SDT looked at combining COM-002-3 and IRO-001-3 into a single Standard? It would allow Entities a one stop shopping place to refer to issuing and receiving a Reliability Directive. The RCSDT understands some of the benefits with combining the standards; however, at this juncture, it would further delay the progress of the standards. No change made. The definition of Interpersonal Communication is: “Any medium that allows two or more individuals to interact, consult, or exchange information.” As stated in Question 4, the use of the word “any” will bring in mediums that are outside the scope of this Standard. The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying

Organization	Yes or No	Question 6 Comment
		change to indicate the DP and GOP only need to consult with the entity affected by the failure. The NSRF recommends the following: Interpersonal Communication: The primary (or designated) medium that allows two or more individuals to interact, consult, or exchange information. The RCSDT emphasizes the requirement refers only to Interpersonal Communication capabilities. Adding the phrase “to the primary” is not needed. Please refer to the definitions of Interpersonal Communication and Alternative Interpersonal Communication for clarification. No change made. In Standard COM-002-3 the MRO NSRF recommends that the Effective Date be the first day of the second calendar quarter after applicable regulatory approval, to be the same as COM-001-2 and IRO-001-3. In that way all 3 standards would be effective at the same time, making implementation much smoother. The RCSDT thanks you for your comment and has made conforming changes to adjust IRO-001 to be the same as COM-001 and COM-002. The below section will lead to entities hold evidence past the 12 month retention period. This ambiguous wording will force entities to hold data past the 12 month period as stated in the following paragraph, after the below sighting. Recommend that the first paragraph within 1.3 be deleted in its entirety. 1.3. Data Retention The following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit. The RCSDT thanks you for your comments. The Data Retention language has been updated to be consistent with the Standards Drafting Guidelines.

Organization	Yes or No	Question 6 Comment
Response: See response above.		
CCG, CPG, CECD		Comments: IRO-001-3 uses the term ‘direct’ in its purpose statement, R1, R2 and R3. To avoid confusion with a Reliability Directive (both for auditors and entities), we suggest the following: To establish the authority of Reliability Coordinators to make requests of other entities to prevent an Emergency or Adverse Reliability Impacts to the Bulk Electric System. The RCSDT feels the use of “direct” and “directed” is consistent with the purpose and application of those terms in other standards. No change made. R1: Each Reliability Coordinator shall have the authority to act or request others to act (which could include issuing Reliability Directives) to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impacts. The RCSDT feels the use of “direct” and “directed” is consistent with the purpose and application of those terms in other standards. The RCSDT believes by using the word “request” make the requirement conditional and is not consistent with the purpose of the standard. No change made. R2: Each Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider shall comply with its Reliability Coordinator’s request unless compliance with the request cannot be physically implemented, or unless such actions would violate safety, equipment, regulatory or statutory requirements, or unless the TOP, BA, GOP or DP convey a business reason not to comply with the request but express that they will comply if a Reliability Directive is given. The RCSDT feels the use of “direct” and “directed” is consistent with the purpose and application of those terms in other standards. The RCSDT believes by using the word “request” make the requirement conditional and is not consistent with the purpose of the standard. No change made. R3: Each Transmission Operator, Balancing Authority, Generator Operator, and

Organization	Yes or No	Question 6 Comment
		Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to perform as requested in accordance with Requirement R2. The RCSDT feels the use of “direct” and “directed” is consistent with the purpose and application of those terms in other standards. The RCSDT believes by using the word “request” make the requirement conditional and is not consistent with the purpose of the standard. No change made.
Response: See response above.		
LG&E and KU Services Company		COM-001-2 Regarding COM-001-2 and proposed definitions, LG&E and KU Services recommends changing the terms being defined from “Interpersonal Communications” and “Alternative Interpersonal Communication” to “Means for Interpersonal Communication” and “Alternative Means for Interpersonal Communication.” A communication is an exchange of information, not a medium. The medium is simply the means. LG&E and KU Services Company further recommend that each requirement be rewritten with these new defined terms as appropriate and that the word “capabilities” currently following the defined terms be removed from each of the requirements. We suggest the definition for “Means for Interpersonal Communication” be: “A medium utilizing electromagnetic energy that allows two or more individuals to interact, consult or exchange information.” We suggest the definition for “Alternative Means for Interpersonal Communication” be: “Any Means for Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Means for Interpersonal Communications used for day-to-day operation.” The RCSDT thanks you for your comment; however, great lengths were taken in communicating mediums regarding IC and AIC and finds that adding “Means” to the

Organization	Yes or No	Question 6 Comment
		proposed terms being defined diminishes clarity of the definition. No change made. Finally, LG&E and KU Services Company request clarification that the requirements to have in place Interpersonal Communications and Alternative Interpersonal Communications do not establish non-compliance for the unavailability of either medium provided the reporting requirements set forth in the standard are otherwise met. The RCSDT believes a condition of non-compliance will not be created if the entity meets all of the requirements for Interpersonal Communication and Alternative Interpersonal Communication capability. For example, the applicable entity has a failure of the IC and notifies the identified entities and begins using its AIC. No change made. All Proposed Standards LG&E and KU Services Company suggest that the first paragraph in section 1.3 Data Retention be removed from all proposed standards. It states: ...For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit. While LG&E and KU Services Company is confident that the SDT intended to clarify entities' data retention responsibilities, this paragraph could be clarified to indicate that it does not require that any additional evidence be retained and provided beyond that written in the standard's requirements. The RCSDT thanks you for your comments. The Data Retention language has been updated to be consistent with the Standards Drafting Guidelines.
Response: See response above.		
Bonneville Power Administration		BPA supports COM-001-2, COM-002-3 and IRO-001-3 as written and has no comments or concerns at this time.

Organization	Yes or No	Question 6 Comment
Response: Thank you for your comment.		
SPP Standards Review Group		COM-001-2: Requirement 10 is too open ended as written. The measure, M10, indicates that only impacted entities need to be notified. The requirement should be changed to make it consistent with the measure. The requirement would then read: <i>“Each RC, TOP And BA shall notify impacted entities as identified...”</i> Requirements 3 and 5 places the responsibility for establishing Interpersonal Communication capability on the TOP and BA. It is quite conceivable that a TOP or BA may not know all, or newly, registered DPs and GOPs in its respective area. The word “impacted” was removed in previous postings. For further clarification, the RCSDT has modified M10 to remove the word “impacted” to be consistent with R10. For additional clarity, the RCSDT also changed the phrase in R10 and M10, “R1 through R6” to “R1, R3, and R5” to clarify that it applies to the capabilities with the RC, the TOP, and the BA. In Requirements 7 and 8, the DP and GOP, respectively, are in turn responsible for establishing Interpersonal Communication capability. The TOPs/BAs and the DPs/GOPs should not be responsible for this. The DPs and GOPs should be held accountable for requesting that capability of their TOP and BA. The standard establishes requirement for communication capability appropriate to ensure reliability. There is no requirement for it to be different from the Interpersonal Communication capability that its Balancing Authority has with it, nor the Interpersonal Communication capability that its Transmission Operator has with it. Cooperation and coordination is always encouraged and is an excellent practice, but is not required by this standard. Thank you for your suggestion. No change made.

Organization	Yes or No	Question 6 Comment
		Therefore, we suggest adding the following phrase at the end of Requirements 3.3, 3.4, 5.3 and 5.4 - 'that has requested Interpersonal Communications capability.' Then R3.3 would read: <i>"Each Distribution Provider within its Transmission Operator Area that has requested Interpersonal Communications capability."</i> The SDT does not agree that these changes to R3.3, R3.4, R5.3 and R5.4 are necessary. The current R7 and R8 require the DP and the GOP to have this capability. It is not a request. No change made. COM-002-3: Requirement 2/Measure 2: There is an inconsistency between the requirement and the measure. The requirement allows the recipient to repeat, restate, rephrase or recapitulate the directive. Measure 1 only mentions repeating the directive. The RCSDT agrees that M2 needs to match the phrasing used in R2 and has made clarifying changes.
Response: See response above.		
Dominion		COM-001-2; M9 reads <i>"at least on a monthly basis"</i>, Dominion suggests that this be changed to <i>"at least once per calendar month"</i> as written in R2. The RCSDT agrees and the language in M9 has been changed to agree with the language in COM-001-2, R9. M8 Dominion suggests removing the second <i>"that"</i> in the first sentence of the measure. COM-001-2, M8: The RCSDT agrees and the language in M8 has been changed to delete the additional <i>"that."</i> M10 Dominion suggests this be revised to coincide with changes made in R10 (deleting impacted and adding as identified in Requirements R1 through R6),

Organization	Yes or No	Question 6 Comment
		therefore M10 should read: <i>“Each Reliability Coordinator, Transmission Operator, and Balancing Authority, shall have and provide upon request evidence that it notified entities as identified in Requirements R1 through R6 within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasted 30 minutes or longer. Evidence could include, but is not limited to dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent evidence. (R10.)”</i> The RCSDT thanks you for your comment and has made conforming changes to make change “impacted” to “identified” entities. M12 needs to be removed. The RCSDT appreciates your comment and has deleted Measure M12 that was left in error. IRO-001-3; R2 - Dominion questions the phrase “physically implemented” and recommends that the intent be clarified in the language. The RCSDT believes there may be conditions where an entity may not be able to physically implement the direction. For example, an entity that does not have the right to access certain equipment or cannot manually operate a broken apparatus. We feel the proposed language achieves the intended purpose. No change made. Dominion notes the following comment and response posted under Consideration of Comments on Initial Ballot - Reliability Coordination (Project 2006-06) Date of Initial Ballot: February 25 - March 7, 2011:” <i>IRO-001 R2, R3, and R4 have replaced “Directives” with the word direction in lower case (while it appears that “Directives” is a subset of “directions”). We believe that this muddies the waters and could bring numerous conversations and dialog into scope unnecessarily. The end result is that the RC has the right to issue and use</i>

Organization	Yes or No	Question 6 Comment
		<i>“Directives” and anything short of this could just be communications. For example, a number of entities that are Reliability Coordinators also facilitate energy markets. There are many communications related to markets that probably should be out of scope with respect to the standards. Furthermore, it might not be clear what role (e.g., Reliability Coordinator, market operator, etc) the staff at these entities are fulfilling.</i> <i>Response: IRO-001 is written to cover both typical daily operating scenarios and also emergency scenarios. The required performance encompasses issuing and responding to Reliability Directives as well as other directions. The requirement language specifically ties back to Requirement R2 which states that the RC “shall take actions or direct actions, which could include issuing Reliability Directives.” This is the “direction in accordance with Requirement R2” stated in R3 and the “direction in accordance with Requirement R3” stated in R4.”Dominion believes the entity’s comments remain valid and the response provided by the SDT does not address all aspects of the concern.</i> Dominion suggests that the language be changed to “Reliability Directive” consistent with COM-002. The word “direction” connects with the language in the R1 (act or direct). Reliability Directives is a subset of “direction.” No change made. M2 - need to add the following words “compliance with, physically, unless” which were included in R2, therefore M2 should read: <i>“Each Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator and Distribution Provider shall have and provide evidence which may include, but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it complied with its Reliability Coordinator's direction(s) per Requirement R1 unless compliance with the direction per Requirement R1 could not be physically</i>

Organization	Yes or No	Question 6 Comment
		<i>implemented or unless such actions would have violated safety, equipment, regulatory or statutory requirements. In such cases, the Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator or Distribution Provider shall have and provide copies of the safety, equipment, regulatory or statutory requirements as evidence for not complying with the Reliability Coordinator's direction. (R2)"</i> The RCSDT thanks you for your comment and has added the word "physically" to the IRO-001-2 Measure M2. Section 1.3, the second bullet; need to add calendar to 12 calendar months The RCSDT appreciates your comments and conforming changes have been made to the Data Retention section.
Response: See response above.		
FirstEnergy		Definition of Interpersonal Communications. We understand that the team does not want to be prescriptive as far as the specific types of communication mediums since we live in an age of many forms of communication. But in this case it may be helpful to give examples in the definition. An auditor may interpret Interpersonal Communication to strictly include voice-related and two-way conversations. Depending on the circumstances, other mediums may be adequate, such as blast calls or instant messaging. This should be clarified in the definition. COM-001-2. In R9, it should be clear that the 2-hour timeframe is for initiation of corrective action because mitigation may take much longer. We suggest the last sentence of R9 state: "If the test is unsuccessful, the responsible entity shall, within 2 hours, initiate action to repair or designate a replacement Alternative Interpersonal Communications capability.

Organization	Yes or No	Question 6 Comment
		COM-001-2, R9: The requirement is to initiate repair or designate an Alternative Interpersonal Communication capability within two hours. The requirement is NOT to have the repair completed within two hours. The requirement recognizes that the entity may use its Alternative Interpersonal Communication capability now as its Interpersonal Communication capability, and then, if it decides to do so, designate another, if you may, “new” Alternative Interpersonal Communication capability. This is not required, but is an option that the entity can consider. The entity may already have a maintenance and repair agreement in place that will respond and repair the failed capability. No change made. In R10, the phrase “R1 through R6” should state “R1 through R8.” The RCSDT thanks you for your comment; alternatively, the RCSDT has modified the language of R10 to refer to R1, R3, and R5, rather than “R1 through R6,” since the responsible entities are limited to the RC, the TOP, and the BA in these requirements. COM-002-3 In R2, the use of the term recapitulate may not be appropriate. This term means “to summarize” the directive. Three-part communication during emergency situations should assure that the essential details of the directives are understood and a summary may inadvertently leave out important information. The RCSDT carefully considered the use of the term “recapitulate,” and believes it correctly captures the intent. No change made. The effective date of COM-002-3 should be consistent with COM-001-2 and IRO-001-3 and state “the 1st calendar day of the 2nd calendar quarter.” It currently shows the “1st calendar quarter in the standard and implementation plan. The RCSDT thanks you for your comment and has made conforming changes to adjust IRO-001 to be the same as COM-001 and COM-002. IRO-001-3 The third bullet under Data Retention addresses requirement R4 and measure M4

Organization	Yes or No	Question 6 Comment
		neither of which exist in the standard. The RCSDT thanks you for your comment and has made conforming changes. In R1, the word “and” is missing between Generator Operator and Distribution Provider. The RCSDT thanks you for your comment and has made conforming changes to IRO-001, R2. VSL for R2 - “N/A” should be removed from the High VSL - Furthermore, the VSL should include language for instances when the entity cannot meet the RC’s directive as afforded by R2. The RCSDT thanks you for your comment and has made conforming changes to IRO-001, R2 VSL.
Response: See response above.		
MISO Standards Collaborators		The Data Retention Section in IRO-001 does not reflect the revised requirements. For example: the Electric Reliability Organization is no longer a responsible entity; the Reliability Coordinator should replace the ERO for keeping data for R1; Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider should replace the Reliability Coordinator for keeping data for R2; and there is no R4/M4. The RCSDT thanks you for your comment and has made conforming changes. Additional comments associated with COM-002 We are concerned with the use of ‘shall’ in the measurement sections. ‘Shall’ statements should only be used in the Requirements, as these are the only enforceable items in the standard. The measures should not limit how we show compliance. If there are specific issues that the drafting team is proposing to be a requirement, they should be added to the requirements section of the standard. The RCSDT has checked the usage of “shall” in other standards and has found it to be

Organization	Yes or No	Question 6 Comment
		consistent with writing measures. The RCSDT notes the measures are examples and the entity is not limited to those examples. No change made. Measurement M1 should also allow entities to develop procedures that are distributed to and trained on in advance with recipients of directives that meet the requirements for the communication of what constitutes a Reliability Directive. The last sentence in the measurement should be revised to read: <i>“Such evidence could include, but is not limited to, dated and time-stamped voice recordings, dated and time-stamped transcripts of voice recordings, or dated operator logs to show that it identified the action as a Reliability Directive to the recipient or approved procedures that identify what constitutes a Reliability Directive and when Reliability Directives are issued.”</i> The RCSDT believes that M1 does not preclude an entity from developing, having or utilizing procedures as evidence to address Reliability Directives. No change made. (R1) The Data Retention section states; ‘For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.’ It is unclear on how an entity would be expected to provide evidence beyond 3 months when requested if the data retention period and established procedures do not require the evidence to be retained. The SDT should provide examples of what other types of evidence could be expected or the phrase should be removed. The RCSDT thanks you for your comments. The Data Retention language has been updated to be consistent with the Standards Drafting Guidelines.
Response: See response above.		

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Florida Municipal Power Agency		In the definition of Interpersonal Communication, the use of the word “medium” is ambiguous. Suggestions for alternatives: “system”, “channel.” The RCSDT deliberately stayed away from the use of primary and secondary mediums, and prefers to use communications capabilities. Further, the RCSDT has gone to great lengths to provide some flexibility for those DPs and GOPs with little or no impact on the reliability of the BES. FERC directed NERC to provide for this consideration. Therefore, we use the language as proposed in R11. Mutually agreeable implies that both parties are willing to accept the outcome. It doesn’t mean that a DP or GOP must comply with the wishes of its TOP or BA because as you state that could be beyond the control of the DP or GOP. But what transpires in the consultation is a realization of what the situation is, what the impacts to reliability are and a determination of what is amicable to both parties. No change made. COM-001-2, R1 and R3, the phrase: “have Interpersonal Communications capabilities”, what if the communication system fails? Is that an immediate non-compliance (especially R3.3 and R3.4 which do not require a redundant system). Suggest using EOP-008 type of language to allow restoration of failed equipment without non-compliance. The RCSDT reviewed both EOP-008-0 and EOP-008-1, which is subject to future enforcement. In either version, the team believes there is no need to add additional language to the standard. The RCSDT believes that prescribing a device or medium would limit an entity; therefore, “capability” is used to avoid being prescriptive and to provide flexibility. This was not intended by the drafting team. The intent is to give the entity the flexibility in meeting the requirement. A loss of Interpersonal Communication capability is covered by R10, notification of Interpersonal Communication capability failure. No change made.

Organization	Yes or No	Question 6 Comment
		COM-001-2, R9 - "Each ... shall test its Alternative Interpersonal Communications capability", suggest adding the phrase "to each entity for which Alternative Interpersonal Communications is required" to add clarity. In addition, the type of testing is unclear and ambiguous. The RCSDT proposes that R9 correctly identifies and provides clarity for the entities required to have Alternative Interpersonal Communication capability. No change made There is also ambiguity in the terms "direct", "directive", "direction" and "Reliability Directive." The SDT may want to consider using the terms "instruct" and "instruction" in place of "direct", "directive", "direction" to more clearly distinguish from a Reliability Directive. The RCSDT feels the use of "direct" and "directed" is consistent with the purpose and application of those terms in other standards. No change made.
Response: See response above.		
ACES Power Marketing Standards Collaborators		The following comments are regarding IRO-001-3. We disagree with including "authority" in this standard. FERC Order 693a, paragraph 112, made it clear that the authority of a registered entity is established through the approval of the standards by FERC. Thus, a Reliability Coordinator gets its authority to issue Reliability Directives by having a requirement that states it must issue Reliability Directives approved by the Commission. Please change "shall have authority to act" in Requirement R1 back to "shall act." Please also remove all other vestiges of authority from the standards including in the purpose, measures and VSLs. The RCSDT believes that other standards (i.e., IRO-009 - R3 & R4, EOP-002 - R1 & R8) address the action of others and if the term "authority" is omitted, creates a generic requirement such as what has been suggested puts the RC in a double jeopardy

Organization	Yes or No	Question 6 Comment
		situation. No change made. The word “direction” connects with the language in the R1 (act or direct). Reliability Directives is a subset of “direction.” No change made. Requirement R1 should require the use of Reliability Directives. The requirement compels the Reliability Coordinator “to direct others to act to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impact.” Reliability Directives are necessary to address Adverse Reliability Impacts or Emergencies and trigger the use of three-part communications identified in COM-002-3. The RCSDT views R1 as an authority requirement to direct others, which could include a subset of direction called, Reliability Directive. Requirement R2 is the response requirement for the recipient. The judgment the recipient is under is that the recipient must comply with the direction, unless the direction cannot be physically implemented or unless such actions would violate safety, equipment, regulatory or statutory requirements. Requirement R3 is simply requires the recipient to inform the issuer of its inability to perform the direction. No change made. COM-002-3 R1 really compels the Reliability Coordinator to use a Reliability Directive for Emergencies and Adverse Reliability Impacts with the opening clause: “When a Reliability Coordinator, Transmission Operator, or Balancing Authority determines actions need to be executed as a Reliability Directive.” What else could be more important for a Reliability Coordinator to issue a Reliability Directive than for an Emergency or Adverse Reliability Impact? Thus, not requiring the use of Reliability Directives for Adverse Reliability Impacts and Emergencies makes IRO-001-3 R1 and COM-002-3 R1 inconsistent. For clarity and consistency, Requirement R2 and R3 should also be clear that the responsible entities will respond to the Reliability Coordinator’s Reliability Directives.

Organization	Yes or No	Question 6 Comment
		Furthermore, this would make the standard consistent with how Reliability Directives are handled by the Transmission Operator in the draft TOP-001-2 standard proposed by the Real-Time Operations drafting team (Project 2007-03). The RCSDT development of IRO-001-3 R1 states “...which could include issuing Reliability Directives...” and therefore does not preclude its use if it is determined by the RC to use it. There may be instances where the RC discusses operational issues in normal dialogue with entities that do not require the use of Reliability Directive. No change made. The Data Retention section needs to be modified. The first bullet applies to the Electric Reliability Organization and Requirement R1 and Measure M1. The actual requirement and measure apply to the Reliability Coordinator. Furthermore, five calendar years exceeds the audit period of three years for a Reliability Coordinator. The RCSDT thanks you for your comment and has removed this bullet. The second bullet incorrectly applies to the Reliability Coordinator and Requirement R2 and Measure M2. Requirement R2 and Measurement M2 apply to Transmission Operators, Balancing Authorities, Generator Operators and Distribution Providers. The third bullet mentions Requirement R4 and Measurement M4. The RCSDT thanks you for your comment and has made conforming changes. There is no Requirement R4 and Measurement M4 in the standard. The RCSDT thanks you for your comment and has made conforming changes. The VSLs for Requirement R1 are not consistent with the requirement. The VSL states that it is for failure to act while the requirement compels the Reliability Coordinator to have the authority to act. This modifies the requirement which is not allowed under FERC VSL guidelines. The RCSDT thanks you for your comment and will correct the R1 VSL to have the phrase "exercise their authority" inserted between "to" and "take" in the first

Organization	Yes or No	Question 6 Comment
		sentence. The VSLs for Requirement R2 need to include the “unless” clause from the requirement. Otherwise, the VSL implies that the responsible entity violated the requirement for failing to follow the directive even if they could not for one of the reasons listed in the requirement. This again is not consistent with FERC guidelines that state VSLs cannot modify the requirement. The RCSDT did not include the “unless such actions would violate safety, equipment, regulatory or statutory requirements” portion of the requirement in the VSL because if an entity could not perform the directed action, there is no violation. No change made. The following comments pertain to COM-001-2. We recommend striking “capability” from all of the requirements. It is not clear to us how this helps when a definition for Interpersonal Communications is written already and applies to a communication medium. Furthermore, we think it causes confusion and actually contradicts the intent of the standard. Because Requirements R1, R3, R5, R7 and R8 focus on capability, the responsible entity will be in violation anytime its medium that it uses for the primary capability does not function properly. Whereas if the requirement stated that the responsible entity was to designate a primary communications medium, the responsible entity is not in violation if that medium is not functioning properly. It would be clear that Requirement R2, R4 and R6 are intended to be complementary. The RCSDT believes that prescribing a device or medium would limit an entity; therefore, “capability” is used to avoid being prescriptive and to provide flexibility. This was not intended by the drafting team. The intent is to give the entity the flexibility in meeting the requirement. A loss of Interpersonal Communication capability is covered by R10, notification of Interpersonal Communication capability failure. No change made. Furthermore, it is not clear why Requirements R1, R3, R5, R7 and R8 state that the

Organization	Yes or No	Question 6 Comment
		responsible entity shall “have” when the companion Requirements R2, R4, and R6 state “designate.” The RCSDT believes the requirements achieve the desired intent of the standard. Each entity listed must “have” an Interpersonal Communication capability and for Alternative Interpersonal Communication capability able to “designate” the alternate. The team established these requirements to provide flexibility to the industry. No change made. Since Requirement R10 deals with a failure of its Interpersonal Communications capabilities and not Alternate Interpersonal Communications capability, it should only refer to the entities in Requirements R1, R3, and R5. Currently, it includes R1 through R6. COM-001-2, R10: The RCSDT thanks you for pointing this out. The RCSDT has modified the language of R10 to refer to R1, R3, and R5, rather than “R1 through R6,” since the responsible entities are limited to the RC, the TOP, and the BA in these requirements. (COM-001 M1) We suggest changing “physical assets” to “demonstration of physical assets.” Since evidence is provided to the auditor and the auditor takes the evidence with them, providing them evidence that is a “physical asset” would be problematic. We believe that the VSLs could be written to provide more gradations. For example, if a Transmission Operator or Balancing Authority failed to have Interpersonal Communications capability with a Distribution Provider but had Interpersonal Communications capability with all other required entities, it has met the vast majority of the requirement. Since VSLs are a measure of how much the requirement was missed by the responsible entity, jumping to a Severe VSL does not seem to adequately capture that the responsible entity met the vast majority of the requirement. Requirements R4 and R6 even seem to recognize this by not including Distribution Provider in the list of entities to which the Transmission Operator or

Organization	Yes or No	Question 6 Comment
		Balancing Authority are required to designate Alternate Interpersonal Communications capability. The following comments pertain to COM-002-3. The RCSDT believes the Measures address the needed examples of evidence. No change made. While COM-002-3 is well written to explain the three-part communications requirements and makes it perfectly clear when Reliability Directive has been issued, the opening clause leaves the responsible entity open to second guessing on whether they should have issued a Reliability Directive. This problem could be solved by changing the opening clause to: “When a Reliability Coordinator, Transmission Operator, or Balancing Authority determines actions need to be executed as a Reliability Directive.” In the second bullet of Requirement R3, we suggest using “Restate” in place of “Reissue.” The responsible entity is not really reissuing the Reliability Directive. They are still in the act of trying to get the Reliability Directive issued and are simply re-communicating it because it was not understood.
Response: The RCSDT believe the offered suggestion does not improve COM-002-3, R1. No change made.		
Kansas City Power & Light		R9 - considering the reliability of communication systems and System Operator attention may be on more important operational concerns, a 2-hour response to a problem with the alternative means of communication is over sensitive. Allowing for sometime in an operating shift would be more in line, such as 8 hours. COM-001-2, R9: The requirement is to initiate repair or designate an Alternative Interpersonal Communication capability within two hours. The requirement is NOT to have the repair completed within two hours. The requirement recognizes that the entity may use its Alternative Interpersonal Communication capability now as its Interpersonal Communication capability, and then, if it decides to do so, designate

Organization	Yes or No	Question 6 Comment
		another, if you may, “new” Alternative Interpersonal Communication capability. This is not required, but is an option that the entity can consider. The entity may already have a maintenance and repair agreement in place that will respond and repair the failed capability. No change made. Violation Severity Levels for COM-001-2: The VSL’s for requirements R1-R8 and R11 do not recognize the efforts of Entities to meet the requirements. If an Entity failed to establish communications or alternative communications with 1 Entity out of 20 should that be Severe? The RCSDT believes the requirements are essential to reliable operations; however, the requirement is Severe more so because it is a pass-fail requirement, and by definition makes it Severe (binary requirement). No change made. Implementation Plan for COM-001-2: The implementation plan is too aggressive at completing in 6 months after regulatory approvals. Establishing agreements with other RC’s, TOP’s and BA’s for alternative “interpersonal communications” regarding the various types of communications available that meet these requirements will take more than 6 months. Recommend 12 months to allow Entities sufficient time to reach agreements and to establish the communications. The RCSDT believes that six months is adequate considering additional facilities should not have to be built to establish communications with the DP and GOP; similarly, compliance documentation should not impose significant work on the entities’ part. No change made.
Response: See response above.		
Southern Company		We question why the first paragraph of Section 1.3 - Data Retention has been included in each of these three standards. We suggest that it should be removed from each standard. The RCSDT thanks you for your comments. The Data Retention language has been

Organization	Yes or No	Question 6 Comment
		updated to be consistent with the Standards Drafting Guidelines. We suggest the drafting team look at Standard EOP-008, Requirements R3 and R8 and add appropriate language in Standard COM-001-2, to avoid instantaneous non-compliance for loss of Interpersonal Communications and/or alternate Interpersonal communications (R1 and R2). The RCSDT reviewed both EOP-008-0 and EOP-008-1, which is subject to future enforcement. In either version, the team believes there is no need to add additional language to the standard. The RCSDT believes that prescribing a device or medium would limit an entity; therefore, “capability” is used to avoid being prescriptive and to provide flexibility. This was not intended by the drafting team. The intent is to give the entity the flexibility in meeting the requirement. A loss of Interpersonal Communication capability is covered by R10, notification of Interpersonal Communication capability failure. No change made. COM-001-2 Dominion VP: COM-001-2; M9 reads “at least on a monthly basis”, Dominion suggests that this be changed to “at least once per calendar month” as written in R9. This change should also be corrected in the VSLs. The RCSDT agrees and the language in M9 has been changed to agree with the language in R9 and the R9 VSL. M8 - We suggest removing the second “that” in the first sentence of the measure. COM-001-2, M8: The RCSDT agrees and the language in M8 has been changed to delete the additional “that.” M10 - Dominion suggests this be revised to coincide with changes made in R10 (deleting impacted and adding as identified in Requirements R1 through R6), therefore M10 should read:

Organization	Yes or No	Question 6 Comment
		“Each Reliability Coordinator, Transmission Operator, and Balancing Authority, shall have and provide upon request evidence that it notified entities as identified in Requirements R1 through R6 within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasted 30 minutes or longer. Evidence could include, but is not limited to dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent evidence. (R10.)” The word “impacted” was removed in previous postings. For further clarification, the RCSDT has modified M10 to remove the word “impacted” to be consistent with R10. For additional clarity, the RCSDT also changed the phrase in R10 and M10, “R1 through R6” to “R1, R3, and R5,” to clarify that it applies to the capabilities with the RC, the TOP, and the BA. M12 needs to be removed. The RCSDT thanks you for your comment and has made the deletion. Southern: Definition of Alternative Interpersonal Communication: Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communications used for day-to-day operation. Comments: -The proposed definition uses the term “medium.” What is the scope of that? Telephony is a “medium” but there is wired, wireless, satellite, etc. Was “medium” intended to differentiate voice, paper, text, email, teletype, or something else? -Similar to that last question - does the qualifying term “same” when modifying infrastructure mean something like voice versus written? What about situations where the primary telephone system is Voice Over Internet

Organization	Yes or No	Question 6 Comment
		Protocol (VOIP) and it is using the same computer network infrastructure as an email or messaging system. That is the “same infrastructure” but a different “medium” R1 Each Reliability Coordinator shall have Interpersonal Communications capability with the following entities: ...” The RCSDT believes that prescribing a device or medium would limit an entity; therefore, “capability” is used to avoid being prescriptive and to provide flexibility. This was not intended by the drafting team. The intent is to give the entity the flexibility in meeting the requirement. A loss of Interpersonal Communication capability is covered by R10, notification of Interpersonal Communication capability failure. No change made. Comments -In later requirements it is proposed that the entity “...shall designate an...” It is suggested that for consistency and auditability, this concept be used for R1, R3, R5, R7 and R8. Each entity listed must “have” an Interpersonal Communication capability and for Alternative Interpersonal Communication capability able to “designate” the alternate. The team established these requirements to provide flexibility to the industry. No change made. In addition, the qualifier of “primary” should be used such that the requirements read “... shall have designated, primary Interpersonal Communications capability with the following entities:” Although it is appropriate that “Alternative” be capitalized since it is used in a defined term (i.e. Alternative Interpersonal Communication”) that bounds acceptable alternative methods , we do not see the need to capital “primary.” The RCSDT emphasizes the requirement refers only to Interpersonal Communication capabilities. Adding the phrase “to the primary” is not needed. Please refer to the definitions of Interpersonal Communication and Alternative Interpersonal Communication for clarification. No change made.

Organization	Yes or No	Question 6 Comment
		R9 Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall test its Alternative Interpersonal Communications capability at least once per calendar month. Comments -The requirement is unclear if the required monthly test is a general functionality test or if there is the expectation of testing the designated Alternative Interpersonal Communications with all of the entities defined in the subrequirements of R2, R4, and R6. -There is no expectation of testing the primary Interpersonal Communications is this intentional or an oversight? Although functional testing of this should be done as a normal course of business, should an explicit test be required with each entity in the subrequirements of R1, R3, R5, R7 and R8 to insure, for example, that all the phone numbers are correct? The RCSDT intends each Alternative Interpersonal Communication capability to be verified functional by testing. If an entity has only one such capability, then only one test would be required. You further ask whether the absence of required testing of the “primary” (word is not in the requirement) Interpersonal Communication capability is intentional. The RCSDT intentionally left it out because the Communication capability is used routinely and the use is sufficient to demonstrate functionality. With respect to phone numbers, these are procedural matters to be addressed by each individual entity and by including phone numbers it would make the requirement prescriptive. The requirement is to test capability. No change made. R10 Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall notify entities as identified in Requirements R1 through R6 within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer.

Organization	Yes or No	Question 6 Comment
		Comments -The following scenario seems plausible: The Interpersonal Communications fails and is detected at 14:00 and gets fixed at 14:35. It lasted more than 30 minutes but is fixed. As written the requirement would require the responsible entity to notify entities identified in R1 through R6 by 15:00 (i.e. 60 minutes from detection) even though the problem no longer exists. Is that the expectation? The RCSDT proposes that upon detection of failure that continues at least 30 minutes, starts the 60-minute clock. The 30 minutes allows an entity time to restore or determine if it can restore its Interpersonal Communication capability before the clock starts. No change made. General Question -Does COM-001 apply only to primary control centers or back-ups, per EOP-008, as well? The RCSDT reviewed both EOP-008-0 and EOP-008-1, which is subject to future enforcement. In either version, the team believes there is no need to add additional language to the standard. No change made. COM-002-3 Southern R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. Comment It is recommended that the requirement be clarified that the Reliability Directive be identified as such during its delivery. (e.g., "...shall identify the action as a Reliability Directive to the recipient during its delivery.") The RCSDT believes the suggestion is overly prescriptive and limits the ability for an

Organization	Yes or No	Question 6 Comment
		entity to meet the requirement. No change made. R2 Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of a Reliability Directive shall repeat, restate, rephrase or recapitulate the Reliability Directive. Comment -It is recommended that the requirement be clarified that an entity receiving a Reliability Directive repeat, restate, rephrase or recapitulate it immediately upon receiving it. (e.g., "...shall repeat, restate, rephrase or recapitulate the Reliability Directive immediately upon receiving it."). As written, there is not limit as to when the entity must repeat it (i.e. they could wait 2 hours). The proposed requirement uses the term "upon recognition." No change made. General Question -The Standard is not clear as to what each entity is to do when more than one entity receives a Reliability Directive at the same time (e.g. during a RC area teleconference call) . Is, for example, a roll call of receiving entities expected to be held so that they individually can repeat, restate, rephrase or recapitulate the Reliability Directive followed by individual confirmation required in R3? The question about whether a roll call of receiving entities is expected to be held is asking for prescription of "how" to accomplish what is required. The RCSDT recognizes that there is more than one way to accomplish the confirmation when more than one entity received a Reliability Directive at the same time. What is required is for the recipient to respond in such a way that the issuer may determine whether the message has been properly understood. One way for that to occur would be, as you suggest, for the entities to individually respond. Another way would be for a pre-established protocol or procedure (e.g. roll-call, all-call, etc.) to be in place and used in such cases. The RCSDT has determined that prescribing "how" to ensure that "what" is required has been accomplished is not required and that the individually adopted procedures or protocols could offer many different ways to

Organization	Yes or No	Question 6 Comment
		ensure effectiveness. No change made. The RCSDT concept is that “All Call” compliance is related to having a document that explains how the entity responds. No change made. IRO-001-3 Dominion VP: R2 - Dominion questions the phrase “physically implemented” and recommends that the intent be clarified in the language. The RCSDT believes there may be conditions where an entity may not be able to physically implement the direction; for example, an entity that does not have the right to access certain equipment or cannot manually operate a broken apparatus. We feel the proposed language achieves the intended purpose. No change made. Dominion notes the following comment and response posted under Consideration of Comments on Initial Ballot - Reliability Coordination (Project 2006-06) Date of Initial Ballot: February 25 - March 7, 2011: <i>“IRO-001 R2, R3, and R4 have replaced “Directives” with the word direction in lower case (while it appears that “Directives” is a subset of “directions”). We believe that this muddies the waters and could bring numerous conversations and dialog into scope unnecessarily. The end result is that the RC has the right to issue and use “Directives” and anything short of this could just be communications. For example, a number of entities that are Reliability Coordinators also facilitate energy markets. There are many communications related to markets that probably should be out of scope with respect to the standards. Furthermore, it might not be clear what role (e.g., Reliability Coordinator, market operator, etc) the staff at these entities are fulfilling.</i> <i>Response: IRO-001 is written to cover both typical daily operating scenarios and also emergency scenarios. The required performance encompasses issuing and responding to Reliability Directives as well as other directions. The requirement language specifically ties back to Requirement R2 which states that the RC “shall take actions or direct actions, which could include issuing Reliability Directives.” This is the</i>

Organization	Yes or No	Question 6 Comment
		<i>“direction in accordance with Requirement R2” stated in R3 and the “direction in accordance with Requirement R3” stated in R4.”Dominion believes the entity’s comments remain valid and the response provided by the RCSDT does not address all aspects of the concern. Dominion suggests that the language be changed to “Reliability Directive” consistent with COM-002.</i> The word “direction” connects with the language in the R1 (act or direct). Reliability Directives is a subset of “direction.” No change made. M2 - need to add the following words “compliance with, physically, unless” which were included in R2, therefore M2 should read: <i>“Each Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator and Distribution Provider shall have and provide evidence which may include, but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it complied with its Reliability Coordinator’s direction(s) per Requirement R1 unless compliance with the direction per Requirement R1 could not be physically implemented or unless such actions would have violated safety, equipment, regulatory or statutory requirements. In such cases, the Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator or Distribution Provider shall have and provide copies of the safety, equipment, regulatory or statutory requirements as evidence for not complying with the Reliability Coordinator’s direction.”</i> The RCSDT thanks you for your comment and has added the word “physically” to the IRO-001-2 Measure, M2. (R2) “Section 1.3, the second bullet; need to add calendar to 12 calendar months Southern General recommendation The RCSDT appreciates your comments and conforming changes have been made to the Data Retention section.

Organization	Yes or No	Question 6 Comment
		-It is recommended that where the verb “direct/directed” or noun “direction” is used in Purpose, R1, R2 and R3, that it be replaced with the verb “instruct/instructed” or noun “instruction”, as appropriate. This would help the industry avoid confusion often referred to as “big D” or “little d” directives. It is noted that the term “Reliability Directive” does that to a great degree but avoiding the verb/noun “direct/direction” would augment the difference. The RCSDT feels the use of direct and directed is consistent with the purpose and application of those terms in other standards. No change made. R1 Each Reliability Coordinator shall have the authority to act or direct others to act (which could include issuing Reliability Directives) to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impacts. Comment -At what point in time is “identified” referring to in “...to prevent identified events or...” Is it referring to current or future events? One might assume both since the “Time Horizon” is defined as Real-time Operations, Same Day Operations and Operations Planning but the requirement may be enhanced if explicitly stated (“...to prevent events identified in real-time or in the future or to mitigate the magnitude...”). The context of “identified” is when a set of system conditions is recognized that could lead to an Emergency or Adverse Reliability Impact, which may require action. See standards IRO-008 and IRO-009. No change made. -For clarity, the scope of the authority should be limited to the Reliability Coordinator Area (“...that result in an Emergency or Adverse Reliability Impacts within its Reliability Coordinator Area”). As written, it implies the authority should extend outside its RC Area. The RCSDT believes that limiting the scope to the RC’s area would be too limiting and not account for potential conditions where an adjacent RC may have lost its wide-

Organization	Yes or No	Question 6 Comment
		area view and requests the assistance of another RC or vice-versa. No change made. R2 Editorial comment - The words “compliance with” are in a different font in the posted version. The RCSDT thanks you for your comment and has corrected the font in IRO-001, R2. R3 Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to perform as directed in accordance with Requirement R2. Comment The requirement states the responsible entities shall “inform” its RC when unable to perform as directed but it is unclear when the notification needs to take place. Although the term “as soon as practical” may seem be un-measurable, as written now there is no time deadline to perform the notification - i.e. it could be 4 hours later after recognition. The proposed requirement uses the term “upon recognition.” No change made.
Response: See response above.		
Central Lincoln		As stated in our prior comments, we continue to have problems with COM-002, R2 and R3 as written. The SDT’s answer (“It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive”) addresses our concern perfectly, and we would agree with such an expectation. Unfortunately, the expressed expectation is not in the proposed standard or even in a proposed guideline for the standard.
Response: The RCSDT believes this is a process or procedure question that should be determined by the entity in how it handles communication with the RC. The standard, as written does, not preclude the entity from having a procedure. No change made.		

Organization	Yes or No	Question 6 Comment
Entergy Services, Inc		Entergy does not agree with including the DP and GOP in this standard. However, if they are to be included and are required to have the communications capability indicated, they should be included in R10. Why would it be important for the TOP to notify the DP that their communications method has failed, but it is not important for the DP to notify the TOP when their communications method has failed? The distinction doesn't seem reasonable or meaningful. The RCSDT stresses that R11 grants the DP and GOP flexibility in determining, in conjunction with its TOP or BA, when its Interpersonal Communication capability must be restored. This would provide allowances for those entities, which have little or no impact on the reliability of the BES while not requiring them to obtain Alternative Interpersonal Communication capabilities. Making the proposed changes would eliminate this flexibility. Removing R11, takes away the RCSDT's effort to include those provisions in the standard. No change made. Additionally, in the draft of COM-002-3 requirement 2 contains the language that the recipient of the directive shall "repeat, restate, rephrase or recapitulate" the directive. Why are so many synonyms of repeat necessary? Repeat or restate should be sufficient to get the point across. The RCSDT used the additional words to facilitate complete understanding. No change.
Response: See response above.		
Independent Electricity System Operator		(1) The proposed implementation plan conflicts with Ontario regulatory practice respecting the effective date of the standard. It is suggested that this conflict be removed by appending to the implementation plan wording, after "applicable regulatory approval" in the Effective Dates Section A5 on P. 4 of the draft standard COM-001, COM-002 and IRO-001, and on P. 2 of COM-001's Implementation Plan and P. 1 of COM-002's and IRO-001's Implementation Plans, to the following effect:", or as otherwise made effective pursuant to the laws applicable to such ERO

Organization	Yes or No	Question 6 Comment
		governmental authorities.” The RCSDT is uncertain where the conflict exists. The standard IRO-001 uses the term “after applicable” and the others “following applicable.” The RCSDT has updated the standards to use the most current effective date language. (2) COM-001: Measure M9: - “monthly basis.” Suggest changing “monthly basis” to “at least once per calendar month” to be consistent the wording in R9. The RCSDT thanks you for your comment and has made the conforming change in the COM-001, Measure M9. (3) IRO-001: Measures M1, M2, M3 - The types of evidence are listed in paragraph form. This is not consistent with presentation style in COM-001-2 Measures, where evidence is listed in bullet format. Suggest using bullet form for consistency. The RCSDT agrees and has made all the Measures bullet form in COM-001-2, but not in COM-002-3 and IRO-001-3. (4) IRO-001, Data Retention Section: i. The retention requirements do not reflect the revised requirements. For example: the Electric Reliability Organization is no longer a responsible entity; the Reliability Coordinator should replace the ERO for keeping data for R1; Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider should replace the Reliability Coordinator for keeping data for R2; and there is no R4/M4. Data retention related to IRO-001-2, R2/M2 was changed to agree with your suggestion. The changes were more involved – several sections were changed, including removing the reference to R4/M4. ii. Section 1.3, second paragraph: “The Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider... shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of

Organization	Yes or No	Question 6 Comment
		time as part of an investigation: "The word "or" between Generator Operator and Distribution Provider should be changed to "and." The RCSDT thanks you for your comment and has made conforming changes.
Response: See response above.		
Hydro-Quebec TransEnergie		For COM-001: R1.2 and R2.2: The phrase "within the same Interconnection" is improper; it needs to be removed. RCs between two Interconnections still need to communicate with each other for reliability coordination (e.g. between Quebec and the other RCs in the NPCC region to coordinate reliability issues including curtailing interchange transactions crossing an Interconnection boundary). The SDT's response to industry comments on the previous posting that the phrase was added to address the ERCOT situation (that ERCOT does not need to communicate with other RCs and that such coordination takes place between TOPs) leaves a reliability gap. Requirement R1 addresses a reliability need for adjacent Reliability Coordinators synchronously connected within the same Interconnection to have Interpersonal Communication capability; however, it does not preclude or limit the Reliability Coordinator from establishing Interpersonal Communication capability with others. The RCSDT does not see where there is a need to communicate with other Reliability Coordinator's from one interconnection to another. No change made. 2. R3.5 and R4.3: The phrase "synchronously connected within the same Interconnection" is also improper; it needs to be removed. TOPs do communicate with other TOPs including those asynchronously connected and in another Interconnection (e.g. between Quebec and all of its asynchronously interconnected neighbors). The reason that was used in response to the above comments (coordination among TOPs for DC tie operation) contradicts with the inclusion of this

Organization	Yes or No	Question 6 Comment
		phrase in R3.5 and R4.3. The RCSDT has made clarifying changes by adding a Part to R3 and R4 to address asynchronous connections between Transmission Operators and have eliminated the phrase “within the same interconnection.” 3. R4 and R6: Not requiring an Alternative Interpersonal Communication capability between the BAs and the DP and GOP can result in a reliability gap. If Interpersonal Communication capability between the BAs and these entities is required to begin with to enable BAs to communicate with these entities (such as operating instructions or Reliability Directives) to ensure reliable operations, then an alternative capability is also needed to ensure this objective is achieved when the primary capability fails. The RCSDT refers the Order No. 693 in Paragraph 508 to clarify the reason the DP and GOP are not required to have Alternative Interpersonal Communication and is as follows: “(1) expands the applicability to include Generator Operators and Distribution Providers and includes Requirements for their telecommunications facilities; (2) identifies specific requirements for telecommunications facilities for use in normal and emergency conditions that reflect the roles of the applicable entities and their impact on Reliable Operation and (3) includes adequate flexibility for compliance with the Reliability Standard, adoption of new technologies and cost-effective solutions.” In addition, R11 requires the DP and GOP to consult with its BA and TOP to determine a mutually agreeable action for restoration. No change made. 4. To preclude the possibility of problems arising from having different languages spoken between entities, COM-001-1.1 R4 should remain as it was or those ideas kept in the revised requirement. R4 read: “R4. Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations.” 5. Measure M3

Organization	Yes or No	Question 6 Comment
		does not cover the added R3.5 condition (having Interpersonal Communications capability with each adjacent TOP). M3 needs to be revised. According to the proposed implementation plan for COM-001-2, R4 pertaining to the use of English will remain in effect upon the effective date of COM-001-3. This requirement is being revised and will be included in Standard COM-003-1, Operating Personnel Communications Protocols. COM-001-1.1, R4 will be retired at midnight the day before COM-003-1 becomes effective. No change made. For IRO-001: The Data Retention Section does not reflect the revised requirements. As examples: the Electric Reliability Organization is no longer a responsible entity; the Reliability Coordinator should replace the ERO for keeping data for R1. The RCSDT thanks you for your comment and has made conforming changes to the Data Retention section. Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider should replace the Reliability Coordinator for keeping data for R2. The RCSDT has made conforming changes by correcting an error in the data retention section And, in the Data Retention Section, R4 and M4 are mentioned. However, there are only three requirements with their corresponding measures in the standard. The RCSDT has made conforming changes by correcting an error in the data retention section
Response: See response above.		
NIPSCO		In IRO-001 R2 an "and" is missing after Generator Operator, and the comma should be removed. Why are there 3 different Effective Dates for this project, each standard being

Organization	Yes or No	Question 6 Comment
		different? To simplify, can't they all be made identical?
Response: The RCSDT thanks you for your comment and has made conforming changes to IRO-001 R2 and the effective dates to the second quarter after regulatory approval.		
Oncor Electric Delivery Company LLC		For COM-001-2 Oncor takes the position that contacting all impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer as prescribed in R1 through R6 is not doable within the ERCOT interconnect for a Transmission Operator. Oncor takes the position that notification only to the RC and BA is sufficient and that those two entities have the operational functionality to contact within the prescribed time all affected Distribution Providers, Generator Operators, and other Transmission Operators. The RCSDT proposes that upon detection of failure that continues at least 30 minutes, starts the 60-minute clock. The 30 minutes allows an entity time to restore or determine if they can restore Interpersonal Communication capability before the clock starts. No change made. R10 - Oncor takes the position that the word “impacted” added to R10 will clarify that notification only needs to be made to the entities that are effected by the failure of a communication path. This will also more align with the language in M10. The word “impacted” was removed in previous postings. For further clarification, the RCSDT has modified M10 to remove the word “impacted” to be consistent with R10. For additional clarity, the RCSDT also changed the phrase in R10 and M10, “R1 through R6” to “R1, R3, and R5,” to clarify that it applies to the capabilities with the RC, the TOP, and the BA. For COM-002-3 Oncor request clarity about what constitutes a “recipient.” For example, if a

Organization	Yes or No	Question 6 Comment
		Transmission Grid Operator performing the functions of a Transmission Operator issues a Reliability Directive to its own field operations personnel to perform an action on behalf of the same entity, does the field operations personnel as the recipient become in affect a “Transmission Operator” subject to R2? The term “recipient” in this case is referring to Functional entity to Functional entity communication. No change made.
Response: See response above.		
Consolidated Edison Co. of NY, Inc.		Regarding COM-002 Requirement R1, we recommend that this requirement be reworded as follows: “When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall require that the Reliability Directive be communicated using three-part communications as described in Requirements R2 and R3 of this standard.” The reason for this recommended rewording are threefold: 1. Good operating practice calls for use of three-part communications at all times. The recommended re-write encourages the use of the good operating practice of three-part communications at all times, but does not require it. 2. It is not good operating practice to require that an additional (unnecessary) phrase be used during emergency situations. During emergency situations, it is best to use standard operating protocols so as to limit unnecessary burdens on operating personnel during critical and stressful times. 3. By implementing the proposed new R1 requirement, it would effectively weaken the need for rigorous compliance with any and all directives issued by the RC’s, TO’s or BA’s. The RCSDT respectfully disagrees, the recipient needs clarity when a Reliability Directive is communicated. No change made.

Organization	Yes or No	Question 6 Comment
		Regarding IRO-001 Requirement R1, we recommend that the current requirement R3 be reinstated as the new requirement R1. That is, the new requirement R1 should read as follows: R1. The Reliability Coordinator shall have clear decision-making authority to act and to direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities within its Reliability Coordinator Area to preserve the integrity and reliability of the Bulk Electric System. These actions shall be taken without delay, but no longer than 30 minutes. We do not support any further dilution of Reliability Coordinator authority to enforce Reliability Directives through deletion of the 30-minute maximum response time period. The timely actions in response to any Reliability Coordinator issued Reliability Directives is an essential part of the process. The RCSDT believe these concerns are addressed in other performance-based standards (IRO-008 and IRO-009) that require action and contain timing requirement when addressing IROs. The omission of TSP, LSE, and PSE does not diminish reliability and brings the standard into conformity with COM-001 and COM-002. No change made.
Response: See response above.		
We Energies		COM-001, Although a great improvement over existing COM-001, and eliminates the data component see comments: -For R5.1 Can the solutions included to meet R1 be included, same R3.2 and R5.2, same R5.3 and R7.2, same R5.4 and R8.1 -For R5.2 Can the solutions included to meet R2 be included, same R4.2 and R6.2 COM-001-2, R5: In a word: Yes. The requirement is to have capability and that capability does not have to be different than the entity on the other end has. No change made.

Organization	Yes or No	Question 6 Comment
		-R9 a 2 hour response for a once a month test seems extreme, as would require a secondary Alternate Interpersonal Communications capability -M9 is reasonable, but should include something about communication actual repair and or time estimates COM-001-2, R9: The requirement is to “initiate action to repair or designate a replacement Alternative Interpersonal Communication capability...” within two hours. The RCSDT recognizes that many different contracts or other arrangements may exist to address repair. However, the RCSDT finds that entities should know what they have and how to initiate repair and those two hours to do so is reasonable. No change made. COM-001-2, M9: The requirement is to have evidence that either repair was initiated or an Alternative Interpersonal Communication capability was designated within two hours. The RCSDT understands that, in extreme cases, the entity may need to make its initial Alternative Interpersonal Communication capability its Interpersonal Communication capability and then designate another Alternative Interpersonal Communication capability if the repair times are so long that to continue in that mode for that long would present a reliability risk. Such arrangements, if they exist at all, are very rare. No change made. -R10 The use of R1 through R6 implies notification of both Interpersonal Communications and Alternate Interpersonal Communications failures. Do you notify if you become aware after the link is back up if it was down for GT 30 minutes, and Doesn't address notifying when restored? COM-001-2, R10: The RCSDT thanks you for pointing this out. The RCSDT has modified the language of R10 to refer to R1, R3, and R5, rather than “R1 through R6,” since the responsible entities are limited to the RC, the TOP, and the BA in these requirements. Yes, there is no requirement to notify identified entities the Interpersonal Communication have been restored.

Organization	Yes or No	Question 6 Comment
		-R11 Implies that R8 and R9 are independent and redundant to R5.3, R5.4 and R3.3 and R3.4. COM-001-2, R11: The RCSDT believes you intended to refer to R7 and R8, rather than R8 and R9. The RCSDT does not believe that the language implies that the communications capability required by R7 and R8 are independent, but they may be. If the entity which is registered as a DP is also registered as a GOP (probably unlikely), then the capability could be met by the same medium. Neither does the RCSDT believe that R11 implies that R7 and R8 are redundant to R3.3 and R3.4 or to R5.3 and R5.4. No change made. R11 is not clear on the purpose of the statement “determine a mutually agreeable time for restoration” this could be driven by forces outside the control any of the entities. I think” provide estimated restoration and actual restoration time and determine mutually agreeable alternative during outage” would be better. The RCSDT notes that R11 does not limit the sources of information used by the DP or GOP in establishing a mutually agreeable action for restoration of its Interpersonal Communication capability with its TOP or BA. That is precisely why R11 is written in this manner. This allows flexibility on the part of the TOP and BA in determining when the Interpersonal Communication capability must be restored. In situations where there is little or no impact to the reliability of the BES, some flexibility could be allowed without requiring the acquisition of Alternative Interpersonal Communication capability. No change made. Update M9 accordingly See comment above concerning R9. COM-002 -Since all the Requirements are related to Reliability Directives, is it implied that all “Emergency Communications” are Reliability Directives even if not designated as such per R1.

Organization	Yes or No	Question 6 Comment
		The RCSDT would like to highlight that communications is not a defined term in the NERC Glossary of Terms used in Reliability Standards ,nor is it defined in this standard. Thus, the plain meaning of communications is intended. The RCSDT has not implied a defined term in the wording of the purpose statement of the standard, nor in the Requirements themselves, that any communication is a Reliability Directive unless the issuing functional entity identifies the actions to be taken as a Reliability Directive. Therefore, not all communications during Emergencies will be Reliability Directives. No change made. COM-002, R2: The RCSDT included some examples of how to provide the evidence needed for Measure M2. The examples are not intended to be an all-inclusive list. The RCSDT does point out, though, that dated operator logs could provide such evidence. The RCSDT does not believe that the recipient has the alternative to refuse to perform as required. However, the RCSDT does bring attention to standard IRO-001-3, which requires entities to comply with directions unless compliance with the direction cannot be physically implemented or unless such actions would violate safety, equipment, regulatory, or statutory requirements. No change made. -The M2 measure could be difficult for a recipient such as a Distribution Provider or Generator Operator. A recipient's phone may not be recorded but an initiator's always should. If a receiver refused to meet the R2 requirement, an initiator should have an alternative. i.e., repeat the directive and provide potential penalties if recipient refuses to comply. Should the initiator have responsibility for providing the entire 3-way evidence as M3 implies? The RCSDT would like to highlight that communications is not a defined term in the NERC Glossary of Terms used in Reliability Standards nor is it defined in this standard. Thus, the plain meaning of communications is intended. The RCSDT has not implied a defined term in the wording of the purpose statement of the standard, nor in the Requirements themselves, that any communication is a Reliability Directive unless the issuing functional entity identifies the actions to be taken as a Reliability Directive. Therefore, not all communications during Emergencies will be

Organization	Yes or No	Question 6 Comment
		Reliability Directives. No change made. COM-002 M3: The Measure is correct as written. The issuer only needs the evidence that it confirmed the response was accurate or reissued according to the requirement. Evidence does not necessarily mean the entity must have the entire three-way conversation captured (i.e., recording), but evidence the entity confirmed or reissued according to requirement. No change made. IRO-001 Although a great improvement over existing IRO-001, see comments: -R2 needs to be clear that it is the Reliability Coordinator's Reliability Directive that must be complied with not just any Reliability Coordinator's direction as stated. -The M2 measure could be difficult, as the operator would have to have access to documents proving the safety, equipment, regulatory or statutory requirements, which may be the assessment of an individual applying the safety rule. Is the measure requiring a deposition of the individual to be performed for each instance? The RCSDT notes that the intent of the standard is not intended to limit the RC authority to issue Reliability Directives. The Reliability Coordinator issuing the Reliability Directive is the one, which the recipient must comply. It is assumed that a BA or TOP has a relationship with one and only one RC for a given Balancing Area or Transmission Operator Area (some may have multiple, disconnected areas, that are subject to different RCs). Still need a way to communicate to mutually agree. No change made. With an assumed data retention of 90 day (voice) or 12 month document retention the deposition would be unlikely to be acquired prior to the retention period ending. Data retention is a significant issue when the data being recorded is voluminous, supporting a 90-day retention period. No change made.

Organization	Yes or No	Question 6 Comment
		-R3 needs to be clear that it is the inability to perform the Reliability Coordinator's Reliability Directive that must be communicated not just any "Reliability Coordinator's as directed." The RCSDT believes there is a misunderstanding about IRO-001, R3. The requirement specifically says "direction" and is in alignment with Requirement R1. Please note a Reliability Directive is a subset of "direction" that the RC may perform in accordance with R1. No change made. -The Data Retention section does not align with the standard: The Reliability Coordinator shall retain its evidence for the most recent 90 calendar days for voice recordings or 12 months for documentation for Requirement R2, Measure M2. The RCSDT thanks you for your comment. The RC has been removed from the measure and replaced with the corresponding R2 responsible entities (BA, DP, GOP, and TOP). R2 and M2 apply to the Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider. There is no R4 and M4. The RCSDT thanks you for your comment and has made conforming changes.
Response: See response above.		
City of Jacksonville Beach dba/ Beaches Energy Services		COM-001-2, R9 - "Each ... shall test its Alternative Interpersonal Communications capability." I would suggest adding the phrase "...to each entity for which Alternative Interpersonal Communications is required." to add clarity.
Response: The RCSDT proposes that R9 correctly identifies and provides clarity for the entities required to have Alternative Interpersonal Communication capability. No change made.		

Organization	Yes or No	Question 6 Comment
Indiana Municipal Power Agency		For R2 in IRO-001-3, the requirement needs to have the entities comply with their Reliability Coordinator's direction received in R1. Currently, requirement 2 directions are not linked back to R1 which means entities would have to comply with all Reliability Coordinator's directions regardless if they are associated with R1. The RCSDT agrees with your comment and believes the requirements does not need a linkage. No change made. For R7 in COM-001-2, IMPA does not believe that every Distribution Provider needs to be included in requirement 7. IMPA recommends stating that requirement 7 only applies to Distribution Providers who own an UFLS or UFLS system. The expectation is that a Distribution Provider that is registered with NERC is obligated to comply. No change made.
Response: See response above.		
Luminant Energy Company LLC		IRO-001-3 R1 is not consistent with the direction taken in COM-002-3 which requires the Reliability Coordinator to identify Reliability Directive as such. The same approach should be taken with IRO-001-3 R1 so that the Reliability Coordinator is required to identify directions that are made to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impacts as such prior to or when issuing the directions. This extra specification is needed to eliminate any possible confusion in areas where the market operator and Reliability Coordinator are the same entity. In these areas, the Reliability Coordinator/market operator routinely gives directions to other entities that are not to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impacts. Without the added clarification the receiving entity may not know the urgency of the situation and may not know to inform the Reliability Coordinator if they are unable to perform as required by R3.

Organization	Yes or No	Question 6 Comment
Response: The RCSDT views R1 as an authority requirement to direct others, which could include a subset of direction called Reliability Directive. Requirement R2 is the response requirement for the recipient. The judgment the recipient is under is that the recipient must comply with the direction, unless the direction cannot be physically implemented or unless such actions would violate safety, equipment, regulatory or statutory requirements. Requirement R3 simply requires the recipient to inform the issuer of its inability to perform the direction. No change made.		
NextEra Energy, Inc.		NextEra has the following additional comments. COM-002-3 The purpose of COM-002-3 is: “To ensure Emergency communications between operating personnel are effective.” This stated purpose is not the same as the specific requirement that three-way communication is used for a Reliability Directive. Thus, NextEra requests that the purpose be revised to read as follows: “To ensure that when a Reliability Directive is given that the Reliability Directive is explicitly stated and three-way communication is used.” The majority of stakeholders did not raise any issues with the purposed statement, and the RCSDT believes the current purpose statement is adequate. No change made. Consolidation of COM-002-3 and IRO-001-3 NextEra notes a continuing area of concern with the somewhat unsynchronized approach taken in the drafting process. Reliability Standards COM-002 and IRO-001 are now on version three, and still there is a somewhat unsynchronized approach being proposed. A clear and consolidated approach seems easily achievable with minimal effort. Thus, as proposed below, NextEra requests that COM-002-3 and IRO-001-3 be combined, which also would appear to allow for the retirement of certain requirements, such as TOP-001-1 R1-4. The standard TOP-001-1, R1 through R4 is under the purview of another team. No

Organization	Yes or No	Question 6 Comment
		change made. NextEra also is concerned that the current approach may have contributed to several significant misstatements in IRO-001-3, R1-3, which use the terms “direct,” “direction” and “directed,” instead of the term Reliability Directive as used in COM-002-3. COM-002-3 and IRO-001-3 indicate that three-way communication only is required when a Reliability Directive is issued. The word “direction” connects with the language in the R1 (act or direct). Reliability Directives is a subset of “direction,” No change made. This begs the question of what are the potentially other, lower classes of directives in IRO-001-3 R1-3? And why do they need to be followed with or without three-way communication? Reliability Directives are identified as such at the time they are issued so the recipient understands the magnitude of the action being directed. No change made. Thus, at a minimum, NextEra requests that the terms direct, direction and directed be deleted from IRO-001-3 R1-3, respectively, and that Reliability Directive be inserted. This change, and other proposed changes, are reflected in NextEra’s overall proposal to combine COM-002-3 and IRO-001-3 into one COM-002-3 standard: {Note: If the term Adverse Reliability Impact is revised as proposed by NextEra, then the term would not need to be stricken. The RCSDT understands some of the benefits with combining the standards; however, at this point, it would further delay the progress of the standards. The word “direction” connects with the language in the R1 (act or direct). Reliability Directives is a subset of “direction.” No change made. <i>R1. Each Reliability Coordinator shall have the authority to act and to issue a Reliability Directive to a Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider within its operating region to prevent identified events that may lead to, or to mitigate the magnitude or duration of, an Emergency.</i>

Organization	Yes or No	Question 6 Comment
		<i>[Violation Risk Factor: High][Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i> <i>R1.1 Each Transmission Operator shall have the authority to act or issue a Reliability Directive to a Balancing Authority, Generator Operator and Distribution Provider within its operating region to prevent identified events that may lead to, or to mitigate the magnitude or duration of, an Emergency. [Violation Risk Factor: High][Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i> <i>R1.2 Each Balancing Authority shall have the authority to act or issue a Reliability Directive to a Generator Operator and Distribution Provider within its balancing region to prevent identified events that may lead to, or to mitigate the magnitude or duration of, an Emergency. [Violation Risk Factor: High][Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i> <i>R2. When a Reliability Coordinator, Transmission Operator or Balancing Authority issues a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time]</i> <i>R2. Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of a Reliability Directive shall repeat, restate, rephrase or recapitulate the Reliability Directive. [Violation Risk Factor: High][Time Horizon: Real-Time]</i> <i>R3. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a Reliability Directive shall either [Violation Risk Factor: High][Time Horizon: Real-Time]:</i> -Confirm that the response from the recipient of the Reliability Directive (in accordance with Requirement R2) was accurate, or -Reissue the Reliability Directive to resolve any misunderstandings.

Organization	Yes or No	Question 6 Comment
		<i>R4. Each Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider shall comply with its Reliability Coordinator's Reliability Directive, unless compliance with the Reliability Directive cannot be physically implemented or unless such actions would violate safety, equipment, regulatory or statutory requirements. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i> <i>R4.1 Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to perform a Reliability Directive in accordance with Requirement R4. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i> <i>R5. Each Balancing Authority, Generator Operator, and Distribution Provider shall comply with its Transmission Operator's Reliability Directive, unless compliance with the Reliability Directive cannot be physically implemented or unless such actions would violate safety, equipment, regulatory or statutory requirements. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i> <i>R5.1. Each Balancing Authority, Generator Operator, and Distribution Provider shall inform its Transmission Operator upon recognition of its inability to perform a Reliability Directive in accordance with Requirement R5. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i> <i>R6. Each Generator Operator or Distribution Provider shall comply with its Balancing Authority's Reliability Directive, unless compliance with the Reliability Directive cannot be physically implemented or unless such actions would violate safety, equipment, regulatory or statutory requirements. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i> <i>R6.1. Each Generator Operator or Distribution Provider shall inform its Balancing Authority upon recognition of its inability to perform a Reliability Directive in</i>

Organization	Yes or No	Question 6 Comment
		<i>accordance with Requirement R6. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i> Conclusion Given the importance of having clear and concise Reliability Standards on the issue of directives and three-way communication, until the above concerns raised by NextEra in items 4 through 6 are addressed, NextEra intends to continue to vote “no” on COM-001-2, COM-002-3 and IRO-001-3. The RCSDT thanks you for your comment and believes the revisions made to this set of standards is valuable to the industry and within the scope of the project. No change made.
Response: See response above.		
Manitoba Hydro		COM-001-2-Definition ‘Interpersonal Communication’ - for clarity, the definition should explicitly state that data exchange is not included. The standard COM-001 is for Interpersonal Communication capability, which facilitates the communication (i.e., “... to interact, consult, or exchange information.”) and not the exchange of data which is addressed in IRO-010. No change made. -R9 - for clarity, the wording ‘... within 2 hours’ should be replaced with ‘... within 2 hours of the unsuccessful test’. Conforming change required to M9 as well. The RCSDT proposes that R9 correctly identifies and provides clarity for the entities required to have Alternative Interpersonal Communication capability. No change made. -R10 - for clarity, the wording ‘... as identified in R1 through R6...’ should be replaced with ‘... with which it is required to have Interpersonal Communications capability or Alternative Interpersonal Communication capability...’.

Organization	Yes or No	Question 6 Comment
		The RCSDT has modified the language of R10 to refer to R1, R3, and R5, rather than “R1 through R6,” since the responsible entities are limited to the RC, the TOP, and the BA in these requirements. -M6 - the term ‘Adjacent’ needs to be capitalized in the last sentence of the paragraph as ‘Adjacent Balancing Authority’ is a NERC defined term. The RCSDT thanks you for your comment and recognizes the confusion created by having “Adjacent” start the sentence. This gave the appearance of a defined NERC glossary term. The RCSDT has made conforming measures to eliminate this problem. See changes to COM-001-2, R1.2, R2.2, R3.5, R4.3, R5.5, and R6.3. -M7 - ‘that’ in the first line is repeated The RCSDT thanks you for your comment and has made conforming changes to remove the additional word “that.” -M9 - the wording ‘on a monthly basis’ should be replaced with ‘once per calendar month’ to be consistent with the wording of the R9. The RCSDT agrees and the language in M9 has been changed to agree with the language in R9 and the R9 VSL. -M11 - the words ‘that experiences a failure of any of its Interpersonal Communications capabilities’ should be added after Operator to be consistent with the wording of the Requirement The RCSDT thanks you for your comment and has made the conforming changes to Measure M11. -Compliance - 1.3 bulleted sentences - the term ‘historical data’ should be removed. The term ‘evidence’ is sufficiently descriptive and is consistently used in other requirements The RCSDT thanks you for your comment and has made conforming changes to the Data Retention section.

Organization	Yes or No	Question 6 Comment
		-Data Retention (1.3) - The data retention requirements are too uncertain for two reasons. First, the requirement to “provide other evidence” if the evidence retention period specified is shorter than the time since the last audit introduces uncertainty because a responsible entity has no means of knowing if or when an audit may occur of the relevant standard. Secondly, it is unclear what ‘other evidence’, besides the specified logs, recordings and emails, an entity may be asked to provide to demonstrate it was compliant for the full time period since their last audit. The RCSDT thanks you for your comments. The Data Retention language has been updated to be consistent with the Standards Drafting Guidelines. This comment also applies to COM-002-3 and IRO-001-3. -Data Retention (1.3) - COM-002-3 requires that voice recordings are kept for the most recent 3 calendar months but COM-001-2 requires that they be kept for the most recent 12 calendar months. Manitoba Hydro does not see the reliability benefit of storing voice recordings for longer than 3 months and suggests that voice recordings be removed as evidence for COM-001-2. The RCSDT thanks you for your comment and has provided a retention period of 90 days for voice recordings, if chosen by the entity, as a matter of media storage, and 12 months for all other evidence. Evidence of the availability of Interpersonal Communications and Alternative Interpersonal Communications can be demonstrated using the other forms of evidence listed. The RCSDT thanks you for your comment. The measures provide a significant listing of potential evidence, which allows for compliance flexibility. The measures are examples and the entity is not limited to those examples. No change made.

Organization	Yes or No	Question 6 Comment
		-VSLs (general comment) - for clarity, use for example R1.1 and R1.2 to refer to requirements instead of Part 1.1 and Part 1.2. The RCSDT thanks you for your comment and has made conforming changes to the Data Retention section. -VSLs R4 - a reference to R4.3 is missing The RCSDT thanks you for your comment and has made conforming changes to the VSL section. COM-002-3-Title - to capture the purpose and intent of the standard, the title should be changed to 'Emergency Communications'. The RCSDT believes the title adequately captures the standard's scope. No change made. -R2 - for clarity, the words 'back to the sender' should be added to the end of the sentence The RCSDT believes the current wording clearly identifies the issuer. No change made. -R3 - for clarity, the words 'to the recipient' should be added to both of the bulleted sentences after 'confirm' and 'reissue'. The words 'evident from the response' should be added to the end of the second bullet. The RCSDT believes the current wording is clear as to who is the recipient. No change made. -A question for the drafting team: has it been discussed whether there should be an additional requirement which indicates that the Reliability Coordinator, Transmission Operator and Balancing Authority shouldn't take any action in a Reliability Directive

Organization	Yes or No	Question 6 Comment
		until such time as it has been confirmed accurate by the sender? If so, does the team feel that it's a worthwhile requirement to consider? RCSDT believes having an additional requirement is unnecessary and would be overly prescriptive. No change made. -M2 - the words 'restated, rephrased or recapitulated' should be added after 'repeated' to be consistent with wording of the requirement. The RCSDT thanks you for your comment and has made conforming changes to the Measure, M2 in COM-002. -M3 - the words 'to show' should be deleted from the end of this paragraph. The RCSDT thanks you for your comment and has made conforming changes to the Measure, M3 in COM-002. IRO 001-3-Purpose - the words 'to the Bulk Electric System' already appear in the definitions of Emergency and Adverse Reliability Impact and do not need to be repeated here. The RCSDT thanks you for your comment and has made conforming changes to the Purpose in IRO-001. -Effective Date - the effective date should be changed to the 2nd calendar quarter following BOT approval in jurisdictions not requiring regulatory approval to be consistent with jurisdictions requiring regulatory approval. The RCSDT thanks you for your comment and has made conforming changes to make IRO-001 the same as COM-001 and COM-002. -General comment - There are repeated references to 'identified events'

Organization	Yes or No	Question 6 Comment
		- it is not clear what this is referring to. The context of “identified” is when a set of system conditions is recognized that could lead to an Emergency or Adverse Reliability Impact, which may require action. See standards IRO-008 and IRO-009. No change made. M1 - M1 refers to Adverse Reliability Impacts “within its Reliability Coordinator Area.” The requirement does not refer to ‘within its Reliability Coordinator Area’ - the wording in the measure and in the requirement should be consistent. The RCSDT thanks you for your comment and has made conforming changes to IRO-001, M1 to remove the phrase “within its Reliability Coordinator Area.” M2 - missing the word ‘physically’ when describing that a direction could not be implemented, should be consistent with the wording in the requirement. The RCSDT thanks you for your comment and has made conforming changes to make IRO-001 measure M2. Compliance - the entire section needs to be updated as it refers to requirements and measures that don’t exist. The RCSDT thanks you for your comment and has made conforming changes to make IRO-001 Compliance section 1.3 to remove the invalid references. -VSLs R2 - the reference to ‘fully comply’ is very vague. It is only a violation if the entity does not fall within the exception. The RCSDT thanks you for your comment and has made conforming changes to make IRO-001, R2, High VSL to be more consistent with the R2. - R2 VSL - For clarity, change “RC’s directive” to “Reliability Coordinator’s Reliability Directive.” The RCSDT thanks you for your comment and has made conforming changes to make

Organization	Yes or No	Question 6 Comment
		IRO-001, VSL R2, High VSL.
Response: See response above.		
Great River Energy		In IRO-001-3 "authority" should be removed and the verbiage returned to "shall act." The RCSDT believes that other standards (i.e., IRO-009, R3 & R4 and EOP-002, R1 & R8) address the action of others and if the term "authority" is omitted, creates a generic requirement such as what has been suggested puts the RC in a double jeopardy situation. No change made. In COM-002-3 R2 and in Applicability we suggest removing the Distribution Provider as the RC would not likely give a Reliability Directive to a Distribution Provider. The Reliability Directive would more likely come from the Transmission Operator to the Distribution Provider. The RCSDT believes that other standards (i.e., IRO-009 - R3 & R4, EOP-002 - R1 & R8) address the action of others and if the term "authority" is omitted, creates a generic requirement such as what has been suggested puts the RC in a double jeopardy situation. No change made. In COM-002-3 R3 we "replacing "Reissue" with "Restate." You are not technically reissuing the Reliability Directive. COM-002-3, R3: The communications described are not intended to be a once-through process. Effective communications, sometimes referred to as three-part or three-way, often may be effective only after numerous iterations. The RCSDT believes the likely first effort to clarify would be to re-issue the instructions just to determine whether the recipient simply "heard wrong." Using the word re-state seems to imply that the wording is incorrect in some way or for some other reason needs to be said a different way. The RCSDT believes it is more likely that the issuer is attempting to bet the recipient to understand and therefore believes that reissue is more appropriate. No change made.

Organization	Yes or No	Question 6 Comment
Response: See response above.		
Orange and Rockland Utilities, Inc.		Regarding COM-002 Requirement R1, we recommend that this requirement be reworded as follows: <i>“When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall require that the Reliability Directive be communicated using three-part communications as described in Requirements R2 and R3 of this standard.”</i> The reason for this recommended rewording are threefold: <i>1. Good operating practice calls for use of three-part communications at all times. The recommended re-write encourages the use of the good operating practice of three-part communications at all times, but does not require it.</i> <i>2. It is not good operating practice to require that an additional (unnecessary) phrase be used during emergency situations. During emergency situations, it is best to use standard operating protocols so as to limit unnecessary burdens on operating personnel during critical and stressful times.</i> <i>3. By implementing the proposed new R1 requirement, it would effectively weaken the need for rigorous compliance with any and all directives issued by the RC’s, TO’s or BA’s. Regarding IRO-001 Requirement R1, we recommend that the current requirement R3 be reinstated as the new requirement R1.</i> That is, the new requirement R1 should read as follows: <i>“R1. The Reliability Coordinator shall have clear decision-making authority to act and to direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities within its Reliability Coordinator Area to preserve the integrity and reliability of the Bulk Electric System. These actions shall be taken</i>

Organization	Yes or No	Question 6 Comment
		<i>without delay, but no longer than 30 minutes."</i> We do not support any further dilution of Reliability Coordinator authority to enforce Reliability Directives through deletion of the 30 minute maximum response time period. The timely actions in response to any Reliability Coordinator issued Reliability Directives is an essential part of the process.
Response: The RCSDT development of IRO-001-3 R1 states "...which could include issuing Reliability Directives..." and, therefore, does not preclude its use if it is determined by the RC to use it. There may be instances where the RC discusses operational issues in normal dialogue with entities that do not require the use of Reliability Directive. No change made.		
Niagara Mohawk (dba National Grid)		COM-001-3 - Some requirements are overly prescriptive and not results based. R7 & R8 are not necessary. Every entity at a minimum has a contact with a phone as their "Interpersonal Communications capability." Just need to require that every entity has a plan if they lose their primary communication channel ("Interpersonal Communications capability"). The standard establishes requirement for communication capability appropriate to ensure reliability. There is no requirement for it to be different from the Interpersonal Communication capability that its Balancing Authority has with it nor the Interpersonal Communication capability that its Transmission Operator has with it. Cooperation and coordination is always encouraged and is an excellent practice, but is not required by this standard. Thank you for your suggestion. No change made. COM-002-3 - Requiring RCs, TOPs and BAs to state an action as a "reliability directive" complicates communications during a time when response time and clarity are important. If those issuing a directive don't get a repeat back they just need to ask for one. The requirement just needs to define "what" is required not "how." This

Organization	Yes or No	Question 6 Comment
		can be handled by procedures and training. The requirement is aimed at being a performance-based requirement and states a description of “what” communication must take place, but does not prescribe “how” the communication is to be made. Adding the suggested phrase “immediately upon receiving it” introduces the ambiguous term “immediately” for which there is neither plain meaning nor simple explanation. What must happen is that the recipient must respond in such a way that the issuer may determine whether the message has been properly understood. The RCSDT concludes that the proposed language gives plain meaning. No change made. - Delete reference to "adverse reliability impact" from the "Directive" definition. The "adverse reliability impact" definition is not clear, is this an actual event or contingency? The words imply it is an actual event which is already covered in the "Directive" definition. If the intent is to apply directives to potential stability or cascading contingencies it should say so.
Response: The RCSDT thanks you for your comment; however, the RCSDT believes the definition captures two independent conditions, anticipated and after or post event. The definition of Emergency implies situations where the event is anticipated or currently happening. Likewise, the definition of Adverse Reliability Impact clearly identifies as a potential or actual event in the phrase, “an event that results in.” Both conditions are important to the definition. The RCSDT notes that the term, “Adverse Reliability Impact,” is a currently defined NERC Glossary term. The term as it appears in the standard is the revised term is the NERC Board of Trustee adopted term: The impact of an event that results in Bulk Electric System instability or Cascading. No change made.		
American Electric Power		COM-001-02 R9: A two hour limit to repair or designate a replacement Alternative Interpersonal Communications capability is overly aggressive. COM-001-2, R9: The requirement is to initiate repair or designate an Alternative Interpersonal Communication capability within two hours. The requirement is NOT to have the repair completed within two hours. The requirement recognizes that the

Organization	Yes or No	Question 6 Comment
		entity may use its Alternative Interpersonal Communication capability now as its Interpersonal Communication capability, and then, if it decides to do so, designate another, if you may, “new” Alternative Interpersonal Communication capability. This is not required, but is an option that the entity can consider. The entity may already have a maintenance and repair agreement in place that will respond and repair the failed capability. No change made. COM-002-03 R1: Should this requirement also include references to a manual action? The RCSDT believes adding the word “manual” is unnecessary and overly prescriptive. No change made. COM-002-03 R3:The text “to resolve any misunderstandings” is unnecessary and should be removed. The RCSDT believes this phrase is essential to the process of communications. No change made. COM-002-3 VSL’s: As we have stated on previous projects, all severity levels need to be commensurate with both: a) the degree by which the requirement was violated, and The RCSDT has followed the VSL Guidelines in properly assigning the VSL as binary. No change made. b) by the impact of the violation to the BES. In this case, a single VSL of “Severe” violates both principles. The RCSDT notes the Violation Risk Factors define the potential impact to the BES; whereas, the VSL is how badly an entity violated the requirement. No change made.

Organization	Yes or No	Question 6 Comment
		There needs to be more gradients across the severity levels, and the single VSL of “Severe” incorrectly makes the assumption that the impact to the BES was severe. The RCSDT has followed the VSL Guidelines in properly assigning the VSL as binary. No change made. IRO-001-3 R1, R2, R3: Having this requirement apply to actions and/or directions (which may be different than Reliability Directives) may put the recipient in a position that they are judged on whether or not they acted on communication that was not a Reliability Directive. The RCSDT views R1 as an authority requirement to direct others, which could include a subset of direction called, Reliability Directive. Requirement R2 is the response requirement for the recipient. The judgment the recipient is under is that the recipient must comply with the direction, unless the direction cannot be physically implemented or unless such actions would violate safety, equipment, regulatory or statutory requirements. Requirement R3 is simply requires the recipient to inform the issuer of its inability to perform the direction. No change made. The draft states that the purpose of this standard is “To establish the capability and authority of Reliability Coordinators to direct other entities to prevent an Emergency or Adverse Reliability Impacts to the Bulk Electric System.” The key word used is “direct”, so communications that need to be acted upon should be Reliability Directives only. The addition of any non-defined term is in conflict with the definition and intent of the term Reliability Directive. This could potentially cause confusion, especially at critical times when communication is key.
Response: See response above.		
Georgia Transmission		The following comments are regarding IRO-001-3.

Organization	Yes or No	Question 6 Comment
Corporation		Requirement R1 should require the use of Reliability Directives. The requirement compels the Reliability Coordinator “to direct others to act to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impact.” Reliability Directives are necessary to address Adverse Reliability Impacts or Emergencies and trigger the use of three-part communications identified in COM-002-3. The RCSDT views R1 as an authority requirement to direct others, which could include a subset of direction called, Reliability Directive. Requirement R2 is the response requirement for the recipient. The judgment the recipient is under is that the recipient must comply with the direction, unless the direction cannot be physically implemented or unless such actions would violate safety, equipment, regulatory or statutory requirements. Requirement R3 is simply requires the recipient to inform the issuer of its inability to perform the direction. No change made. COM-002-3 R1 really compels the Reliability Coordinator to use a Reliability Directive for Emergencies and Adverse Reliability Impacts with the opening clause: “When a Reliability Coordinator, Transmission Operator, or Balancing Authority determines actions need to be executed as a Reliability Directive.” What else could be more important for a Reliability Coordinator to issue a Reliability Directive than for an Emergency or Adverse Reliability Impact? Thus, not requiring the use of Reliability Directives for Adverse Reliability Impacts and Emergencies makes IRO-001-3 R1 and COM-002-3 R1 inconsistent. The RCSDT development of IRO-001-3 R1 states “...which could include issuing Reliability Directives...” and, therefore, does not preclude its use if it is determined by the RC to use it. There may be instances where the RC discusses operational issues in normal dialogue with entities that do not require the use of Reliability Directive. No change made. It is recommended that the treatment of Reliability Directives shall be consistent

Organization	Yes or No	Question 6 Comment
		with those being developed for TOP-001-2 as proposed by the Real-Time Operations drafting team (Project 2007-03). The RCSDT is using the term in the same context in this standard as it is in TOP-001-2. No change made. As such, consider using the following language for R2: “Each TOP, BA, and GOP shall comply with each identified Reliability Directive issued and identified as such by its RC, unless such actions would violate safety, equipment, regulatory, or statutory requirements.” The RCSDT is addressing a directive (P487, Order 693) to include the DP in COM-001 and the RCSDT has included the DP in COM-002 and IRO-001 applicability because these standards are related to reliability communications. The RCSDT agrees with the point that communication will most likely be from the BA or TOP; however, the communications may come from the RC. No change made. Accordingly, please consider using the following language for R3: “Each TOP, BA, and GOP shall inform its RC of its inability to perform an identified Reliability Directive issued by that RC.” Again, we do not believe the DP would receive an identified Reliability Directive directly from the RC and the DP applicability should be removed from this standard. The DP is appropriately captured under COM-002 and TOP-001 with respect to Reliability Directives. Accordingly, NERC’s Reliability Functional Model V5 describes and identifies the DP’s relationships with other functional entities to TOP and BA with respect to Real Time. Real Time⁹ 7. Implements voltage reduction and sheds load as directed by the Transmission Operator or Balancing Authority.

⁹ NERC Functional Model Version 5, “Functional Entity – Distribution Provider,” pg 47, (http://www.nerc.com/files/Functional_Model_V5_Final_2009Dec1.pdf)

Organization	Yes or No	Question 6 Comment
		8. Implements system restoration plans as coordinated by the Transmission Operator. 9. Directs Load-Serving Entities to communicate requests for voluntary load curtailment. The following comments are regarding COM-001-2. With respect to the Functional Model V5, please see Page 31, “18. Issues corrective actions and emergency procedures directives (e.g., curtailments or load shedding) to Transmission Operators, Balancing Authorities, Generator Operators, Distribution Providers, and Interchange Coordinators.” No change made. The SDT should include an additional qualifier to Interpersonal Communications within the context of these requirements, for example (operational or dispatch center communications??). Technically, the air we breathe, as well as other mediums like “any” cell phone, fax lines, and/or email accounts would qualify under this proposed definition of Interpersonal Communication. Assuming at least one employed individual can speak, all entities could demonstrate compliance of this capability at all times, therefore, it is not clear the intent of these requirements are accurately being presented. The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure. It is recommended to include the use of “signed attestation letters” as examples of evidence under M4 and M11 and other measures as appropriate. The RCSDT proposes that R4 and R11 allow for compliance flexibility. A “signed attestation letter” is one form of evidence. The measures are examples and the entity is not limited to those examples. No change made.

Organization	Yes or No	Question 6 Comment
Response: See response above.		
BGE		No comment.
Response: No comment provided.		
Nebraska Public Power District		Comments: COM-001-2: Requirement 10 is too open ended as written. The measure, M10, indicates that only impacted entities need to be notified. The requirement should be changed to make it consistent with the measure. The requirement would then read ‘Each RC, TOP And BA shall notify impacted entities as identified...’ Requirements 3 and 5 place the responsibility for establishing Interpersonal Communication capability on the TOP and BA. It is quite conceivable that a TOP or BA may not know all, or newly, registered DPs and GOPs in its respective area. The word “impacted” was removed in previous postings. For further clarification, the RCSDT has modified M10 to remove the word “impacted” to be consistent with R10. For additional clarity, the RCSDT also changed the phrase in R10 and M10, “R1 through R6” to “R1, R3, and R5,” to clarify that it applies to the capabilities with the RC, the TOP, and the BA. In Requirements 7 and 8, the DP and GOP, respectively, are in turn responsible for establishing Interpersonal Communication capability. The TOPs/BAs and the DPs/GOPs should not be responsible for this. The DPs and GOPs should be held accountable for requesting that capability of their TOP and BA. Therefore, we suggest adding the following phrase at the end of Requirements 3.3, 3.4, 5.3 and 5.4 - ‘that has requested Interpersonal Communications capability.’ Then R3.3 would read ‘Each Distribution Provider within its Transmission Operator Area that has requested Interpersonal Communications capability.’ The standard establishes requirement for communication capability appropriate to

Organization	Yes or No	Question 6 Comment
		ensure reliability. There is no requirement for it to be different from the Interpersonal Communication capability that its Balancing Authority has with it nor the Interpersonal Communication capability that its Transmission Operator has with it. Cooperation and coordination is always encouraged and is an excellent practice, but is not required by this standard. Thank you for your suggestion. No change made. Requirement 9: could be construed to mean that the repair or replacement due to an unsuccessful test should be completed within 2 hours. In any case a rewording of the second sentence of Requirement 9 would make it clear and we would suggest the following: “ The responsible entity shall, within 2 hours of the unsuccessful test, provide notification to the proper authority in order to initiate repair or designate a replacement Alternative Interpersonal Communications capability. “ COM-001-2, R9: The requirement is to initiate repair or designate an Alternative Interpersonal Communication capability within two hours. The requirement is NOT to have the repair completed within two hours. The requirement recognizes that the entity may use its Alternative Interpersonal Communication capability now as its Interpersonal Communication capability; and then, if it decides to do so, designate another, if you may, “new” Alternative Interpersonal Communication capability. This is not required, but is an option that the entity can consider. The entity may already have a maintenance and repair agreement in place that will respond and repair the failed capability. No change made. COM-002-3: Requirement 2/Measure 2: There is an inconsistency between the requirement and the measure. The requirement allows the recipient to repeat, restate, rephrase or recapitulate the directive. Measure 1 [See M2] only mentions repeating the directive. The RCSDT appreciates your observation. The phrases “restate, rephrase or

Organization	Yes or No	Question 6 Comment
		recapitulate,” have been added to Measure, M2. Requirement 3: The second bullet in Requirement 3 appears to require the reissuance of an entire Reliability Directive if only a single point in the directive is not correctly repeated, restated, rephrased or recapitulated. Is this what the SDT intended? Shouldn’t consideration be given for that portion of the directive that was communicated properly? Then only a new, revised directive containing the portion of the original directive that was misunderstood would need to be reissued. The RCSDT’s intention of the requirement is to confirm the communication is confirmed accurate and, if not, any misunderstanding is corrected. The requirement does not limit the entity to reissuing the entire Reliability Directive. So an entity is not precluded from only correcting the portion of the misunderstanding. No change made.
Response: See response above.		
Georgia System Operations		Requirement R1 should require the use of Reliability Directives. The requirement compels the Reliability Coordinator “to direct others to act to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impact.” Reliability Directives are necessary to address Adverse Reliability Impacts or Emergencies and trigger the use of three-part communications identified in COM-002-3. COM-002-3 R1 really compels the Reliability Coordinator to use a Reliability Directive for Emergencies and Adverse Reliability Impacts with the opening clause: “When a Reliability Coordinator, Transmission Operator, or Balancing Authority determines actions need to be executed as a Reliability Directive.” What else could be more important for a Reliability Coordinator to issue a Reliability Directive than for an Emergency or Adverse Reliability Impact? Thus, not requiring the use of Reliability Directives for Adverse Reliability Impacts and Emergencies makes IRO-001-3 R1 and

Organization	Yes or No	Question 6 Comment
		COM-002-3 R1 inconsistent. The RCSDT development of IRO-001-3 R1 states “...which could include issuing Reliability Directives...” and, therefore, does not preclude its use if it is determined by the RC to use it. There may be instances where the RC discusses operational issues in normal dialogue with entities that do not require the use of Reliability Directive. No change made. It is recommended that the treatment of Reliability Directives shall be consistent with those being developed for TOP-001-2 as proposed by the Real-Time Operations drafting team (Project 2007-03). The RCSDT is using the term in the same context in this standard as it is in TOP-001-2. No change made. As such, consider using the following language for R2: “Each TOP, BA, and GOP shall comply with each identified Reliability Directive issued and identified as such by its RC, unless such actions would violate safety, equipment, regulatory, or statutory requirements.” Accordingly, please consider using the following language for R3: “Each TOP, BA, and GOP shall inform its RC of its inability to perform an identified Reliability Directive issued by that RC.” Again, we do not believe the DP would receive an identified Reliability Directive directly from the RC and the DP applicability should be removed from this standard. The DP is appropriately captured under COM-002 and TOP-001 with respect to Reliability Directives. The RCSDT believes the latitude afforded in R2 and R3 allows for normal operational dialogue that may not require the use of Reliability Directive. The RC determines when Reliability Directive is applicable. No change made. With respect to the Functional Model V5, please see Page 31, “18. Issues corrective actions and emergency procedures directives (e.g., curtailments or load shedding) to Transmission Operators, Balancing Authorities, Generator Operators, Distribution

Organization	Yes or No	Question 6 Comment
		Providers, and Interchange Coordinators.” No change made. The RCSDT is addressing a directive (P487, Order 693) to include the DP in COM-001 and the RCSDT has included the DP in COM-002 and IRO-001 applicability because these standards are related to reliability communications. The RCSDT agrees with the point that communication will most likely be from the BA or TOP; however, the communications may come from the RC. No change made. Accordingly, NERC’s Reliability Functional Model V5 describes and identifies the DP’s relationships with other functional entities to TOP and BA with respect to Real Time.¹⁰ 7. Implements voltage reduction and sheds load as directed by the Transmission Operator or Balancing Authority. 8. Implements system restoration plans as coordinated by the Transmission Operator. 9. Directs Load-Serving Entities to communicate requests for voluntary load curtailment. The following comments are regarding COM-001-2. With respect to the Functional Model V5, please see Page 31, “18. Issues corrective actions and emergency procedures directives (e.g., curtailments or load shedding) to Transmission Operators, Balancing Authorities, Generator Operators, Distribution Providers, and Interchange Coordinators.” No change made. The SDT should include an additional qualifier to Interpersonal Communications within the context of these requirements, for example (operational or dispatch center communications???) Technically, the air we breathe, as well as other mediums like “any” cell phone, fax lines, and/or email accounts would qualify under

¹⁰ NERC Functional Model Version 5, “Functional Entity – Distribution Provider,” pg 47, (http://www.nerc.com/files/Functional_Model_V5_Final_2009Dec1.pdf)

Organization	Yes or No	Question 6 Comment
		this proposed definition of Interpersonal Communication. Assuming at least one employed individual can speak, all entities could demonstrate compliance of this capability at all times, therefore, it is not clear the intent of these requirements are accurately being presented. The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure. The RCSDT agrees with your assessment of “medium” and included the term to allow flexibility for an entity to communicate as they determine and demonstrate compliance. Two or more individuals are required for communication to occur where they interact, consult or exchange information. No change made. The RCSDT proposes that R4 allows for compliance flexibility. “Signed attestation letters” could qualify as “equivalent evidence” as stated in M4 and M11. No change made. It is recommended to include the use of “signed attestation letters” as examples of evidence under M4 and M11 and other measures as appropriate. The RCSDT proposes that R4 and R11 allow for compliance flexibility. A “signed attestation letter” is one form of evidence. The measures are examples and the entity is not limited to those examples. No change made.
Response: See response above.		
Ingleside Cogeneration LP		Ingleside Cogeneration LP is concerned that the entity-to-entity organization of the COM Standards is quickly being outdated by voice and video conferencing or one-to-many broadcasts. In addition, email may be a preferred mode of most communications to and from small Generator Operators. It is not clear that these technologies are precluded from consideration by COM-001 and COM-002 - which means that some auditors may believe that they are. This leads to inconsistent application of the compliance criteria, and may discourage the

Organization	Yes or No	Question 6 Comment
		use of some powerful technologies. It appears to us that some technical guidelines would be appropriate to help entities and auditors decide which are applicable under these Standards.
Response: The RCSDT proposes that COM-001-2 and COM-002-3, as written, allows flexibility for an entity to communicate where two or more individuals are required for communication to occur and they interact, consult or exchange information. Compliance is contained in the measures and an entity must determine if their communication method can demonstrate compliance with the requirements. No change made.		
Duke Energy		- COM-001-2 does not specify how much time an entity is allowed to restore failed Interpersonal Communications capability or failed Alternative Interpersonal Communications capability. R1 through R6 require that the RC, TOP and BA have both. R7 and R8 require that DPs and GOPs have Interpersonal Communications capability. An auditor could find an entity non-compliant with these requirements upon failure of either capability. The RCSDT thanks you for your comment. Requirements R7 and R8 have been revised to account for the failure of Interpersonal Communication capability. The intent of R11 is to require the responsible entity to take action upon the failure of its Interpersonal Communication. R9, R10 and R11 specify actions to take upon failure, but do not relieve entities of responsibility under R1 through R8. The RCSDT believes non-compliance is not due solely to the failure of any Interpersonal Communication capability, but must be accompanied by a failure to consult with the applicable Transmission Operator or Balancing Authority to establish mutually agreeable action for restoration. No change made. -COM-001-2 R9, M9 and VSLs - M9 and VSLs should be revised to be consistent with wording of R9 phrase “at least once per calendar month.” The RCSDT agrees with your comments and has aligned M9 and the R9 VSL to the R9

Organization	Yes or No	Question 6 Comment
		to use “once each calendar month.” -COM-001-2 R10, M10 and VSLs - Clarity is needed regarding when the 60-minute clock starts. For example, suppose a failure is detected immediately upon occurrence of the failure. Does the 60-minute clock start immediately, or after the failure has lasted 30 minutes? When does the 60-minute clock start if a failure is detected and the entity is unsure when it occurred? The RCSDT proposes that upon detection of failure that continues at least 30 minutes, starts the 60-minute clock. The 30 minutes allows an entity time to restore or determine if it can restore its Interpersonal Communication capability before the clock starts. No change made. -COM-001-2 R10, M10 and VSLs - If the failure only lasts for 35 minutes, it appears that the RC, TOP or BA is still required to notify entities identified in R1 through R6. Is this the drafting team’s intent? Yes. The clock starts upon detection of failure of at least 30 minutes. No change made. -COM-001-2 R10, M10 and VSLs - Should be revised since the RC, TOP and BA are only required to have Alternative Interpersonal Communications capability with other RCs, TOPs and BAs per R2, R4 and R6. For additional clarity, the RCSDT also changed the phrase in R10 and M10, “R1 through R6” to “R1, R3, and R5,” to clarify that it applies to the capabilities with the RC, the TOP, and the BA. Suggested rewording for R10: <i>“Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify entities with which it is required to have Alternative Interpersonal Communications capability as identified in R2, R4 and R6 within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer.”</i>

Organization	Yes or No	Question 6 Comment
		-COM-001-2 M11 and VSL - Replace the word “their” with the word “its.” The RCSDT agrees and has modified M11 and VSL, as you suggested. -COM-001-2 Data Retention - The way Data Retention is being enforced, this whole section could just be reduced to a blanket statement that an entity must be able to provide evidence that it has been in compliance since its last audit. The RCSDT has provided the Data Retention section consistent with the approved Standard Drafting Team Guidelines. No change made. -COM-002-3 R2, M2 and VSL - Replace “and” with “or.” The RCSDT agrees with your comment and modifies R2, M2, and VSL accordingly. Also, the phrase “repeat, restate, rephrase or recapitulate” seems excessive and may be intended to avoid a violation where an entity fails to repeat the Reliability Directive word for word. Suggested rewording: “Each Balancing Authority, Transmission Operator, Generator Operator or Distribution Provider that is the recipient of a Reliability Directive shall repeat the Reliability Directive back to the issuer with sufficient accuracy so that understanding can be confirmed.” The RCSDT believes the term suggested “sufficient accuracy” is subject to interpretation. The RCSDT proposes the terms to allow a recipient to convey the message back to the issuer without a word-for-word requirement as long as the issuer confirms the accuracy of the response or reissues it to resolve any misunderstanding. No change made. -COM-002-3 R3, M3 - Replace “and” with “or.” The RCSDT agrees with your comment and modifies R3, M3, and VSL accordingly. -IRO-001-3 - We believe that the Purpose and the Requirements of this standard should be focused solely on situations where the Reliability Coordinator issues Reliability Directives to prevent an Emergency or Adverse Reliability Impact.

Organization	Yes or No	Question 6 Comment
		The RCSDT development of IRO-001-3 R1 states “...which could include issuing Reliability Directives...” and, therefore, does not preclude its use if it is determined by the RC to use it. There may be instances where the RC discusses operational issues in normal dialogue with entities that do not require the use of Reliability Directive. No change made. IRO-001-3 - The Purpose should be rewritten as follows: “To establish the authority of Reliability Coordinators to issue Reliability Directives to other entities to prevent an Emergency or the impact of an event that results in Bulk Electric System instability or Cascading.” The RCSDT appreciates the suggested rewording; however, the RCSDT development of the IRO-001-3 Purpose Statement allows for instances where the RC discusses operational issues in normal dialogue with entities that do not require the use of Reliability Directive. The requirements of IRO-001-3 allow the RC to issue a Reliability Directive if they determine one should be issued. No change made. -IRO-001-3 - R1 should be rewritten as follows: “Each Reliability Coordinator shall have authority to act or to issue Reliability Directives to others, including but not limited to the Transmission Operator, Balancing Authority and Generator Operator within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or the impact of an event that results in Bulk Electric System instability or Cascading.” The RCSDT appreciates the suggested rewording; however, the Functional Model V5 addresses the scope of the RC function. No change made. -IRO-001-3 - R2 should be rewritten as follows: <i>“Each Transmission Operator, Balancing Authority, Generator Operator or Distribution Provider shall comply with a Reliability Directive issued by the Reliability Coordinator unless the Reliability Directive cannot be physically implemented or unless such action would violate safety, equipment, regulatory, or statutory requirements.”</i>

Organization	Yes or No	Question 6 Comment
		The RCSDT appreciates the suggested rewording; however, as written R2 allows for normal operational dialogue without having to invoke a Reliability Directive by the RC. No change made. -IRO-001-3 - R3 should be rewritten as follows: “Each Transmission Operator, Balancing Authority, Generator Operator or Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to comply with a Reliability Directive in accordance with Requirement R2. The RCSDT appreciates the suggested rewording; however, as written R2 allows for normal operational dialogue without having to invoke a Reliability Directive by the RC. No change made. -IRO-001-3 Measures and VSLs - Should be revised to conform with the above suggested revisions to requirements.
Response: See response above.		
ISO New England		none
ERCOT ISO		Regarding COM-001-2: We are not clear on the time horizon of requirements for COM-001-2. Based upon the purpose statement, it appears that establishment would be ahead of real time. Wording in the requirements could be construed as maintaining at all times vs. establishing communications. The RCSDT proposes that compliance with requirements of the standard must be demonstrated. The Purpose Statement is not measured. No change made. The timeline for mandatory/effectiveness may not be acceptable to establish communications with DPs if hardware procurement/projects must take place. The RCSDT considered concerns about the implementation of the requirements by DP and GOPs and concluded the requirements are achievable within the

Organization	Yes or No	Question 6 Comment
		implementation period. No change made. Regarding IRO-001-3: We have some concern for the removal of LSE in particular from R2 and R3 from current IRO-001-2 for the ERCOT region. The ERCOT region has QSEs that manage Load Resources. There may be some QSEs that are not registered as a GOP that deploy Load Resources. Per the current LSE JRO, QSEs with Load Resources are registered as LSEs. Not requiring LSEs to deploy Load Resource directives could be perceived as a reliability gap created from the previous version to this version. PSEs could be removed as long as they fall under BA authority. The RCSDT believes the DP is the correct entity because the LSE does not own assets. The definition of LSE is, “The functional entity that secures energy and transmission service (and reliability related services) to serve the electrical demand and energy requirements of its end use customers.” In contrast, the definition of a DP is, “The functional entity that provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer. Additionally, the Functional Model V5 demonstrates this under the Reliability Coordinator, “18. Issues corrective actions and emergency procedures directives (e.g., curtailments or load shedding) to Transmission Operators, Balancing Authorities, Generator Operators, Distribution Providers, and Interchange Coordinators.” No change made. The Data Retention section should be corrected to match the new requirements numbers and elimination of the previous version R1 with ERO. The Version History mentions six requirements retired, but only details five. The RCSDT thanks you for your comments. The Data Retention language has been updated to be consistent with the Standards Drafting Guidelines.
Response: See response above.		

Organization	Yes or No	Question 6 Comment
ReliabilityFirst		Comments on COM-001-2 1. Applicability Section a. RFC recommends adding the Generator Owner to the applicably section of the standard along with corresponding Requirements R8 and R11. ReliabilityFirst believes to maintain system reliability and based on certain business practices in effect, Generator Owners need to be required to have associated Interpersonal Communications with its Balancing Authority and Transmission Operator. The RCSDT considered this situation and have concluded Generator Owners do not operate facilities of the BES. Under the Functional Model V5 Generator Owners have these Relationships with Other Functional Entities. The following is an excerpt from the Functional Model V5 concerning the Generator Owner. No change made. 1. Provides generator information to the Transmission Operator, Reliability Coordinator, Balancing Authority, Transmission Planner, and Resource Planner. 2. Provides unit maintenance schedules and unit retirement plans to the Transmission Operator, Balancing Authority, Transmission Planner, and Resource Planner. 3. Develops an interconnection agreement with Transmission Owner on a facility basis. 4. Receives approval or denial of transmission service request from Transmission Service Provider. 5. Provides reliability related services to Purchasing-Selling Entity pursuant to agreement. 6. Reports the annual maintenance plan to the Reliability Coordinator, Balancing Authority and Transmission Operator. 7. Revises the generation maintenance plans as requested by the Reliability Coordinator.

Organization	Yes or No	Question 6 Comment
		2. Requirement R7 and R8 a. ReliabilityFirst seeks further clarity on why the Distribution Provider and Generator Operator are not required to designate an Alternative Interpersonal Communications capability? Requirements R7 and R8 require the Distribution Providers and Generator Operators to have Interpersonal Communications capability but there is not corresponding requirement to have an Alternative Interpersonal Communications capability. ReliabilityFirst recommends adding two new requirements for the Distribution Provider and Generator Operator to designate an Alternative Interpersonal Communications capability. This will be consistent with how Requirements R1 through R6 are set up. The standard establishes requirement for communication capability appropriate to ensure reliability. In addition, R7 and R8 are responsive to FERC Order No. 693. Entities may use the telephone cited in the example as their Interpersonal Communication capability. Requirement R11, as modified, addresses the loss of Interpersonal Communication capability. No change made. 3. Requirement R9 a. Assuming new requirements for the Distribution Provider and Generator Operator to designate an Alternative Interpersonal Communications capability (based on previous comment) are added to the standard, the Distribution Provider and Generator Operator will need to be added to Requirement R9 to test its Alternative Interpersonal Communications capability at least once per calendar month. The RCSDT thanks you for your comment and believes the DP and GOP only need Interpersonal Communication capability and it meets the respective FERC directive. No change made. 4. Requirement R10 a. Based on the ReliabilityFirst comment submitted for Question 4, ReliabilityFirst

Organization	Yes or No	Question 6 Comment
		believes the Distribution Provider and Generator Operator should be included in Requirement R10. The RCSDT proposes that DP and GOP are included in the requirement. "... shall notify entities..." as identified in R1 through R6. No change made. b. Since Interpersonal Communications capabilities is a very important piece of operating the BES in a reliable manner, ReliabilityFirst believes the timeframe in which an entity is required to notify the entities is too long. ReliabilityFirst recommends the following language for Requirement R10: i. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider and Generator Operator shall notify entities as identified in Requirements R1 through R8 of a failure of its Interpersonal Communications capabilities that lasts 15 minutes or longer. The notification shall be made within 30 minutes of the detection of a failure. The RCSDT proposed the time frame to allow sufficient time for an entity to determine if IC could be restored. No change made. 5. VSLs for Requirement R1 through R8 a. ReliabilityFirst suggest gradating the VSLs for R1 through R8. Listed below is an example of how to grade the VSL for R1. The same type of approach could be used for R2 through R8 as well. i. High VSL- the Reliability Coordinator failed to have Interpersonal Communications capability with one or more of the entities listed in Parts 1.1 or 1.2. ii. Severe VSL - The Reliability Coordinator failed to have Interpersonal Communications capability with one or more of the entities listed in Parts 1.1 and 1.2. The RCSDT has applied the VSL to the Severe column because not having Interpersonal Communication capability with any entity is detrimental to reliability.

Organization	Yes or No	Question 6 Comment
		No change made. 6. VSL for Requirement R9 a. For consistency with the requirement language, ReliabilityFirst recommends adding the words “at least on a monthly basis” to the Lower, Moderate and High VSLs and adding the words “if the test was unsuccessful” to the end of the Lower, Moderate and High VSLs. Listed below is an example of the Lower VSL. i. The responsible entity tested the Alternative Interpersonal Communications capability at least once per calendar month but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communications in more than 2 hours and less than or equal to 4 hours if the test was unsuccessful. The RCSDT notes the requirement requires the entity to perform the test each month. If the test is not performed during each month, there is no other option for gradating the severity of the violation. No change made. 7. VSL for Requirement R10 a. ReliabilityFirst provided alternate language for R10 in the comments listed above. If the alternated language is not incorporated, ReliabilityFirst recommends the following language for the Lower VSL. Similar language could be used for the Moderate, High and Severe VSLs as well. i. The responsible entity failed to notify entities as identified in Requirements R1 through R6 more than 60 minutes but less than or equal to 70 minutes of the detection of a failure of its Interpersonal Communications capabilities. b. If the alternate language for R10, in the comments listed above, is incorporated, ReliabilityFirst recommends the following language for the Lower VSL. Similar language could be used for the Moderate, High and Severe VSLs as well. i. The responsible entity failed to notify entities as identified in Requirements R1

Organization	Yes or No	Question 6 Comment
		through R6 more than 30 minutes but less than or equal to 740 minutes of the detection of a failure of its Interpersonal Communications capabilities c. For Moderate VSL (the VSL after the OR statement), ReliabilityFirst recommends using a percentage rather than the “least one, but not all” statement. For example, if there is say 100 impacted entities and the applicable entity only notify 1, they would only fall under the Moderate. In another scenario there is say 100 impacted entities and the applicable entity only notified 99, they would also fall under the Moderate as well. The use of percentages will help even this out. The RCSDT made conforming changes to the VSLs to address a number of comments and changes to the requirements. 8. VSL for Requirement R11 a. For consistency with the requirement language, ReliabilityFirst recommends the following language: i. The responsible entity that experiences a failure of any of its Interpersonal Communication capabilities failed to consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability. Comments on COM-002-3 The RCSDT has made conforming changes to the VSLs due to comments received about the R11. 1. Requirement R1 a. Based on ReliabilityFirst suggested change to the definition of “Reliability Directive” as noted in Question 5, ReliabilityFirst recommends deleting Requirement R1. Based on the suggested definition, any communication initiated, where an action by the recipient is required, is considered a “Reliability Directive.” Thus, there would no longer be a need for responsible entity to identify the action as a

Organization	Yes or No	Question 6 Comment
		“Reliability Directive” to the recipient. In coordination with the RTOSDT work on the TOP family of standards, the RCSDT does not propose that the Reliability Directive definition contain a requirement for action to be taken. Therefore, R1 is retained as a requirement for the “action” to be taken. No change made. 2. VSL for Requirement R3 a. For consistency with the requirement language, ReliabilityFirst recommends the following language: The RCSDT has followed the VSL Guidelines in properly assigning the VSL as binary. No change made. <i>i. The responsible entity issued a Reliability Directive, but failed to confirm that the response from the recipient of the Reliability Directive (in accordance with Requirement R2) was accurate.</i> Comments on IRO-001-3 1. Requirement R1 a. ReliabilityFirst seeks further clarity on why Requirement R1 only requires the Reliability Coordinator to have the “authority to act” rather than requiring the Reliability Coordinator to actually “take action” to prevent identified events that result in an Emergency or Adverse Reliability Impacts. Having the “authority to act” does not inherently require the Reliability Coordinator to take action, if appropriate. The RCSDT proposes that R1 reflects the Purpose of IRO-001-3. No change made. b. ReliabilityFirst seeks further clarity on the language “to prevent identified events.” If the event was already identified, how can the Reliability Coordinator act to prevent it? ReliabilityFirst recommends adding the word “potential” in between the words “prevent” and “identified.” The context of “identified” is when a set of system conditions is recognized that

Organization	Yes or No	Question 6 Comment
		could lead to an Emergency or Adverse Reliability Impact, which may require action. See standards IRO-008 and IRO-009. No change made. 2. Requirement R3 a. There is no time qualifier specified in Requirement R3 dealing with the timeframe in which the applicable entity has to inform its Reliability Coordinator of its inability to perform as directed in accordance with Requirement R2. Without a time qualifier, Requirement R3 is open ended and could cause issues if the applicable entity does not inform its Reliability Coordinator upon recognition of its inability to perform as directed in a timely manner. ReliabilityFirst recommends the following language for Requirement R3: <i>i. Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform its Reliability Coordinator within 30 minutes upon recognition of its inability to perform as directed in accordance with Requirement R2.</i> The RCSDT proposes the term “upon recognition of its inability to perform” does not require a time limit. No change made. The Measure M3, has been updated to include the phrase “upon recognition of its inability” to be consistent with R3. 3. VSL for Requirement R1 a. Requirement R1 requires the Reliability Coordinator to “...have the authority to act” - and the VSL does not reflect this language. ReliabilityFirst had questioned why Requirement R1, does not specifically require the RC to take action or direct actions in a comment submitted under Requirement R1. If the SDT does not change the language in Requirement R1, ReliabilityFirst recommends the following language: <i>i. The Reliability Coordinator failed to have the authority to take action or direct actions, to prevent an identified event that resulted in an Adverse Reliability Impact.</i> The RCSDT made conforming changes to the VSL.

Organization	Yes or No	Question 6 Comment
		4. VSL for Requirement R2 a. For the High VSL, the words “fully comply” are ambiguous and open to interpretation. ReliabilityFirst recommends only having a Severe VSL. b. The Severe VSL states “directive” while Requirement R2 states “direction.” To be consistent, ReliabilityFirst recommends the following language: i. <i>“The Responsible Entity failed to comply with its Reliability Coordinator’s direction”</i> The RCSDT thanks you for your comment and has made conforming changes to the VSL.
Response: See response above.		
City of Vero Beach		In the definition of Interpersonal Communication, the use of the word “medium” is ambiguous. Suggestions for alternatives: “system”, “channel.” The RCSDT proposes the term “medium” to allow entities flexibility on how they communicate and meet compliance with the requirements. No change made. COM-001-2, R1 and R3, the phrase: “have Interpersonal Communications capabilities”, what if the communication system fails? The RCSDT proposes that AIC is in force at that time. No change made. Is that an immediate non-compliance (especially R3.3 and R3.4 which do not require a redundant system). Suggest using EOP-008 type of language to allow restoration of failed equipment without non-compliance. The RCSDT reviewed both EOP-008-0 and EOP-008-1, which is subject to future enforcement. In either version, the team believes there is no need to add additional language to the standard. No change made. The RCSDT believes that prescribing a device or medium would limit an entity; therefore, “capability” is used to avoid being prescriptive and to provide flexibility. This was not intended by the drafting team. The intent is to give the entity the

Organization	Yes or No	Question 6 Comment
		flexibility in meeting the requirement. A loss of Interpersonal Communication capability is covered by R10, notification of Interpersonal Communication capability failure. No change made. COM-001-2, R9 - "Each ... shall test its Alternative Interpersonal Communications capability", suggest adding the phrase "to each entity for which Alternative Interpersonal Communications is required" to add clarity. In addition, the type of testing is unclear and ambiguous. The RCSDT proposes that R9 correctly identifies and provides clarity for the entities required to have Alternative Interpersonal Communication capability. No change made. The is also ambiguity in the terms "direct", "directive", "direction" and "Reliability Directive." The SDT may want to consider using the terms "instruct" and "instruction" in place of "direct," "directive," or "direction" to more clearly distinguish from a Reliability Directive. The RCSDT feels the use of direct and directed is consistent with the purpose and application of those terms in other standards and is consistent with previous postings. No change made.
Response: See response above.		
NV Energy		The meaning of R9 is open to some interpretation. It states that if the monthly test is unsuccessful, the entity shall "initiate action to repair or designate a replacement" AIC within 2 hours. The meaning of this is unclear in several ways: First, does "initiate action" apply to the remainder of the sentence or just to the "repair" option? Second, what constitutes initiation of action? Is it the intent of the SDT that the alternate interpersonal communications be

Organization	Yes or No	Question 6 Comment
		restored within a 2-hour limit? If so, the words do not clearly state that, and it seems an impossible task to ensure no more than 2-hr outage to an alternate communications medium. I am voting affirmative under the interpretation that one must only "initiate" the repair or "initiate" the designation of a replacement option within this tight 2-hour limit.
Response: The requirement is to initiate repair or designate an Alternative Interpersonal Communication capability within two hours. The requirement is NOT to have the repair completed within two hours. The requirement recognizes that the entity may use its Alternative Interpersonal Communication capability now as its Interpersonal Communication capability; and then, if it decides to do so, designate another, if you may, "new" Alternative Interpersonal Communication capability. This is not required, but is an option that the entity can consider. The entity may already have a maintenance and repair agreement in place that will respond and repair the failed capability. No change made.		
Midwest Independent Transmission System Operator		COM-001-2, R2 and R6: MISO requests clarification as to whether the designation of Interpersonal Communications and Alternative Interpersonal Communications methods by Responsible Entities must be formally documented and/or agreed upon with those entities with which communications capability must be established. The RCSDT has provided flexibility to the responsible entity with regard to implementation and compliance. Please note that Interpersonal Communication is a "shall have" and Alternative Interpersonal Communication capability is "designate." Please refer to the Measures for suitable evidence, which may be used to support compliance with the requirement. No change made. COM-001-2, R9: MISO suggests that the designation of Alternative Interpersonal Communications methods should not require formal documentation and may be agreed upon (when necessary) informally with those entities with which communications capability must be established in the event of an unsuccessful test of its Alternative Interpersonal

Organization	Yes or No	Question 6 Comment
		Communications capability. The RCSDT has provided flexibility to the responsible entity with regard to implementation and compliance. Please note that Interpersonal Communication is a “shall have” and Alternative Interpersonal Communication capability is “designate.” Please refer to the Measures for suitable evidence, which may be used to support compliance with the requirement. No change made. COM-001-2, Requirement R10: MISO requests clarification as to whether “impacted entities” refers to those entities with which the Responsible Entity must have Interpersonal Communications and Alternative Interpersonal Communications capability. Further, MISO requests clarification as to whether the notification required by R10 must be made using the Alternative Interpersonal Communications method selected by the Responsible Entity. The word “impacted” was removed in previous postings. For further clarification, the RCSDT has modified M10 to remove the word “impacted” to be consistent with R10. For additional clarity, the RCSDT also changed the phrase in R10 and M10, “R1 through R6” to “R1, R3, and R5,” to clarify that it applies to the capabilities with the RC, the TOP, and the BA. With respect to the method used by the Responsible Entity, the standard does not provide the “how” or any prescriptive method for accomplishing the requirement. No change made. COM-002-3, R1 - R3: MISO respectfully submits that, while it appreciates the distinction in responsibilities proposed in the new COM-002-3 and acknowledges that such distinction is beneficial, these requirements increase compliance risk and potential penalty liability without attendant benefit to the reliability of the Bulk Electric System. MISO respectfully suggests that Requirements 2 and 3 be converted into sub-requirements

Organization	Yes or No	Question 6 Comment
		as follows: <i>R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time]</i> <i>R1.1. When the Reliability Coordinator, Transmission Operator or Balancing Authority identifies a stated action as a Reliability Directive, the receiving Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider shall repeat, restate, rephrase or recapitulate the Reliability Directive to the issuing Reliability Coordinator, Transmission Operator or Balancing Authority. [Violation Risk Factor: High][Time Horizon: Real-Time]</i> <i>R1.2. When the Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a Reliability Directive receives a response from the receiving Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider, it shall then either [Violation Risk Factor: High][Time Horizon: Real-Time]:</i> -Confirm that the response from the recipient of the Reliability Directive (in accordance with Requirement R2) was accurate, or -Reissue the Reliability Directive to resolve any misunderstandings. The RCSDT contends the requirements in the proposed standard have been constructed in accordance with standard development guidelines to have only one performance per requirement. The suggested change places three independent actions within one requirement. No change made.
Response: See response above.		
Texas Reliability Entity		(1) There are numerous errors in the Mapping Document in referencing the current version of the standard and requirement. Specifically, referencing IRO-001-2 where it appears that the document should reference standard IRO-001-3. In addition, the

Organization	Yes or No	Question 6 Comment
		notes on page 2 of COM-002-3 are incorrect. The RCSDT thanks you for your comments and has made conforming corrections. (2) In the VRF/VSL Justification document, there are numerous errors in referring to standard versions and requirements. The RCSDT thanks you for your comments and has made conforming corrections. (3) In IRO-001-3, R1 - What is an “identified event,” and who “identifies” an event that requires compliance with this requirement R1? An RC may choose not to “identify” an event, such as a limit violation, and run the risk of causing or exacerbating an emergency. If the RC does not “identify” the event, it may become an actual event and then fall within the standard. The context of “identified” is when a set of system conditions are recognized that could lead to an Emergency or Adverse Reliability Impact, which may require action. See standards IRO-008 and IRO-009. The RC named in R1 is the entity that identifies the even that requires compliance. No change made. (4) In the VSL for IRO-001-3, R1, there should be language in the VSL to capture the term “Emergency,” which was added in the Requirement. The High VSL for R2 needs to be fixed. The RCSDT thanks you for your comments and has made conforming corrections. The “N/A” in R2 of COM-002-3 was removed. (5) In IRO-001-3, R1, remove the “s” in the phrase “Adverse Reliability Impacts.” The RCSDT thanks you for your comments and has made conforming corrections. (6) Referring to the Implementation Plan for IRO-001 - There is a different list in the Implementation Plan (R2, R4, R5, R6, R7, R9) than the Revision History of the Standard (R2, R4, R5, R6, R8). Where is the retirement of R1 shown? The RCSDT thanks you for your comments and has made conforming corrections. (7) Referring to COM-001-2: Measure 7, the word “that” is inadvertently repeated in

Organization	Yes or No	Question 6 Comment
		the first sentence. COM-001-2, M8: The RCSDT agrees and the language in Measure M8 has been changed to delete the additional “that.” (8) In COM-001-2, Measure 9, is “at least on a monthly basis” to be interpreted differently than “at least once per calendar month” as stated in the requirement? The RCSDT thanks you for your comments and has made conforming corrections to Measure M9 and the R9 VSL. (9) In COM-001-2, there is a “Measure 12” bullet that should be removed. The RCSDT thanks you for your comments and has made conforming corrections. (10) Referring to COM-002-3: Electronic directives (which may be issued over many different types of electronic communication channels) are increasingly necessary to manage the modern, dynamic Bulk Power System (generation and transmission) on a real-time basis. The effective use of electronic directives is undermined by this proposed Standard in its current form. This draft standard, in conjunction with other standards that refer to directives, appears to require that directives (at least Reliability Directives) be given verbally. The failure of the NERC standards to address electronic directives may cause significant manpower issues for BAs with large portfolios of generation to manage. The RCSDT proposes that COM-001-2 and COM-002-3, as written, allows flexibility for an entity to communicate where two or more individuals are required for communication to occur and they interact, consult or exchange information. Compliance is contained in the Measures and an entity must determine if its communication method can demonstrate compliance with the requirements. No change made. (11) In the VSL for COM-001-2 R4, a reference to Part 4.3 should be added. The RCSDT thanks you for your comments and has made conforming corrections.

Organization	Yes or No	Question 6 Comment
		(12) In IRO-001-3, Part 1.3 Data Retention, the reference in the first bullet to “Electric reliability Organization” is incorrect. We think it should say “Reliability Coordinator” instead. The other references to entities and to Requirements in this Part 1.3 also appear to be incorrect and need to be updated and corrected. <i>The RCSDT thanks you for your comment and has made conforming changes.</i> (13) Referring to COM-001-2, the prior version of this standard included Requirement R5: “Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have written operating instructions and procedures to enable continued operation of the system during the loss of telecommunications facilities.” This Requirement has been removed from the present draft of COM-001-2. <i>The RCSDT removed this requirement because it did not have a reliability benefit. No change made.</i> The mapping document seems to suggest that this Requirement was moved to EOP-008, but it is not there. We are concerned that removal of this Requirement will result in a reduction in the level of BES reliability and introduce a potential reliability gap. <i>As stated in the Implementation Plan, the RCSDT proposes retiring COM-001-1, R5 as it is redundant with EOP-008-0, R1 as well as replacement EOP-008-1, R1. No change made.</i>
Response: See response above.		
Hydro One Networks Inc.		(1) The proposed implementation plan conflicts with Ontario regulatory practice respecting the effective date of the standard. It is suggested that this conflict be removed by appending to the implementation plan wording, after “applicable regulatory approval” in the Effective Dates Section A5 on P. 4 of the draft standard

Organization	Yes or No	Question 6 Comment
		COM-001, COM-002 and IRO-001, and on P. 2 of COM-001's Implementation Plan and P. 1 of COM-002's and IRO-001's Implementation Plans, to the following effect:", or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities." The RCSDT is uncertain where the conflict exists. The standard IRO-001 uses the term "after applicable" and the others "following applicable." The RCSDT has updated the standards to use the most current effective date language. (2) COM-001: Measure M9: - "monthly basis." Suggest changing "monthly basis" to "at least once per calendar month" to be consistent the wording in R9. The RCSDT thanks you for your comment and has made conforming changes the Measure M9 and the R9 VSL. (3) IRO-001: Measures M1, M2, M3 - The types of evidence are listed in paragraph form. This is not consistent with presentation style in COM-001-2 Measures, where evidence is listed in bullet format. Suggest using bullet form for consistency. The RCSDT appreciates your comments and has made all the Measures bullet form in COM-001-2, but not in COM-002-3 and IRO-001-3. (4) IRO-001, Data Retention Section: i. The retention requirements do not reflect the revised requirements. For example: the Electric Reliability Organization is no longer a responsible entity; the Reliability Coordinator should replace the ERO for keeping data for R1; Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider should replace the Reliability Coordinator for keeping data for R2; and there is no R4/M4. ii. Section 1.3, second paragraph: "The Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider... shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to

Organization	Yes or No	Question 6 Comment
		retain specific evidence for a longer period of time as part of an investigation.” The word “or” between Generator Operator and Distribution Provider should be changed to “and.” The RCSDT thanks you for your comment and has made conforming changes to the Data Retention section.
Response: See response above.		
New York Independent System Operator		COM-001 The drafting team has complicated the requirements by having different requirements between RC/TOP/BA and other entities such as GOP/LSE/DP. The proposal is for redundancy to be required only between RC/TOP/BA. The requirement should be simplified to require all identified entities to have plans for loss of primary communication channels. This could include third parties as a communication channel. The RCSDT refers the Order No. 693 in Paragraph 508 to clarify the reason the DP and GOP are not required to have Alternative Interpersonal Communication and is as follows: “(1) expands the applicability to include Generator Operators and Distribution Providers and includes Requirements for their telecommunications facilities; (2) identifies specific requirements for telecommunications facilities for use in normal and emergency conditions that reflect the roles of the applicable entities and their impact on Reliable Operation and (3) includes adequate flexibility for compliance with the Reliability Standard, adoption of new technologies and cost-effective solutions.” In addition, R11 requires the DP and GOP to consult with its BA and TOP to determine a mutually agreeable action for restoration. No change made. COM-002 The drafting team added a requirement to identify a Reliability Directive is being initiated during an emergency to track 3-part communication for compliance

Organization	Yes or No	Question 6 Comment
		purposes. This will change and complicate the communication protocols between normal and emergency operations simply to simplify compliance assessments. The NYISO is asking for clarification that an entity may identify Reliability Directives as a category of communications to be communicated through procedures and training; and will not require a different communication protocol between normal and emergency operations. Affective communications can only be achieved through consistent processes for all conditions. Compliance assessments should be made on when we are in an emergency or not, and not on how the dialogue was initiated. The RCSDT believes the standard allows for this condition, and the method of implementation is up to the entity. No change made.
Response: See response above.		

END OF REPORT

Consideration of Comments

Project 2006-06 Reliability Coordination

The Reliability Coordination Standard Drafting Team (RCSDT) thanks all commenters who submitted comments on the successive posting of the COM-01-2 reliability standard for Project 2006-06—Reliability Coordination. These standards were posted for a 30-day public comment period from June 7, 2012 through July 6, 2012. Stakeholders were asked to provide feedback on the standards and associated documents through a special electronic comment form. There were 41 sets of comments, including comments from approximately 136 different people from approximately 90 companies representing 9 of the 10 Industry Segments as shown in the table on the following pages.

Summary Consideration

The RCSDT received comments from stakeholders, where a majority of those comments were focused on compliance elements of the standards, various typographical errors, and other minor ambiguities. The RCSDT believes it has been responsive to the many comments and has either provided adequate explanation, where applicable, as well as incorporating the suggested clarifications or corrections. There was one minority issue raised by several commenters which the RCSDT addressed, but did not make a revision to the standard. These commenters suggested adding a time threshold to Requirement R11 that would trigger the Distribution Provider and Generation Operator to consult with its Balancing Authority and Transmission Operator after losing its Interpersonal Communication capability for a defined period. The RCSDT believed this would be unnecessarily prescriptive and notes that each entity along with its affected neighbors, should, by procedures, identify what constitutes the detection of a failure of its capability and the acceptable time threshold for restoration. Revisions made to the standards are summarized in the following sections by standard.

COM-001-2

In the last posting and successive ballot, the standard received approval from 72.16% of the ballot body and fewer overall comments from previous postings. The RCSDT made minor, non-substantive changes to the standard based on these comments. The RCSDT believes it has addressed stakeholder comments and concerns in such a way that the standard is improved and meets the expectations expressed in comments for reliability and industry approval. Now that the standard has achieved industry consensus, this standard will advance to a recirculation ballot.

Purpose: No change.

Effective Date: No change.

Requirements: Changes were minor. The RCSDT for Requirements R1, R3, R5, R7, R8, and R11 changed the term “experiences” in the phrase “experiences a failure” to “detects.” This more appropriately aligns with the performance expectation that an entity must detect a failure first which would start the threshold for performance. The change maintains the intent while adding clarity and measurability.

The RCSDT also notes a minor change in Requirement R5, Part 5.5 and Requirement R6, Part 6.3 concerning “adjacent.” The team, during the revisions of draft 6, inadvertently changed “Adjacent” to a lower case when making revisions to the two parts that began with capitalized term. Commenters regarding draft 5 were concerned that the capitalized term would imply a NERC Glossary term, such as, “Adjacent Reliability Coordinator,” and cause confusion since there was no such term. The RCSDT recognizes that the glossary term should have remained, in the case of Parts 5.5 and 6.3, “Adjacent Balancing Authority.”

One commenter argued that the Violation Risk Factor (VRF) for Requirement R7 should be Medium, not High. The RCSDT considered this argument and concluded the change had merit based on the risk a Distribution Provider has in the scope of communications. Furthermore, the RCSDT also considered the VRF with regard to the Generator Operator in Requirement R8, but concluded the VRF should remain High because the Generator Operator may have a role as a blackstart resource in a Reliability Coordinator’s restoration plan.

Other commenters raised a concern that the relationship in Requirement R10 between the functions and the requirements listed were not clear. The suggested solution was to use the phrase, “as applicable”; however, the RCSDT opted to use the term “respectively” to more appropriately make the distinction between the functions and the listed requirements (i.e., the Reliability Coordinator (R1), Transmission Operator (R3), and Balancing Authority (R5)). This change was also applied to Measure M11.

Measures: One commenter recognized an error in Measure M3. The conjunction between asynchronously and synchronously should have been “or,” not “and” to accurately reflect the situation in Requirement R3, Parts 3.5 and 3.6. The extra word “that” was removed from Measure M7, as it was a typographical error. Measure M10 was updated to include the word “respectively” to coincide with the revision to Requirement R10. The Measure M11 was revised to reflect the changes in Requirement R11 to change the word “experiences” to “detects.” Last, the colon in Measures M9, M10, and M11 was moved to the appropriate location in each sentence.

Compliance, Compliance Enforcement Authority: No change.

Compliance, Data Retention: A commenter raised the question about the Measures allowing voice recordings, but requiring an entity to maintain this evidence for 12 calendar months. Standard drafting guidelines recommend that voice recordings be retained for 90 calendar days. The RCSDT agreed that 90 calendar days is the recommended practice and modified each of the data retention bulleted items to reflect the specific case of voice recordings.

Violation Severity Levels: Several of the Violation Severity Levels (VSL) required updating to account for the term changes in the requirements and the correction of certain typographical errors. For the word change from “experiences” to “detects,” the following VSLs were revised; R1, R3, R5, R7, R8, and R11. The Requirement R3 VSL had the “Reliability Coordinator” listed where it should have been the “Transmission Operator.” Likewise, the same error appeared in the Requirement R5 VSL where “Reliability Coordinator” should have been “Balancing Authority.” A commenter discovered a minor conjunction error in the Requirement R9 VSL in the listing of functional entities. The conjunction was changed from “and” to “or” to accurately reflect the construction of the VSLs. The same issue was revealed in the Requirement R10 VSL and was corrected, as well as removing the additional “identified” that was not needed.

Additional Information

All comments submitted may be reviewed in their original format on the standard’s project page:

http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Mark Lauby, at 404-446-2560 or at mark.lauby@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.¹

¹ The appeals process is in the Standard Processes Manual: http://www.nerc.com/files/Appendix_3A_StandardsProcessesManual_20120131.pdf

Index to Questions, Comments, and Responses

1. The RCSDT has revised the parts of Requirements R1, R2, R3, R4, R5, and R6 of COM-001-2 that began only with “Adjacent...” to begin with “Each adjacent...” to avoid the appearance of creating a defined glossary phrase. Do you agree with the changes? If not, please explain in the comment area below. 15
2. The RCSDT has revised parts of two requirements (Parts 3.5 and 4.3) in COM-001-2 and added two additional parts (Parts 3.6 and 3.4) to address concerns about the phrase “synchronously connected within the same Interconnection.” Do you agree these changes address concerns where entities might only be adjacent across an Interconnection for where connected by a Direct Current (DC) tie? If not, please explain in the comment area below. 20
3. The RCSDT made minor changes and reformatted the evidence examples in the Measures of COM-001-2 for greater clarity. Do you agree with these revisions? If not, please explain in the comment area below. 26
4. Do you have any other comments on COM-001-2, not expressed in questions above, for the RCSDT? 30

The Industry Segments are:

- 1 — Transmission Owners
- 2 — RTOs, ISOs
- 3 — Load-serving Entities
- 4 — Transmission-dependent Utilities
- 5 — Electric Generators
- 6 — Electricity Brokers, Aggregators, and Marketers
- 7 — Large Electricity End Users
- 8 — Small Electricity End Users
- 9 — Federal, State, Provincial Regulatory or other Government Entities
- 10 — Regional Reliability Organizations, Regional Entities

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
1.	Group	Sam Ciccone	FirstEnergy	X		X	X	X	X				
Additional Member Additional Organization Region Segment Selection													
1.	L. Raczkowski	FE	RFC										
2.	D. Hohbaugh	FE	RFC										

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
2.	Group	Gerald Beckerle	SERC OC Standards Review Group	X		X							
Additional Member		Additional Organization	Region	Segment Selection									
1.	Joe Riels	SMEPA	SERC	1, 3, 4, 5									
2.	Jake Miller	Dynegy	SERC	5									
3.	Stuart Goza	TVA	SERC	1, 3, 5, 6									
4.	Jim Case	Entergy	SERC	1, 3, 6									
5.	Larry Rodriquez	Entegra	SERC	6									
6.	Tim Hattaway	PowerSouth	SERC	1, 5									
7.	William Berry	OMU	SERC	3, 5									
8.	Raleigh Nobles	GA. System Operations	SERC	3									
9.	Tom Hanzlik	SCE&G	SERC	1, 3, 5, 6									
10.	Bill Thigpen	PowerSouth	SERC	1, 5									
11.	Marie Knox	MISO	SERC	2									
12.	J.T. Wood	Southern	SERC	1, 5									
13.	Joel Wise	TVA	SERC	5, 6, 1, 3									
14.	Wayne Van Liere	LGE-KU	SERC	3									
15.	Mike Hardy	Southern	SERC	1, 5									

Group/Individual		Commenter	Organization		Registered Ballot Body Segment									
					1	2	3	4	5	6	7	8	9	10
16. Andy Burch		Electric Energy, Inc.	SERC	5										
17. Scott Brame		NCEMC	SERC	1, 3, 4, 5										
18. John Troha		SERC Reliability Corporation	SERC	10										
3.	Group	Chris Higgins	Bonneville Power Administration		X		X		X	X				
Additional Member		Additional Organization		Region	Segment Selection									
1.	Huy	Ngo	WECC	1										
2.	Chris	Sanford	WECC	1										
3.	Paul	Blake	WECC	1										
4.	Group	Brenda Hampton	Luminant							X				
Additional Member		Additional Organization		Region	Segment Selection									
1.		Mike Laney	Luminant Generation Company LLC		ERCOT	5								
5.	Group	Steve Rueckert	Western Electricity Coordinating Council											X
No additional members listed.														
6.	Group	Connie Lowe	Dominion		X		X		X	X				
Additional Member		Additional Organization		Region	Segment Selection									
1.	Mike Garton		MRO	5, 6										

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
2.	Louis Slade	RFC	5, 6										
3.	Randi Heise	NPCC	5, 6										
4.	Michael Crowley	SERC	1, 3, 5, 6										
7.	Group	Kent Kujala	Detroit Edison			X	X	X					
Additional Member Additional Organization Region Segment Selection													
1.	Jeffrey DePriest	RFC	3, 4, 5										
2.	Alexander Eizans	RFC	3, 4, 5										
3.	Barbara Holland	NPCC											
8.	Group	Robert Rhodes	SPP Standards Review Group		X								
Additional Member Additional Organization Region Segment Selection													
1.	Michelle Corley	Cleco Power	SPP	1, 3, 5									
2.	Bo Jones	Westar Energy	SPP	1, 3, 5, 6									
3.	Allen Klassen	Westar Energy	SPP	1, 3, 5, 6									
4.	Tiffany Lake	Westar Energy	SPP	1, 3, 5, 6									
5.	Julie Lux	Westar Energy	SPP	1, 3, 5, 6									
6.	Terri Pyle	Oklahoma Gas & Electric	SPP	1, 3, 5									
7.	Sean Simpson	Board of Public Utilities of Kansas City, KS	SPP	NA									

Group/Individual		Commenter	Organization		Registered Ballot Body Segment									
					1	2	3	4	5	6	7	8	9	10
8.	Bryan Taggart	Westar Energy	SPP	1, 3, 5, 6										
9.	Group	WILL SMITH	MRO NSRF		X	X	X	X	X	X				
Additional Member Additional Organization Region Segment Selection														
1.	MAHMOOD SAFI	OPPD	MRO	1, 3, 5, 6										
2.	CHUCK LAWRENCE	ATC	MRO	1										
3.	TOM WEBB	WPS	MRO	3, 4, 5, 6										
4.	JODI JENSON	WAPA	MRO	1, 6										
5.	KEN GOLDSMITH	ALTW	MRO	4										
6.	ALICE IRELAND	XCEL	MRO	1, 3, 5, 6										
7.	DAVE RUDOLPH	BEPC	MRO	1, 3, 5, 6										
8.	ERIC RUSKAMP	LES	MRO	1, 3, 5, 6										
9.	JOE DEPOORTER	MGE	MRO	3, 4, 5, 6										
10.	SCOTT NICKELS	RPU	MRO	4										
11.	TERRY HARBOUR	MEC	MRO	5, 6, 1, 3										
12.	MARIE KNOX	MISO	MRO	2										
13.	LEE KITTELSON	OTP	MRO	1, 3, 5, 6										
14.	SCOTT BOS	MPW	MRO	1, 3, 5, 6										

Group/Individual		Commenter	Organization		Registered Ballot Body Segment									
					1	2	3	4	5	6	7	8	9	10
15.	TONY EDDLEMAN	NPPD	MRO	1, 3, 5										
16.	MIKE BRYTOWSKI	GRE	MRO	1, 3, 5, 6										
17.	DAN INMAN	MPC	MRO	1, 3, 5, 6										
10.	Group	Guy Zito	Northeast Power Coordinating Council											X
Additional Member		Additional Organization		Region	Segment Selection									
1.	Alan Adamson	New York State Reliability Council, LLC		NPCC	10									
2.	Carmen Agavriloi	Independent Electricity System Operator		NPCC	2									
3.	Greg Campoli	New York Independent System Operator		NPCC	2									
4.	Sylvain Clermont	Hydro-Quebec TransEnergie		NPCC	1									
5.	Chris de Graffenried	Consolidated Edison Co. of New York, Inc.		NPCC	1									
6.	Gerry Dunbar	Northeast Power Coordinating Council		NPCC	10									
7.	Mike Garton	Dominion Resources Services, Inc.		NPCC	5									
8.	Peter Yost	Consolidated Edison Co. of New York, Inc.		NPCC	3									
9.	Michael Jones	National Grid		NPCC	1									
10.	David Kiguel	Hydro One Networks Inc.		NPCC	1									
11.	Michael R. Lombardi	Northeast Utilities		NPCC	1									
12.	Randy MacDonald	New Brunswick Power Transmission		NPCC	9									

Group/Individual		Commenter	Organization		Registered Ballot Body Segment									
					1	2	3	4	5	6	7	8	9	10
13.	Bruce Metruck	New York Power Authority	NPCC	6										
14.	Silvia Parada Mitchell	NextEra Energy, LLC	NPCC	5										
15.	Lee Pedowicz	Northeast Power Coordinating Council	NPCC	10										
16.	Robert Pellegrini	The United Illuminating Company	NPCC	1										
17.	Si-Truc Phan	Hydro-Quebec TransEnergie	NPCC	1										
18.	David Ramkalawan	Ontario Power Generation, Inc.	NPCC	5										
19.	Brian Robinson	Utility Services	NPCC	8										
20.	Michael Schiavone	National Grid	NPCC	1										
21.	Wayne Sipperly	New York Power Authority	NPCC	5										
22.	Donald Weaver	New Brunswick System Operator	NPCC	2										
23.	Ben Wu	Orange and Rockland Utilities	NPCC	1										
11.	Group	Jennifer Eckels	Colorado Springs Utilities		X		X		X	X				
Additional Member Additional Organization Region Segment Selection														
1.	Paul Morland		WECC	1										
2.	Charles Morgan		WECC	3										
3.	Lisa Rosintoski		WECC	6										
12.	Group	Jason Marshall	ACES Power Marketing Standards							X				

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
			Collaborators										
Additional Member		Additional Organization		Region	Segment Selection								
1.	Bill Hutchison	Southern Illinois Power Cooperative		SERC	1								
2.	Megan Wagner	Sunflower Electric Power Corporation		SPP	1								
3.	Mark Ringhausen	Old Dominion Electric Cooperative		RFC	3, 4								
4.	Shari Heino	Brazos Electric Power Cooperative, Inc.		ERCOT	1, 5								
13.	Group	Gregory Campoli	ISO/RTO Standards Review Committee			X							
Additional Member		Additional Organization		Region	Segment Selection								
1.	Stephanie Monzon	PJM		RFC	2								
2.	Ben Li	IESO		NPCC	2								
3.	Matt Goldberg	ISO-NE		NPCC	2								
4.	Gary DeShazo	CAISO		WECC	2								
5.	Steve Myers	ERCOT		ERCOT	2								
6.	Ken Gardner	AESO		WECC	2								
7.	Bill Phillips	MISO		RFC	2								
8.	Don Weaver	NBSO		NPCC	2								
9.	Charles Yeung	SPP		SPP	2								

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
14.	Individual	Janet Smith, Regulatory Affairs Supervisor	Arizona Public Service Company	X		X		X	X				
15.	Individual	Sandra Shaffer	PacifiCorp	X		X		X	X				
16.	Individual	Brent.Ingebrigtsen	LG&E and KU Services	X		X		X	X				
17.	Individual	Alice Ireland	Xcel Energy	X		X		X	X				
18.	Individual	Thad Ness	American Electric Power	X		X		X	X				
19.	Individual	John Seelke	Public Service Enterprise Group	X		X		X	X				
20.	Individual	David Thorne	Pepco Holdings Inc	X		X							
21.	Individual	Karen Webb	City of Tallahassee (TAL)					X					
22.	Individual	Andrew Gallo	City of Austin dba Austin Energy	X		X	X	X	X				
23.	Individual	Kasia Mihalchuk	Manitoba Hydro	X		X		X	X				
24.	Individual	Steve Alexanderson P.E.	Central Lincoln			X	X					X	
25.	Individual	Michelle D'Antuono	Ingleside Cogeneration LP (Occidental Chemical in the ballot body)					X					
26.	Individual	Laura Lee	Duke Energy	X		X		X	X				
27.	Individual	Don Jones	Texas Reliability Entity										X

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
28.	Individual	John Brockhan	CenterPoint Energy Houston Electric, LLC	X									
29.	Individual	Michael Falvo	Independent Electricity System Operator		X								
30.	Individual	Steve Alexanderson P.E.	Central Lincoln			X	X					X	
31.	Individual	Andrew Z. Pusztai	American Transmission Company	X									
32.	Individual	Daniel Duff	Liberty Electric Power					X					
33.	Individual	Chris Mattson	Tacoma Power	X		X	X	X	X				
34.	Individual	Patrick Brown	Essential Power, LLC					X					
35.	Individual	Maggy Powell	Exelon Corporation and its affiliates	X		X		X	X				
36.	Individual	Jay Campbell	NV Energy	X		X	X	X					
37.	Individual	Darryl Curtis	Oncor Electric Delivery Company LLC	X									
38.	Individual	Greg Travis	Idaho Power Company	X		X							
39.	Individual	Marie Knox	MISO		X								
40.	Individual	Scott Berry	Indiana Municipal Power Agency				X						
41.	Individual	Kathleen Goodman	ISO New England Inc		X								

1. The RCSDT has revised the parts of Requirements R1, R2, R3, R4, R5, and R6 of COM-001-2 that began only with “Adjacent...” to begin with “Each adjacent...” to avoid the appearance of creating a defined glossary phrase. Do you agree with the changes? If not, please explain in the comment area below.

Summary Consideration: Twenty-seven stakeholders completing the comment form support the changes by the RCSDT. Of those, there were two commenters not in support of the RCSDT’s change to the sentence structure from “Adjacent...” to “Each adjacent...” This change was made to eliminate the ambiguity that a glossary term was intended by the drafting team and to achieve greater clarity. Another comment concerned the meaning of “adjacent” in terms of geography. The RCSDT notes that due to asynchronous connection (DC tie), some entities may not be geographically adjacent, but electrically adjacent; therefore, adjacency for synchronously connected entities is applied in the typical manner for entities which are, as a rule, geographically adjacent. Additionally, one commenter questioned the revision in Draft 6, Requirement R5, Part 5.5 and Requirement R6, Part 6.3, when the RCSDT applied “Each” before “adjacent,” and by doing so inadvertently changed the glossary term “Adjacent Balancing Authority” to just “adjacent Balancing Authority” which is not a glossary term. The RCSDT notes that the spirit of the phrase “adjacent Balancing Authority” remains accurate and that this was a clerical error.

A single entity argued the requirements should be certification requirements, and not in a standard. The RCSDT directs the commenter to Section 500 of the NERC Rules of Procedure which address certification. The certification process is a program to identify entities that are applicable to and responsible for the reliability standards.

Organization	Yes or No	Question 1 Comment
Colorado Springs Utilities	No	Adjacent is still an ambiguous term. Does the SDT mean to refer to entities which share an interface/tie-line; entities which have geographically abutting service territories or Areas; entities within the same geographical region but not necessarily “touching”; etc.? Is this the same as or different from “neighboring,” and what is the meaning of that term? Perhaps this term deserves a glossary entry.
Response: The RCSDT believes this standard is not about geographical neighbors, it is about the effect of being electrical neighbors. No change made.		
NV Energy	No	If "Adjacent", a capitalized word, must be in the Definitions section merely

Organization	Yes or No	Question 1 Comment
		because it's capitalized, what about "Each"? Other sentences have capitalized words, such as "If", "Its" and "All". If "Adjacent" is in the Definitions merely because it's capitalized, please also add "If", "Its" and "All".
Response: The RCSDT modified the usage of “Adjacent” in draft 5 of COM-001-2 to eliminate the appearance of a defined term to achieve clarity within the requirements because it started the sentence. No change made.		
MISO	No	While MISO disagrees with the modifications to COM-001-1 proposed in COM-001-2 generally, it does not disagree with the clarity provided in the proposed addition of “Each” in front of “Adjacent”.
Response: The RCSDT thanks you for your support of the modification to “Adjacent.” No change made.		
ISO New England Inc	No	The ISO-NE continues to believe that these a certification types of requirements and that they do not belong in a standard.
Response: NERC maintains an Organization Certification Program, the goal of which is to ensure that organizations who apply to register or are registered to perform certain reliability functions deemed particularly crucial to the reliability of the bulk power system will meet or exceed certain minimum criteria (i.e., Reliability Standards) demonstrating they are capable of performing the tasks (i.e., Requirements) for these functions. The process for certification of organizations is included in the NERC Rules of Procedure, Section 500 and Appendix 5A. For example, the first paragraph of Section 500 – Organization Registration and Certification states: “The purpose of the Organization Registration Program is to clearly identify those entities that are responsible for compliance with the FERC approved reliability standards. Organizations that are registered are included on the NERC Compliance Registry (NCR) and are responsible for knowing the content of and for complying with all applicable reliability standards...” No change made.		
PacifiCorp	No	
Ingleside Cogeneration LP (Occidental Chemical in the ballot	Yes	Ingleside Cogeneration LP agrees that the modification removes all doubt that a glossary definition is inferred. We support all clarifications of this

Organization	Yes or No	Question 1 Comment
body)		kind.
Response: The RCSDT thanks you for your comment.		
Texas Reliability Entity	Yes	“Adjacent Balancing Authority” is a defined term in the NERC Glossary, and use of the non-defined term “adjacent Balancing Authority” in this draft will cause confusion. Exactly what difference is intended by using the lower-case “a” instead of the defined term?
Response: The RCSDT agrees “adjacent Balancing Authority” should be “Adjacent Balancing Authority,” the defined NERC Glossary term. This change was made during the draft 6 process and a typo was made during editing of the other usages of “adjacent.” Error correction made.		
Independent Electricity System Operator	Yes	Notwithstanding our opposition to R1.2.
Response: Thank you for your support. No change made.		
FirstEnergy	Yes	
SERC OC Standards Review Group	Yes	
Luminant	Yes	
Western Electricity Coordinating Council	Yes	
Dominion	Yes	
SPP Standards Review Group	Yes	

Organization	Yes or No	Question 1 Comment
MRO NSRF	Yes	
Northeast Power Coordinating Council	Yes	
ACES Power Marketing Standards Collaborators	Yes	
Arizona Public Service Company	Yes	
Xcel Energy	Yes	
American Electric Power	Yes	
Public Service Enterprise Group	Yes	
Pepco Holdings Inc	Yes	
City of Tallahassee (TAL)	Yes	
City of Austin dba Austin Energy	Yes	
Manitoba Hydro	Yes	
Duke Energy	Yes	
CenterPoint Energy Houston Electric, LLC	Yes	
American Transmission Company	Yes	

Organization	Yes or No	Question 1 Comment
Liberty Electric Power	Yes	
Tacoma Power	Yes	
Oncor Electric Delivery Company LLC	Yes	
Idaho Power Company	Yes	

2. The RCSDT has revised parts of two requirements (Parts 3.5 and 4.3) in COM-001-2 and added two additional parts (Parts 3.6 and 3.4) to address concerns about the phrase “synchronously connected within the same Interconnection.” Do you agree these changes address concerns where entities might only be adjacent across an Interconnection for where connected by a Direct Current (DC) tie? If not, please explain in the comment area below.

Summary Consideration: Thirty-one stakeholders completing the comment form support the changes by the RCSDT. Of those, seven provided comments. Two comments suggested combining Requirements R3, Parts 3.5 and 3.6 and Requirement R4, Parts 4.3 and 4.4 to have one part each that says “...synchronously or asynchronously connected.” The RCSDT believes this is a semantic change and having each condition in each requirement separates the emphases and provides the desired clarity. One commenter raised the issue of “adjacent” addressed in Question 1 above. A commenter expressed concern about the Reliability Coordinator not being required to have an Interpersonal Communication capability across an interconnection. The RCSDT notes that some Reliability Coordinators communicate with other Reliability Coordinators across interconnections; however, the requirement is to have the Interpersonal Communication capability within the same interconnection. Two commenters questioned why the synchronous and asynchronous conditions were in the requirements. The RCSDT added these to achieve a greater level of clarity that not all Transmission Operators are geographically adjacent. For example, the RCSDT considered phrases like “electrically connected,” but that creates the problem that all Transmission Operators are electrically connected. The use of adjacent and the synchronous and asynchronous conditions in each part achieve the necessary clarity based on transmission operations.

A single entity argued the requirements should be certification requirements and not in a standard. The RCSDT directs the commenter to Section 500 of the NERC Rules of Procedure which address certification. The certification process is a program to identify entities that are applicable to and responsible for the reliability standards.

Organization	Yes or No	Question 2 Comment
Northeast Power Coordinating Council	No	If 3.5 and 4.3 were made to read: “Each connected adjacent Transmission Operator.” Then 3.6 and 4.4 (not 3.4 as indicated in the question) would not be required. If 3.6 and 4.4 are to be kept, then the wording of 3.6 and 4.4 should be made to read: “Each adjacent Transmission Operator asynchronously connected through a DC tie.” Systems cannot be asynchronously connected.
Response: The RCSDT thanks you for your comments. These are semantic changes and the current Requirement R3, Parts 3.5 and 3.6 and Requirement R4, Parts 4.3 and 4.4 provide the clarity requested by industry stakeholders represented by the ballot. No		

Organization	Yes or No	Question 2 Comment
change made.		
Colorado Springs Utilities	No	See previous comment on “adjacent”.
Response: Please see the RCSDT’s response above in question 1. No change made.		
PacifiCorp	No	PacifiCorp does not understand the RCSDT’s rationale for creating separate sub-requirements for adjacent Transmission Operators that are synchronously and asynchronously connected, in both R3.5/R3.6 and R4.3/R4.4. PacifiCorp recommends the following singular sub-requirement for both R3 and R4: “Each adjacent Transmission Operator (whether synchronously or asynchronously connected).”
Response: The RCSDT thanks you for your comments. These are semantic changes and the current Requirement R3, Parts 3.5 and 3.6 and Requirement R4, Parts 4.3 and 4.4 provide the clarity requested by industry stakeholders represented by the ballot. No change made.		
Texas Reliability Entity	No	The proposed revision to include Transmission Operators asynchronously connected (Parts 3.5 and 4.4) is an appropriate revision to the Standard. The Reliability Coordinator responsibilities for communications with a Reliability Coordinator across an asynchronous connection do not appear to be addressed in this revision. Did the RCSDT have a particular reason not to address the RC issue? We believe each RC should have Interpersonal Communication capability with all neighboring RCs regardless of Interconnection boundaries, the type of connection, or whether a connection exists.
Response: The RCSDT thanks you for your support of the improvements to Requirements R3 part 3.5 and R4 part 4.4. The RCSDT made additional clarifying changes from draft 5 to draft 6 in Requirements R3 and R4 to address the issue that some Transmission Operators (not Reliability Coordinators) that may not be adjacent for situations other than synchronously connected within the same Interconnection in the traditional understanding. For example, some entities have connections beyond the interconnection and some connections are asynchronous. To address this concern, the RCSDT separated the requirements to identify “synchronously		

Organization	Yes or No	Question 2 Comment
connected” and “asynchronously connected,” and removed the “within the same Interconnection” to achieve this clarity. No change made. Requirements for the Reliability Coordinator are addressed in Requirements R1 and R2, which do not specify the synchronous or asynchronous connection. Additionally, the parts 1.2 and 2.2 only require the Reliability Coordinator to have an Interpersonal Communication and Alternative Interpersonal Communication capability with other Reliability Coordinators within the same Interconnection. For example, the loss of a DC tie does not result in a negative reliability impact and is analogous to a load or generator loss because flows would not redistribute. Each end of the DC tie must adjust generation to account for the loss of the DC tie; therefore, no coordination is required between entities. The standard does not preclude the Reliability Coordinator from having a capability with another Reliability Coordinator in another Interconnection. No change made.		
NV Energy	No	What difference does a synchronous or asynchronous connection make? Do not both have a reliability impact on the two entities on either side? Since there is a reliability impact, regardless of connection type, a separate Requirement is superfluous.
Response: The RCSDT made additional clarifying changes from draft 5 to draft 6 in Requirements R3 and R4 to address the issue that some Transmission Operators may not be adjacent for situations other than synchronously connected within the same Interconnection in the traditional understanding. For example, some entities have connections beyond the interconnection and some connections are asynchronous. To address this concern, the RCSDT separated the requirements to identify “synchronously connected” and “asynchronously connected,” and removed the “within the same Interconnection” to achieve this clarity. For example, the loss of a DC-Tie does not result in a negative reliability impact and is analogous to a load or generator loss because flows would not redistribute. Each end of the DC-Tie must adjust generation to account for the loss of the DC-Tie; therefore, no coordination is required between entities. No change made.		
MISO	No	While MISO disagrees with the modifications to COM-001-1 proposed in COM-001-2 generally, it does not disagree with the proposed removal of “within the same interconnection.”
Response: The RCSDT thanks you for your support in removing “...within the same Interconnection.” No change made.		
ISO New England Inc	No	The ISO-NE continues to believe that these a certification types of requirements and

Organization	Yes or No	Question 2 Comment
		that they do not belong in a standard.
Response: NERC maintains an Organization Certification Program, the goal of which is to ensure that organizations who apply to register or are registered to perform certain reliability functions deemed particularly crucial to the reliability of the bulk power system will meet or exceed certain minimum criteria (i.e., Reliability Standards) demonstrating they are capable of performing the tasks (i.e., Requirements) for these functions. The process for certification of organizations is included in the NERC Rules of Procedure, Section 500 and Appendix 5A. For example, the first paragraph of Section 500 – Organization Registration and Certification states: “The purpose of the Organization Registration Program is to clearly identify those entities that are responsible for compliance with the FERC approved reliability standards. Organizations that are registered are included on the NERC Compliance Registry (NCR) and are responsible for knowing the content of and for complying with all applicable reliability standards...” No change made.		
Tacoma Power	Yes	This seems excessive. It should be sufficient to say “each adjacent TOP” regardless of whether they are connected synchronously or via a DC tie.
Response: The RCS DT thanks you for your comment. The clarifications for asynchronous and synchronous were based on industry stakeholder comment. No change made.		
FirstEnergy	Yes	
SERC OC Standards Review Group	Yes	
Luminant	Yes	
Western Electricity Coordinating Council	Yes	
Dominion	Yes	
SPP Standards Review Group	Yes	

Organization	Yes or No	Question 2 Comment
MRO NSRF	Yes	
ACES Power Marketing Standards Collaborators	Yes	
Arizona Public Service Company	Yes	
Xcel Energy	Yes	
American Electric Power	Yes	
Public Service Enterprise Group	Yes	
Pepco Holdings Inc	Yes	
City of Tallahassee (TAL)	Yes	
Manitoba Hydro	Yes	
Ingleside Cogeneration LP (Occidental Chemical in the ballot body)	Yes	
Duke Energy	Yes	
CenterPoint Energy Houston Electric, LLC	Yes	
Independent Electricity	Yes	

Organization	Yes or No	Question 2 Comment
System Operator		
American Transmission Company	Yes	
Liberty Electric Power	Yes	
Oncor Electric Delivery Company LLC	Yes	
Idaho Power Company	Yes	

3. The RCSDT made minor changes and reformatted the evidence examples in the Measures of COM-001-2 for greater clarity. Do you agree with these revisions? If not, please explain in the comment area below.

Summary Consideration: Twenty-eight stakeholders completing the comment form question support the changes by the RCSDT. Of those, three offered substantive comments. One commenter noted that having “physical assets” listed as one type of evidence in the Measures M1 through M8 is problematic. The RCSDT believes an entity may utilize any number of options to demonstrate compliance with the requirements. One commenter had concerns about the use of an intermediary for Interpersonal Communication capability. The RCSDT emphasizes that an entity may employ any number of approaches to achieve the requirements. Another commenter suggested inserting “applicable” as a clarification in Measure M10 to more clearly state the relationship between the entities and the associated requirements. In consideration of the suggestion, the RCSDT inserted the word “respectively,” rather than “applicable” to more accurately note the relationship. Additionally, the RCSDT applied the same consideration to Requirement R10 to achieve the same clarity. The RCSDT also removed a typographical error revealed by a commenter.

Organization	Yes or No	Question 3 Comment
Colorado Springs Utilities	No	See the comment on "evidence" included in the comment section of question 4.
Response: Please see the RCSDT’s response in question 4. No change made.		
ACES Power Marketing Standards Collaborators	No	We continue to believe that use of “physical assets” instead of “demonstration of physical assets” is problematic. Auditors must be able to take evidence with them and they could not take the physical assets. They could, however, take notes they record from demonstration of the physical assets with them. While we understand that the auditors will understand they can’t take the “physical assets”, it does not change the fact that the listing “physical assets” as evidence is technically not correct.
Response: The RCSDT believes that physical assets are demonstration of evidence for Interpersonal Communication capability. The responsible entity may exercise other methods of evidence for the physical assets (e.g., photographs or other documentation). No change made.		
Ingleside Cogeneration LP (Occidental Chemical in the	No	Ingleside Cogeneration LP would like to see the project team include references to intermediaries which act as a single point of contact between GOPs and BAs/TOPs. This is a very common and necessary communications hierarchy - as it is just not possible for the

Organization	Yes or No	Question 3 Comment
ballot body)		BA/TOP to otherwise coordinate the actions of multiple GOPs. We believe that it is appropriate that GOP must retain evidence that Interpersonal Communication capability is maintained up to the intermediary - but the BA or TOP must be responsible for the remainder of the link. This accountability matches the most common contractual arrangements where both the BA/TOP and the GOP have signed agreements with the intermediary.
Response: The RCSDT believes the standard provides the “what” to do, not the “how” to implement the standard. Having an intermediary for communication is one approach in “how” the entity may implement the standard. No change made.		
MISO	No	While MISO appreciates the SDT’s modifications to Measure M10 since the last draft, the Measure remains ambiguous as to which parties should be contacted when an entity experiences a failure of its Interpersonal Communication capability that lasts 30 minutes or longer. MISO respectfully submits the following changes for Measure 10: ”Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have and provide upon request evidence that it notified the entities as identified in Requirements R1, R3, and R5, as applicable, within 60 minutes of the detection of a failure of its Interpersonal Communication capability that lasted 30 minutes or longer. Evidence could include, but is not limited to dated and time-stamped: test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R10.)”
Response: The RCSDT agrees with the ambiguity in Measure M10 and proposes to clarify Requirement R10, Measure M10, and R10 VSL by inserting the word “respectively,” rather than the suggested “as applicable.” The word “respectively” is used rather than “applicable” because “applicable” is open to interpretation. For example, adding the word “respectively” means that the Reliability Coordinator in R1 is not required to notify the entities identified in Requirement R3 or R5. The RCSDT intended the requirements to map to the entity. Clarifying changes made.		
City of Tallahassee (TAL)	Yes	For Measure 7, the first line duplicates the word "that".
Response: The RCSDT appreciates you bringing awareness to this typo. The additional “that” has been removed from Measure M7 in COM-001-		

Organization	Yes or No	Question 3 Comment
2. Error correction made.		
Independent Electricity System Operator	Yes	Notwithstanding our opposition to R1.2.
Response: Thank you for your support. No change made.		
FirstEnergy	Yes	
SERC OC Standards Review Group	Yes	
Luminant	Yes	
Western Electricity Coordinating Council	Yes	
Dominion	Yes	
SPP Standards Review Group	Yes	
MRO NSRF	Yes	
Northeast Power Coordinating Council	Yes	
Arizona Public Service Company	Yes	
PacifiCorp	Yes	

Organization	Yes or No	Question 3 Comment
Xcel Energy	Yes	
Public Service Enterprise Group	Yes	
Pepco Holdings Inc	Yes	
City of Austin dba Austin Energy	Yes	
Manitoba Hydro	Yes	
Duke Energy	Yes	
Texas Reliability Entity	Yes	
CenterPoint Energy Houston Electric, LLC	Yes	
American Transmission Company	Yes	
Liberty Electric Power	Yes	
Tacoma Power	Yes	
NV Energy	Yes	
Oncor Electric Delivery Company LLC	Yes	
Idaho Power Company	Yes	

4. Do you have any other comments on COM-001-2, not expressed in questions above, for the RCSDT?

Summary Consideration: There were several minority comments concerning the proposed standards COM-002-3 and IRO-001-3 that the RCSDT could not respond to because they were approved by industry. Other comments revealed errors in the standard that the RCSDT corrected. Most comments were continuances from previous comment periods, along with various minority comments which the RCSDT provided. Commenters raised the issue that having a communication capability should be a matter of the NERC Certification process, as raised in the above questions. The RCSDT noted that certification was the process to ensure registered entities could perform those tasks associated with the reliability standards and that each entity should address this issue with NERC if further information is needed. Also from previous comment periods, commenters noted this standard should be a Results-Based Standard (RBS). The RCSDT did not disagree that the RBS format would be beneficial, but the current standard, as written, achieves the necessary goals set forth in the Standards Authorization Request (SAR).

Other minority continuances from previous comment periods include the use of “means,” “primary,” and other words or suggestions in the proposed definitions. The RCSDT maintains that these words are problematic and did not alter the definitions. Additionally, the definitions describe the “what” for communications, not the “how.” Some commenters noted that requiring the Generation Operator or Distribution Provider to have an Interpersonal Communication capability is redundant and unnecessary because they would already have a capability by virtue of it being established by the Balancing Authority and Transmission Operator. The RCSDT responded that each entity (i.e., both ends of the communication) is required to have the communication capability which is coordinated with the other entity to establish the capability. Other comments included requests to specifically say that the proposed COM-001-2 is “not for the exchange of data.” The RCSDT did not feel it necessary to insert such a clause, but pointed the commenter to reliability standards IRO-010 and IRO-014 which address data and information.

A commenter questioned having the ability to select other communications as needed; however, the RCSDT notes that an entity cannot randomly choose or designate other communication capabilities without coordinating the capability with other parties. Each applicable entity must know what its Interpersonal Communication capability is with others and, if applicable, its Alternative Interpersonal Communication capability with others. The same commenter questioned how the standard achieves “diversely routed,” as written in the current standard COM-001-1. The RCSDT contends “diversely routed” is achieved through the proposed definitions. The proposed definition of Alternative Interpersonal Communication contains, “...not utilize the same infrastructure (medium) as Interpersonal Communication used for day-to-day operation.”

There were other minority comments about time limits and notifications. One commenter suggested having a defined notification process using a hierarchal format. The RCSDT did not agree with this concept due to the diverse relationships between entities making it impractical. One noted that the 60-minute notification time was insufficient. The RCSDT considered this, as in previous drafts, and contends the period is adequate. Another did not agree with the two-hour limit on initiating action to repair or designating an

Alternative Interpersonal Communication capability. Again, the RCSDT holds that the time elements have been considered and supported by industry.

There were minority comments about the Measures and VSLs. The RCSDT inserted the word “respectively” in Requirement R10 and similarly in Measure M10 to clarify the expected relationship between the listed functional entities and the listed requirements. Some commenters noted that the use of “physical assets” is an inappropriate listing of evidence in the measures. The RCSDT disagreed that having the asset can be one form of demonstrating the necessary evidence. A commenter requested additional granularity in the VSLs in addition to what the RCSDT provided in the draft 6 posting. The RCSDT believes that having two (High and Severe) VSLs is the appropriate VSL granularity given the expected number of entities required to have a communication capability. More importantly, the reliability need is not to miss having a communication capability with any entity necessary for reliability operations. The same commenter requested a lower VSL for Requirements R1, R3 and R5 because, in this case, the Reliability Coordinator, Transmission Operator, and Balancing Authority are all required to have an Alternative Interpersonal Communication capability. The RCSDT contends that a violation should not be contingent on the preponderance of other mitigating requirements. Both VRFs and VSLs are to be evaluated on an individual requirement level without regard to other contributing circumstances. A comment suggested lowering the VRF on Requirement R7 from High to Medium. The RCSDT agreed and made the change since the loss of a communication capability with the Distribution Provider does not present the same level of risk that a Generator Operator would (e.g., during blackstart restoration).

Other minority comments related to the effective date language and data retention. The effective date language governed by NERC staff and the RCSDT only addresses the time elements within the template language. A question was raised about voice recordings generally having only a 90-calendar day retention, but the data retention specified 12 calendar months. The RCSDT recognizes this oversight and added clarifying language to account for voice recordings.

The majority comments in Question 4, also raised in previous comment periods, are related to Requirement R11, which had six distinct reoccurring themes: (1) A threshold for determining when to report a failure of the Generation Operator or Distribution Provider communication capability. (2) The reliability benefit of having to consult with the Balancing Authority or Transmission Operator when neither the Generation Operator nor Distribution Provider are required to have an Alternative Interpersonal Communication capability. (3) Consultation for the purpose of determining a mutually agreeable action for the restoration of its Interpersonal Communication capability. (4) What does “action” constitute? (5) Changing the language to specifically name the entities to be notified in the corresponding Measure M11. (6) The Generation Operator and Distribution Provider should be required to have an Alternative Interpersonal Communication capability. The RCSDT appropriately responded to all six issues as follows:

For item (1) a threshold is not provided to allow flexibility for the Generation Operator or Distribution Provider to determine what constitutes a failure of its Interpersonal Communication capability. The reliability benefit argued in (2) about consulting with the Balancing Authority or Transmission Operator is for the purpose of bringing awareness to these entities that communications are

compromised and to know what is being done to restore the capability. In issue (3) the purpose is to consult, the requirement clarifies the reliability purpose to determine a mutually agreeable action for restoration. The reliability goal is for the Balancing Authority or Transmission Operator to maintain awareness the communication capability has failed and what is being done to restore the capability. The Generation Operator or Distribution Provider is free to employ an Alternative Interpersonal Communication capability, but has no requirement to do so. The RCSDT responded to item (4) regarding what “action” meant. Action can be a number of things which the entity under takes to restore its capability. It could include, but is not limited to: contacting internal staff to initiate a repair, contacting a third party for repair, seeking assistance to troubleshoot the problem, or implementing its procedure(s) regarding the restoration of the capability. There was a suggestion concerning item (5) to explicitly name the entities in Requirement R11. The RCSDT agreed it would improve readability, but it would not be inconsistent with the way the measure is written using the reference to the two requirements. Item (6) was also raised in previous comment periods and the RCSDT noted that only requiring the Generation Operator and Distribution Provider to have an Interpersonal Communication capability is consistent with the direction provided in Order 693.

Organization	Yes or No	Question 4 Comment
City of Austin dba Austin Energy		(1) Both instances of “Reliability Coordinator” in the VSLs for R3 should be “Transmission Operator” to match the language of the standard. Response: The RCSDT appreciates you bringing awareness to this error in Requirement R3 VSL. The reference to “Reliability Coordinator” has been changed to Transmission Operator for Requirement R3 in both the High and Severe VSL. Error correction made. (2) Both instances of “Reliability Coordinator” in the VSLs for R5 should be “Balancing Authority” to match the language of the standard. Response: The RCSDT appreciates you bringing awareness to this error in Requirement R5. The reference to “Reliability Coordinator” has been changed to Balancing Authority for Requirement R5 in both the High and Severe VSL. Error correction made. (3) In the VSLs for R9 and R10 the use of “and” seems incorrect. Austin Energy suggests the following revisions for all VSL levels (only the Lower VSL shown for simplicity and revised words suggested in capital letters):

Organization	Yes or No	Question 4 Comment
		R9, Lower VSL: “The Reliability Coordinator, Transmission Operator, OR Balancing Authority...” Response: RCSDT appreciates you bringing awareness to this error in Requirement R9 VSL. The use of “and” between the responsible entities and the requirement references has been corrected to “or” for proper construction in Requirements R9 and R10 VSLs. Error correction made. R10, Lower VSL: “The Reliability Coordinator, Transmission Operator, OR Balancing Authority failed to notify the entities identified in Requirements R1, R3, OR R5, RESPECTIVELY, upon the detection ...” Response: The RCSDT agrees with the ambiguity in Measure M10 and proposes to clarify Requirement R10, Measure M10, and R10 VSL by inserting the word “respectively.” For example, adding the word “respectively” means that the Reliability Coordinator in R1 is not required to notify the entities identified in Requirement R3 or R5. The RCSDT intended the requirements to map to the entity. Clarifying changes made.
Response: Please see responses above.		
ACES Power Marketing Standards Collaborators		(1) The definition of Alternative Interpersonal Communication needs further refinement. As it is written, the primary Interpersonal Communication that is used to satisfy R1, R3, and R5 is also an Alternative Interpersonal Communication. This primary Interpersonal Communication established in R1, R3, and R5 meet all of the requirements of Alternative Interpersonal Communication. It is an Interpersonal Communication and it is capable of replacing the Interpersonal Communication used as the Alternative Interpersonal Communication (which by definition is an Interpersonal Communication) in R2, R4, and R6. Thus, each Interpersonal Communication used in R1, R3, and R5 really are an Interpersonal Communication and Alternative Interpersonal Communication. One solution may be to add a third definition: Primary Interpersonal Communication. It would essentially be an

Organization	Yes or No	Question 4 Comment
		Interpersonal Communication that is designated as primary or the normal communication system. Then Alternative Interpersonal Communication would be defined based on the ability of the Interpersonal Communication to substitute for the Primary. R1, R3, and R5 would need to be changed to refer to the Primary Interpersonal Communication. Another option might be to simply stick with the two existing definitions and use “primary” in R1, R3, and R5. Regardless of the option selected, “another” needs to be added before the second use of Interpersonal Communication for absolute clarity. Response: The definitions clarify the need to differentiate the communication capabilities. The RCSDT notes that, in this last ballot, industry stakeholder consensus does not support the use of “primary” as a part of Interpersonal Communication. No change made. (2) We appreciate that the drafting team added another VSL for requirements R1 through R8, however, we believe additional levels should be populated. For example, if a Transmission Operator or Balancing Authority failed to have Interpersonal Communications capability with a Distribution Provider but had Interpersonal Communications capability with all other required entities, it has met the vast majority of the requirement. Since VSLs are a measure of how much the requirement was missed by the responsible entity, a Lower VSL seems most appropriate for failing to have Interpersonal Communication capability with a DP. Response: The RCSDT added the High VSL for Requirements R1 through R8 from draft 5 to draft 6 to account for greater granularity in a violation. For each applicable responsible entity named in each of the requirements, the number of entities for which it must have an Interpersonal Communication or Alternative Interpersonal Communication may vary significantly. The RCSDT believed that adding one additional VSL was an appropriate solution to account for variability in the number of entities. No change made. (3) It seems odd to change the effective date language from what NERC has consistently used throughout the standards. “Following” was replaced with “beyond

Organization	Yes or No	Question 4 Comment
		the date this standard is approved”. For consistency with the rest of NERC standards, we recommend changing it back to the original language. Response: The RCSDT appreciates your comment. The language in the Effective Date section is standard language adopted by NERC and used throughout the body of standards currently under development by teams. The RCSDT is not able to alter this language. No change made (4) We appreciate the changes to R1, R3, R5, R7 and R8 that attempt to clarify that a failure of the primary Interpersonal Communication capability is not a violation of these requirements. However, we believe these requirements will never be approved by the Commission. As they are written, they literally say that R1, R3, R5, R7, and R8 apply when the responsible entity has Interpersonal Communication capability and they don’t apply when you don’t have the capability but rather other requirements apply. This means R1, R3, R5, R7 and R8 could never be violated which begs the question why are they even needed. Because Commission approval is unlikely for these requirements, we continue to believe the best solution is to focus the requirements on having a communication medium rather than capability. If “capability” were struck from all of the requirements, the requirements would then focus on a communication medium as defined in Interpersonal Communication and Alternative Interpersonal Communication. This solution would still keep the requirements technology neutral since a medium could be any communication system or device and actually provide more flexibility in the requirements. Because the requirements would focus on having a medium in place rather than a capability, failure of the medium would not automatically translate into a violation which means the problematic “unless [responsible entity] experiences a failure of its Interpersonal Communication capability ...” language could be dropped. Dropping this language would improve the likelihood that the Commission would approve the standard. Response: The RCSDT thoughtfully considered the comments about where an entity might be exempt from the requirement(s). No situation exempts an applicable entity from the requirement(s) of this standard. No change made.

Organization	Yes or No	Question 4 Comment
		(5) The VRF for R7 should be Medium. Failure for the DP to have Interpersonal Communication with its BA or TOP does not meet the basic requirement of a High VRF. A High VRF requires that violation of the requirement would “directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures.” We cannot fathom any situation where failure of a BA and TOP being able to communicate would directly lead to or cause instability, separation, or cascading. It could, however, lead to the inability to know the electrical state of part of the transmission system. This fits the Medium VRF definition. Furthermore, the fact that R4 and R6 do not include DP in the list of functional entities for a TOP and BA to have Alternative Interpersonal Communication further supports a Medium VRF. Response: The RCSDT thanks you for your comments and changed Requirement R7 to Medium VRF. Further consideration has been given to the Requirement R8 VRF; however, the RCSDT concluded the Generator Operator has a higher importance and risk to reliability, particularly blackstart capability. Change made to Requirement R7 VRF. No change made to Requirement R8 VRF. (6) In Measure M11, we believe entity affected should be replaced with its TOP and BA. This makes the measure clearer and easier to read without the need to refer back to the requirement. Response: The RCSDT agrees that naming the specific entities in the measure adds to the readability; however, changing the word “entity” to the named entities in Requirements R7 and R8 would be inconsistent with the way the measure is written using the reference to the two requirements. No change made. (7) We disagree with the data retention period. Because voice recordings are mentioned in the measures as one type of evidence for demonstrating compliance to the requirements, the data retention period should not exceed 90 days. Many companies do not store voice recordings longer than this. To compel a responsible entity to store voice recordings for longer should be justified. We do not see this

Organization	Yes or No	Question 4 Comment
		justification. Response: The RCSDT agrees with the comment about the issue concerning the time period for retaining voice recording. The data retention has been revised to reflect a period of 90 calendar days for all evidence related to the requirements. Clarifying change made. (8) We continue to believe that the DP should not be included in this standard. However, we recognize that the drafting team is attempting to address a FERC directive. An equally efficient and effective alternative would be to leave the responsibility to the BA and TOP. Parts 3.3 and 5.3 require the TOP and BA respectively to have Interpersonal Communication capability with the DP. This will be required whether the standard applies to DP or not based on the Commission directive because the Commission expressed concern about the BA and TOP having communications with the DP during an emergency such as a blackstart event. Because DPs will have to follow directives from the RC, TOP, and BA per IRO-001-3, it is in the best interest of the DP to cooperate with assisting the BA and TOP in establishing this capability. Thus, Parts 3.3 and 5.3 could be relied on exclusively for establishing this Interpersonal Communication Capability without adding unnecessary additional compliance burden on the DP that does not support reliability. Response: The RCSDT thanks you for your comment and agrees that the standard is addressing FERC directives concerning the Distribution Provider. Entities on each end of the communication capability must have a responsibility to have communications. No change made.
Response: Please see responses above.		
MRO NSRF		The NSRF understands the importance of Interpersonal Communications and Alternate Interpersonal Communications and always having the ability to communicate with others. The NSRF questions why per R9 (and similar time requirement per R10) that when testing the Alternate Interpersonal Communications

Organization	Yes or No	Question 4 Comment
		is unsuccessful, why there is a two-hour time limit to initiate an action, repair, or designate a replacement. Response: The RCSDT believes that the Reliability Coordinator, Transmission Operator and Balancing Authority, as reliability entities for Requirement R9, must initiate action to repair or designate an Alternative Interpersonal Communication capability timely so that in the event the Alternative Interpersonal Communication capability is called upon, the capability will be available. Having the measurable time period in the requirement ensures that entities will not delay action in addressing the unsuccessful testing of the capability. No change made. Project 2012-08.1 defines “Reliable Operation” means operating the Elements of the Bulk Power System within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or Cascading failures of such system will not occur as a result of a sudden disturbance, including a Cyber Security Incident, or unanticipated failure of system Elements. The loss of an Alternate Interpersonal Communication will not immediately impact the Reliable Operations of the BPS. Recommend that this not be contained within the Standard as entity’s will view this as a Good Utility Practice. Response: The RCSDT agrees that the loss of an entity’s Alternative Interpersonal Communication capability should not affect “Reliable Operation” of the Bulk Power System; however, the regulatory directive in Order No. 693 addressing the proposed definitions of “Bulk Power System,” “Reliability Standard,” and “Reliable Operations” must be reviewed collectively. The proposed definition for “Reliability Standard” contains the defined term “Reliable Operations,” and is defined as: <i>“A requirement to provide for Reliable Operation of the Bulk Power System, including without limiting the foregoing, requirements for the operation of existing Bulk Power System Facilities, including cyber security protection, and including the design of planned additions or modifications to such Facilities to the extent necessary for Reliable Operation of the Bulk Power System, but the term does not include any requirement to enlarge Bulk Power System Facilities or to construct new transmission capacity or generation</i>

Organization	Yes or No	Question 4 Comment
		<i>capacity. A Reliability Standard shall not be effective in the United States until approved by the Federal Energy Regulatory Commission and shall not be effective in other jurisdictions until made or allowed to become effective by the Applicable Governmental Authority.”</i> In the current paradigm, having an Alternative Interpersonal Communication capability is: <i>“A requirement to provide for Reliable Operation of the Bulk Power System,”</i> as the proposed definition of “Reliability Standard” defines and is necessary to support communications between and among the applicable entities in the standard. The RCSDT has addressed the scope of the SAR in addressing communication requirements for entities through an open industry consensus process. R10 The NSRF recommends that “applicable” be inserted between “...notify entities...” This will assure that RC’s will inform per R1, TOP’s will inform per R3 and BA’s will inform per R5. This will assure that an interpretation is not required as in Interpretation 2010-INT-01, TOP-006. Response: The RCSDT agrees with the ambiguity in Measure M10 and proposes to clarify Requirement R10, Measure M10, and R10 VSL by inserting the word “respectively,” rather than the suggested: “as applicable.” The word “respectively” is used rather than “applicable” because “applicable” is open to interpretation. For example, adding the word “respectively” means that the Reliability Coordinator in R1 is not required to notify the entities identified in Requirement R3 or R5. The RCSDT intended the requirements to map to the entity. Clarifying changes made.
Response: See responses above.		
CenterPoint Energy Houston Electric, LLC		1. For R10, there can be a large number of entities to notify for an Interpersonal Communication failure. During normal operations, 60 minutes can be enough time to make all the notifications. However, during emergency or adverse conditions, 60 minutes may not be sufficient. Thus, at the end of R10, the following should be added: “unless certain adverse conditions (e.g. severe weather, multiple events)

Organization	Yes or No	Question 4 Comment
		prevent the completion of notification within the 60 minutes.” Response: The RCSDT contends that 60 minutes is sufficient for notification because the BA, RC, and TOP are required to have an Alternative Interpersonal Communication capability, and should have the ability to accomplish the required notification. Also, the loss of Interpersonal Communication capability may not always impact the entire capability. This time frame does not apply to the DP and GOP since the Alternative Interpersonal Communication capability is not required for these functional entities. No change made. 2. For R11, the change from “mutually agreeable time” to “mutually agreeable action” is not an improvement. It should not be the concern of the other entities how (what action) the capability is restored, only that it is restored and that the entity with the failure can be reached in the interim. Thus, we suggest the following: “to determine a mutually agreeable alternative until Interpersonal Communication capability is restored.” Response: The RCSDT agrees the desired end result is restoring the capability, and appreciates the suggested modification; however, the suggestion presents other issues; such as: What if an alternative is not available? The RCSDT believes the most appropriate and measureable way to address the loss of the Distribution Provider or Generation Operator’s capability is to require the entities to communicate the action taken to restore the capability. No change made.
Response: Please see responses above.		
Independent Electricity System Operator		1. COM-001: We continue to disagree with R1.2, the phrase “within the same Interconnection” is troublesome. RCs between two Interconnections still need to communicate with each other for reliability coordination (e.g. between Quebec and the other RCs in the NPCC region to curtail interchange transactions crossing Interconnection boundary). The SDT’s previous response that the phrase was added to address the ERCOT situation and citing that ERCOT does not need to communicate with other RCs leaves a

Organization	Yes or No	Question 4 Comment
		reliability gap. The SDT's latest response that R1 as written does not preclude or limit the Reliability Coordinator from establishing Interpersonal Communication capability with others is inconsistent with the basic principle for having a reliability standard. A standard should stipulate the requirements based on what is needed to ensure reliability, not on what is not precluded. If there is a reliability need for RCs across Interconnection boundary to coordination operations, then Interpersonal Communication shall be provided. If we apply the SDT's philosophy (that the standard does not preclude...), then one can argue that the standard does not need to stipulate a requirement to have Interpersonal Communication as without such a requirement, the standard does not preclude any operating entities to have it. Finally, we would reiterate the fact that RCs between asynchronously interconnected systems do communicate, e.g. between Quebec and its neighbor RCs. We are also aware that RCs in the Western Interconnection and those in the Eastern Interconnection do communicate as needed to coordinate TLR for transactions crossing Interconnection boundary. Response: From the Functional Model V5, Functional Entity - Reliability Coordinator, the RCSDT notes the following: "Balancing operations. The Reliability Coordinator ensures that the generation-demand balance is maintained within its Reliability Coordinator Area; which, in turn, ensures that the Interconnection frequency remains within acceptable limits. The Balancing Authority has the responsibility for generation-demand-interchange balance in the Balancing Authority Area. The Reliability Coordinator may direct a Balancing Authority within its Reliability Coordinator Area to take whatever action is necessary to ensure that this balance does not adversely impact reliability." Based on the last sentence, the Reliability Coordinator does not have the responsibility for these transactions. No change made. 2. The follow comments address data retention for COM-002-3: a. The first bullet in Section D 1.3 stipulates that "The Reliability Coordinator, Transmission Operator, and Balancing Authority shall retain evidence of Requirement

Organization	Yes or No	Question 4 Comment
		R1 and R3, Measure M1 and M2 for the most recent 3 calendar months.” We believe M2 should be M3. Response: The RCSDT agrees with your assessment that M2 should be M3 and has advised NERC staff of the typo in COM-002-3. Error correction made. b. The second bullet: “The Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider shall retain evidence of Requirement R1, Measure M1 for the most recent 3 calendar months.” We believe R1 and M1 should read R2 and M2 since DP is only responsible for meeting R2. Response: The RCSDT agrees with your assessment that R1 and M1 should be R2 and M2. The RCSDT has advised NERC staff of the typo in COM-002-3. Error correction made. c. Section 2 “Violation Severity Levels”: R# R2 Severe includes the Balancing Authority as one of the listed entities; however, this is inconsistent with R2 / M2 which do not include the Balancing Authority. To be consistent with R2 / M2, the Balancing Authority should be removed from VSL R# R2. Response: The RCSDT agrees with your assessment and has advised NERC staff that the VSL for Requirement R2 should have the entity “Reliability Coordinator” replaced with “Balancing Authority” in COM-002-3 to be consistent with the named entities in Requirement R2. Error correction made. While these can be regarded as typos, and do not contribute to a show-stopper vote for some, we urge the SDT and the Standards Committee to pay closer attention to the accuracy of all elements in the standard. 3. IRO-001-3: Section 1.3 Data Retention (second bullet) states: The Operator, Balancing Authority, Generator Operator, or Distribution Provider shall retain for Requirements R2 and R3, Measures M2 and M3 shall retain voice recordings for the most recent 90 calendar days or documentation for the most

Organization	Yes or No	Question 4 Comment
		recent 12 calendar months. - The statement above appears to be missing “Transmission” before the word Operator. Response: The RCSDT agrees with your assessment of IRO-001-3 and has advised NERC staff that in the second bullet of Section D, 1.3 section, the word “Transmission” needs to be inserted in front of “Operator.” Error correction made. - The statement above repeats “shall retain” and the highlighted instance is not required. Response: The RCSDT agrees with your assessment of IRO-001-3 and has advised NERC staff that in the second bullet of Section D, 1.3, the first occurrence of “shall retain” needs to be removed. Error correction made. - The statement above states “or” Distribution provider, implying that one entity needs to retain evidence. Starting the sentence with “Each” rather than “The” and replacing “or” with “and” may provide clarity. The same would apply to the introduction sentence prior to the bullets. COM-002-3 section D. Compliance 1.3 Data Retention provides an example of the suggested format. Response: The RCSDT agrees with your assessment of IRO-001-3 and has advised NERC staff that in the second bullet of Section D, 1.3, the “or” between the responsible entities should be an “and.” Error correction made. Here is an example of the revised sentence: “Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall retain voice recordings for the most recent 90 calendar days or documentation for the most recent 12 calendar months, for Requirements R2 and R3, Measures M2 and M3”.
Response: Please see responses above.		
Bonneville Power		BPA thanks you for the opportunity to comment on Project 2006-06, COM-001-2 and

Organization	Yes or No	Question 4 Comment
Administration		has no comments or concerns at this time.
Response: The RCSDT thanks you for your comment.		
Public Service Enterprise Group		Change R11 and replace “experiences a failure” with “detects a failure” because one may have a failure, but if it’s undetected for some period of time because no communications are taking place, it’s unclear when one actually “experienced a failure.” We note that R10 uses the terminology “detection of a failure.” Using consistent terminology in R10 and R11 would result in less confusion for compliance because there would not be an issue as to whether a difference was intended by the SDT between “experiences” and “detects” in the two requirements.
Response: The RCSDT agrees with your assessment of the differences in terms and has changed “experiences” to “detects” in Requirement R11 to be consistent with Requirement R10. Change made.		
Colorado Springs Utilities		CSU appreciates the work the SDT has put into this standard, along with the others in this project and the opportunity to comment. We agree with the goal to encourage consistent communications and availability of robust & redundant communication paths. CSU appreciates that the SDT appears to have tried to write some flexibility into this standard. As written, however, this draft of COM-001-2 in its entirety seems to us unwieldy and unmanageable. It appears each entity may choose its own ‘primary’ and Alternate “Interpersonal Communication” capabilities. Entity A may select email as its ‘primary’ capability, while Entity B might not select that among either ‘primary’ or “Alternate,” and may not pay any attention on the real-time desk to email (only the designated “Alternate” requires testing). Response: The requirements require the applicable entity to have a communication capability with the defined entities in each requirement. An applicable entity should not be changing its Interpersonal Communication capability independently without coordinating the change with the defined entities in a given requirement. The

Organization	Yes or No	Question 4 Comment
		proposed definition says, “...between two or more individuals...” No change made. Also, DOs & GOs are not expected to maintain a backup (“Alternate”) communications capability. It is unclear how those entities can then comply with R11 if their one and only interpersonal communication capability has failed. Response: The RCSDT, from draft 5 to 6 of COM-001-3, added clarifying language in Requirement R7 for the Distribution Provider and in Requirement R8 for the Generator Operator to account for the potential gap of compliance. The language was: “... (unless the <responsible entity> experiences a failure of its Interpersonal Communication capability in which case Requirement R11 shall apply).” The RCSDT also notes this parenthetical was updated to more appropriately address the detection of the failure and now reads: “... (unless the <responsible entity> detects a failure of its Interpersonal Communication capability in which case Requirement R11 shall apply).” No change made. Sufficient evidence includes “physical assets.” Does that mean we can point to the phone on the desk and the email program on the desktop PC and we’re compliant? Are photographs of physical assets sufficient evidence to submit for the pre-audit questionnaire? Response: The RCSDT believes that physical assets are demonstration of evidence for Interpersonal Communication capability. The responsible entity may exercise other methods of evidence for the physical assets (e.g., photographs or other documentation). No change made. There is no requirement for the communications capabilities to be either diverse or redundant. If both our capabilities, in the end, rely on the POTS/PSTN system, is that acceptable? Response: The RCSDT agrees that the requirements do not specifically address this condition within the requirements themselves; however, the issue of redundancy is addressed within the proposed defined term “Alternative Interpersonal Communication.” The definition reads: “Any Interpersonal Communication that is

Organization	Yes or No	Question 4 Comment
		able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.” No change made.
Response: Please see responses above.		
Detroit Edison		Defining Interpersonal Communication as “Any medium that allows two or more individuals to interact, consult, or exchange information” will also include all Alternative Interpersonal Communications since “Any medium” is all inclusive. Consider replacing the definition of Interpersonal Communication with the following: Primary Interpersonal Communication: The normal communication medium that two or more individuals use to interact, consult, or exchange information relating to day-to-day operations. Response: The RCSDT notes that previous drafts received comments recommending the use of terms; such as, “primary,” “secondary,” “device,” “means,” and “medium” with regard to the proposed definitions. The RCSDT thanks you for your suggestion; however, the requirements are for “capability” and adding such proposed terms is not needed to achieve the necessary clarity. No change made. Consider replacing the definition of Alternative Interpersonal Communication with the following: Alternative Interpersonal Communication: Any communication medium that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as the designated Primary Interpersonal Communication. Response: This suggestion has only added the word “Primary” to the definition. The RCSDT contends that the use of terms, such as, “primary,” “secondary,” “device,” “means,” and “medium” with regard to the proposed definitions is not needed to achieve the necessary clarity. No change made. R1, R3, R5, R7, R8 should require entities to designate Primary Interpersonal

Organization	Yes or No	Question 4 Comment
		Communication. Response: This suggestion has only added the word “Primary” to the defined term. The RCSDT contends that the use of terms, such as, “primary,” “secondary,” “device,” “means,” and “medium” with regard to the proposed definitions is not needed to achieve the necessary clarity. No change made. R10 and R11 should address failures to designated Primary and Alternate Interpersonal Communication. Response: This suggestion has only added the word “Primary” to Requirements R10 and R11. The RCSDT contends that the use of terms, such as, “primary,” “secondary,” “device,” “means,” and “medium” with regard to the proposed definitions is not needed to achieve the necessary clarity. No change made. R9 in all VSL levels the phrase "failed to initiate action to repair" or designate a replacement is subject to interpretation. Does "initiate action" include notification to the proper party to investigate and repair or does it require repairs to begin within specified times as listed in severity levels? Response: The RCSDT notes that the requirement is for the entity to “initiate action,” which may include, but is not limited to, notifying or request repair to restore the capability. The available alternative is to designate an Alternative Interpersonal Communication capability. No change made.
Response: Please see response above.		
Duke Energy		Distribution Providers and Generator Operators have significant responsibilities that require reliable means of communications with other entities, such as implementing load shedding and adjusting real and reactive power. The requirements for the Distribution Provider and Generator Operator should therefore be consistent with those for the Reliability Coordinator, Transmission Operator and Balancing Authority, namely, they should be required to designate Alternative Interpersonal Communication capability, to test this capability and to notify appropriate entities

Organization	Yes or No	Question 4 Comment
		when its Interpersonal Communication capability has failed. Response: The RCSDT thanks you for your comment about requiring the Distribution Provider and Generation Operator to have the requirements similar to that of the Reliability Coordinator, Transmission Operator, and Balancing Authority. The standard, as proposed, has included the Distribution Provider and Generation Operator in accordance with the regulatory statements in Order No. 693, Paragraphs 483, 491, 495, 496, and 503 which recognized the need for Distribution Providers and Generation Operators to have flexibility in meeting the communication capability requirements and not to burden smaller entities (i.e., DPs and GOPs) with the additional requirement of adding communication redundancy. No change made. The definition of Interpersonal Communication should also be expanded to clearly include the drafting team's intent that the capability is NOT for the exchange of data. With respect to the standard being tacit on "not for the exchange of data," the RCSDT believes this concern is addressed within the earlier IRO-014-1 – Procedures, Processes, or Plans to Support Coordination Between Reliability Coordinators standard and now the proposed IRO-014-2 – Coordination Among Reliability Coordinators adopted by the NERC Board of Trustees August 4, 2011. No change made.
Response: Please see the responses above.		
Dominion		Dominion has no additional comments on COM-001-2, but does have the below comments on IRO-001-3: Dominion believes that our previous comment remains valid and the response provided by the SDT does not address all aspects of our concerns. Dominion suggests that the language of 'direction' be changed to 'Reliability Directive' to remain consistent with COM-002. Another alternative would be as written below; IRO-001-3 uses the term 'direct' in its purpose statement, R1, R2 and R3. To avoid confusion with a Reliability Directive (both for auditors and entities), we suggest the

Organization	Yes or No	Question 4 Comment
		following: To establish the authority of Reliability Coordinators to make requests of other entities to prevent an Emergency or Adverse Reliability Impacts to the Bulk Electric System. R1: Each Reliability Coordinator shall have the authority to act or request others to act (which could include issuing Reliability Directives) to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impacts. R2: Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall comply with its Reliability Coordinator's request unless compliance with the request cannot be physically implemented, or unless such actions would violate safety, equipment, regulatory or statutory requirements, or unless the TOP, BA, GOP or DP convey a business reason not to comply with the request but express that they will comply if a Reliability Directive is given. R3: Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to perform as requested in accordance with Requirement R2." Or we could cite Southwest Transmission Cooperative, Inc. comments which read "COM-002-3 R1 really compels the Reliability Coordinator to use a Reliability Directive for Emergencies and Adverse Reliability Impacts with the opening clause: "When a Reliability Coordinator, Transmission Operator, or Balancing Authority determines actions need to be executed as a Reliability Directive." What else could be more important for a Reliability Coordinator to issue a Reliability Directive than for an Emergency or Adverse Reliability Impact? Thus, not requiring the use of Reliability Directives for Adverse Reliability Impacts and Emergencies makes IRO-001-3 R1 and COM-002-3 R1 inconsistent. For clarity and consistency, IRO-001-3 Requirement R2 and R3 should also be clear that the responsible entities will respond to the Reliability Coordinator's Reliability Directives.
		Response: The RCSDT thanks you for your support of COM-001-2. The standards COM-002-3 and IRO-001-3 were approved by

Organization	Yes or No	Question 4 Comment
industry in July 2012; therefore, the RCSDT is not able to respond to Dominion's comments and consider changes to the standard. No change made.		
FirstEnergy		FE supports COM-001-2 and has no further comments. PLEASE NOTE: THE FOLLOWING COMMENTS RELATE TO COM-002-3 AND IRO-001-3 SINCE WE WERE NOT ABLE TO PROVIDE COMMENTS ON THE RECIRCULATION BALLOT AND WANTED TO EXPLAIN OUR REASONS FOR NOT SUPPORTING THOSE STANDARDS: Although we believe the team made significant improvements to the standard, and would support a 3-part communication standard, we believe the introduction of both COM-002-2 which utilizes Reliability Directives and COM-003-1 which utilizes Operating Communications cause confusion for system operators and may in fact be detrimental to reliability. We do not support two standards on three-part communication. We suggest, as we have in the past, that the subject of three-part communication be addressed in a single standard, and that the requirements be developed for simplicity. The industry is, and has been, using three-part communication for decades and although we agree it should be more consistently practiced and standardized, the required communications protocols should be simple while meeting the goal of BES reliability. Introducing complicated requirements and standards that have different definitions such as Reliability Directive and Operating Communication may cause the operator to hesitate when issuing directives in real-time and every second counts when a potential system emergency must be mitigated. Therefore, FE does not support the creation of both COM-003-1 nor the revisions to COM-002-2 and IRO-001-3 which introduce the "Reliability Directive" term and ask NERC to reevaluate the need to have two separate standards for three-part communication.
Response: The RCSDT thanks you for your support of COM-001-2. The standards COM-002-3 and IRO-001-3 were approved by industry in July 2012; therefore, the RCSDT is not able to respond to FirstEnergy's comments and consider changes to the standard.		

Organization	Yes or No	Question 4 Comment
No change made.		
Indiana Municipal Power Agency		IMPA does not like the wording in R11 that states "mutually agreeable action for the restoration of its Interpersonal Communication capability." IMPA sees that entities will have to prove that the action taken by entities was "mutually agreeable" to the parties involved which will be very problematic. IMPA believes as long as the entity who owns the equipment is taking steps to get it back into service that is all that should be required by any requirement of this standard.
Response: The RCSDT addressed the concern about “mutually agreeable restoration time” by revising the phrase to “mutually agreeable action,” which allows the applicable entities to reach consensus on the effort needed to restore communications. Additionally, working toward a mutually agreeable action also ensures that both parties understand the magnitude of the loss of their Interpersonal Communication capability and agree to the actions needed to restore and minimize the time the capability is unavailable. From a compliance standpoint, the Distribution Provider and Generation Operator that is working to restore its Interpersonal Communication capability is not out of compliance as far as the entity is meeting the requirement for taking action to restore its capability. It is practical on the part of the Balancing Authority or Transmission Operator to reach a mutual agreement, as it will facilitate restoring the capability. No change made.		
Texas Reliability Entity		In the Measures for R3 and R4 (M3 and M4), should the phrase “each adjacent Transmission Operator asynchronously AND synchronously connected” be changed to “each adjacent Transmission Operator asynchronously OR synchronously connected”? Response: The RCSDT agrees with your assessment in COM-001-2 and has changed the word in Measure M3 from “and” to “or” between the words “asynchronously and synchronously.” Error correction made. In the VSLs for R3 it appears that “Reliability Coordinator” should be “Transmission Operator”. Response: The RCSDT agrees with your assessment and has advised NERC staff that the VSL for Requirement R3 should have the entity “Reliability Coordinator” replaced with “Transmission Operator” in COM-002-3 to be consistent with the named entities

Organization	Yes or No	Question 4 Comment
		in Requirement R3. Error correction made. In the VSLs for R5 it appears that “Reliability Coordinator” should be “Balancing Authority”. Response: The RCSDT appreciates you bringing awareness to this error in Requirement R5 VSL. The reference to “Reliability Coordinator” has been changed to Balancing Authority for Requirement R5 in both the High and Severe VSL. Error correction made. In the Severe VSL for R10 the phrase “failed to notify the identified entities identified” should probably be “failed to notify the entities identified”. Response: The RCSDT appreciates you bringing awareness to this error in Requirement R10 VSL Severe column. The first occurrence of “identified” has been removed. Error correction made.
Response: Please see the above responses.		
Ingleside Cogeneration LP (Occidental Chemical in the ballot body)		Ingleside Cogeneration LP generally agrees with the modifications that the SDT has made to COM-001-2. However, we cannot vote to accept the standard unless requirement R10 is modified to include a minimum communications outage duration before consultation with the BA or TOP is necessary. This is similar to R10, which allows an outage to extend up to 30 minutes - thus avoiding the need for a notification that an insignificant interruption in service took place. The following language could be added to R11 as shown in the brackets below: R11. Each Distribution Provider and Generator Operator that experiences a failure of its Interpersonal Communication capability [that lasts 30 minutes or longer] shall consult each entity affected by the failure, as identified in Requirement R7 for a Distribution Provider or Requirement R8 for a Generator Operator, to determine a mutually agreeable action for the restoration of its Interpersonal Communication capability.

Organization	Yes or No	Question 4 Comment
Response: The RCSDT notes that the requirement allows flexibility for the Distribution Provider and Generator Operator to define what constitutes a failure of its Interpersonal Communication capability. The RCSDT believes it is inappropriate to establish a single defined threshold applicable to the numerous entities applicable to this standard. No change made.		
Essential Power, LLC		It is unclear what we are trying to accomplish in R11. If the intent is to coordinate the restoration of communications, then there should be an additional requirement that the GOP have a Communications Recovery Plan, and R11 should focus on the coordination and implementation of that Plan. If the intent is to maintain continuous communications, then there should be an additional requirement for the GOP to maintain an Alternative Interpersonal Communications capability, and R11 should focus on the coordination and implementation of that capability.
Response: The RCSDT thanks you for your comments. The intent of Requirement R11 is to require the Distribution Provider and Generator Operator to consult with its Balancing Authority or Transmission Operator, as the case may be, to mutually agree on the action needed to restore the Interpersonal Communication capability. Additionally, working toward a mutually agreeable action also ensures that both parties understand the magnitude of the loss of their Interpersonal Communication capability and impact to reliability; therefore, both need to agree on the actions needed to restore and minimize the time the capability is unavailable. It is practical on the part of the Balancing Authority or Transmission Operator to reach a mutual agreement, as it will facilitate restoring the capability. No change made.		
Manitoba Hydro		Manitoba Hydro would like additional clarification added to the definition of interpersonal communication. The definition should explicitly state that interpersonal communication does not data links (e.g. the ICCP data link). Also, does interpersonal communication include emails? Response: With respect to the standard being tacit on “not for the exchange of data,” the RCSDT believes this concern is addressed within the earlier IRO-014-1 – Procedures, Processes, or Plans to Support Coordination Between Reliability Coordinators standard and now the proposed IRO-014-2 – Coordination Among Reliability Coordinators adopted by the NERC Board of Trustees August 4, 2011.

Organization	Yes or No	Question 4 Comment
		Additionally, Requirement R3 in IRO-010-1a – Reliability Coordinator Data Specification and Collection states: Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. No change made. Under the Effective Date Section, the effective date language has a few issues in its drafting. It would be clearer to use the word ‘following’ as opposed to the word ‘beyond’ (and this would also be more consistent with the drafting of similar sections in other standards). The words ‘the standard becomes effective’ in the third line are not needed. The words ‘made pursuant to the laws applicable to such ERO governmental authorities’ may not be appropriate. It’s not the laws applicable to the governmental authorities that are relevant, but the laws applicable to the entity itself. We would suggest wording like ‘or as otherwise made effective pursuant to the laws applicable to the Balancing Authority’. Response: NERC staff note that the phrase: “... the standard becomes effective” is a clarifying statement that needs to remain. This phrase would become more important if the heading “Effective Date” was not used. The phrase, “made pursuant to the laws applicable to such ERO governmental authorities” is a reference to governmental entities that have authority over BPS reliability within a jurisdictional territory; for example, in the United States, the Federal Energy Regulatory Commission; and in Canada, those parties delegated authority by Canadian provinces. Therefore, the statement is appropriate because the laws that are applicable to “such ERO governmental entities” will determine the effective date under the circumstances, not necessarily the laws that are applicable to functional entities. No change made. Also, ERO is not defined. Response: The RCSDT appreciates your comment. The language in the Effective Date section is standard language adopted by NERC and used throughout the body of

Organization	Yes or No	Question 4 Comment
		standards currently under development by teams. The RCSDT is not able to alter this language. No change made R11 and M11 - would suggest replacing 'action' with 'plan of action' or 'action plan' Response: The RCSDT believes the use of "action" is sufficient for Requirement R11 and Measure M11 and that adding "plan" does not add clarity. The RCSDT understands that whatever actions are mutually agreed upon will constitute a plan which the Distribution Provider or Generation Operator will use in the restoration of its Interpersonal Communication capability. No change made. M3 and M4 - the word 'and' between asynchronously and synchronously should more appropriately be 'or' Response: The RCSDT agrees with your assessment and has changed the word in Measure M3 from "and" to "or" between the words "asynchronously and synchronously". Error correction made. M10 - the semi colon after stamped should be deleted Response: The RCSDT agrees with your assessment and has added a colon at the appropriate location and changed the current colon to a comma for the Measures M9, M10, and M11. Error correction made. Compliance Section - Compliance Enforcement Authority is defined as CEA, but then both the acronym and the entire term is later used in the document. Should either not define, or use acronym consistently. Response: The RCSDT notes that the usage of the acronyms is consistent with the NERC style guide. No change made.
Response: Please see responses above.		
MISO		MISO respectfully submits that the subject matter of COM-001-1 is better addressed through an official NERC certification - that is, by having NERC certify that a registered

Organization	Yes or No	Question 4 Comment
		entity has the appropriate communications facilities - than through a formal Reliability Standard. Response: NERC maintains an Organization Certification Program, the goal of which is to ensure that organizations who apply to register or are registered to perform certain reliability functions deemed particularly crucial to the reliability of the bulk power system will meet or exceed certain minimum criteria (i.e., Reliability Standards) demonstrating they are capable of performing the tasks (i.e., Requirements) for these functions. The process for certification of organizations is included in the NERC Rules of Procedure, Section 500 and Appendix 5A. For example, the first paragraph of Section 500 – Organization Registration and Certification states: “The purpose of the Organization Registration Program is to clearly identify those entities that are responsible for compliance with the FERC approved reliability standards. Organizations that are registered are included on the NERC Compliance Registry (NCR) and are responsible for knowing the content of and for complying with all applicable reliability standards...” The RCSDT has addressed the scope of the SAR in addressing communication requirements for entities through an open industry consensus process. Furthermore, the Reliability Standards surrounding communications should be performance based and specifically targeted toward testing, maintenance, and implementation of corrective actions when an issue arises or is otherwise detected. As a result of narrowing the focus of these standards, enforcement would then be tailored toward a Registered Entity’s failure to take such actions when necessary, a direct benefit and correlation to enhancement of the reliability of the BES. Response: The RCSDT thanks you for your comment. Although this standard is not a Results-Based Standard (RBS), it achieves the need to require both Interpersonal Communication and Alternative Interpersonal Communication capability of the applicable entities to ensure reliable operations of the Bulk Electric System. The RCSDT believes the requirements achieve the needed level of communications to ensure reliable operations. No change made.

Organization	Yes or No	Question 4 Comment
		Under the currently proposed approach, the lack of a communication medium or a finding that a communication medium is “inadequate” or does not otherwise qualify under the standard would result in a non-compliance. Response: The RCSDT is not sure what is meant by a “lack of communication medium.” The applicable entity either has the necessary Interpersonal Communication and Alternative Interpersonal Communication capability or does not. The requirements account for conditions where the capability is unavailable and has provided language to avoid situations of non-compliance due to the strict language construction of the requirements. No change made. Finally, MISO respectfully submits that: -Distribution Providers (DPs) and Generator Operators (GOPs) should have alternate communication media as well. Response: The RCSDT thanks you for your comment about requiring the Distribution Provider and Generation Operator to have the requirements similar to that of the Reliability Coordinator, Transmission Operator, and Balancing Authority. The standard, as proposed, has included the Distribution Provider and Generation Operator in accordance with the regulatory statements in Order No. 693, Paragraphs 483, 491, 495, 496, and 503 which recognized the need for Distribution Providers and Generation Operators to have flexibility in meeting the communication capability requirements and not to burden smaller entities (i.e., DPs and GOPs) with the additional requirement of adding communication redundancy. No change made. -If an alternate communication tool is tested once a month, there is no need to address deficiencies within two hours; six hours is sufficient in such instances. Response: The RCSDT contends the time frame has been through industry consensus, and two hours has been determined acceptable. No change made. -The standard should acknowledge that if more than two independent communication mechanisms are available, the VRF/VSL associated with missing a

Organization	Yes or No	Question 4 Comment
		timing requirement is minimal. Response: The RCSDT agrees that the applicable entities in Requirements R1, R3, and R6 are required to designate an Alternative Interpersonal Communication capability; however, this does not create a rationale for lowering the VRF/VSL. The VRF is a measure of the risk, if violated, and the VSL is a measure of non-compliance with the specific requirement. The RCSDT added the High VSL for Requirements R1 through R8 from draft 5 to draft 6 to account for greater granularity in a violation. For each applicable responsible entity named in each of the requirements, the number of entities for which it must have an Interpersonal Communication or Alternative Interpersonal Communication may vary significantly. The RCSDT believed that adding one additional VSL was an appropriate solution to account for variability in the number of entities. No change made. The SDT should require reporting times of failed mediums for GOP and DP similar to that for RC/BA/TOP. Response: The RCSDT thanks you for your comment about requiring the Distribution Provider and Generation Operator to have the requirements similar to that of the Reliability Coordinator, Transmission Operator, and Balancing Authority. The standard, as proposed, has included the Distribution Provider and Generation Operator in accordance with the regulatory statements in Order No. 693, Paragraphs 483, 491, 495, 496, and 503 which recognized the need for Distribution Providers and Generation Operators to have flexibility in meeting the communication capability requirements and not to burden smaller entities (i.e., DPs and GOPs) with the additional requirement of adding communication redundancy. No change made.
Response: Please see responses above.		
Oncor Electric Delivery Company LLC		Oncor takes the position that the premise of R3 does not provide a reliability enhancement but may in effect; increase the risk to reliability by placing notification

Organization	Yes or No	Question 4 Comment
		requirements on the Transmission Operator that could best be managed by the Reliability Coordinator. In fact, Oncor takes the position that as a Transmission Operator, it is being placed into the position of having to continually validate the registration status of every entity that may be registered as a Distribution Provider, Transmission Operator, and Generator Operator within its Transmission Operator Area. Oncor takes the position that since each of these entities are in the applicability section of the standard, the Distribution Provider, Transmission Operator, and Generator Operator should be responsible for seeking Interpersonal Communication capability with the Transmission Operator and the Transmission Operator should then reciprocate Interpersonal Communication capability in response to their initial request. This eliminates an unnecessary compliance obligation of the Transmission Operator to manage "who is" and "who is not" registered as a Generator Operator, Distribution Provider or Transmission Operator. Response: The RCSDT notes this is not within the scope of the SAR. No change made. Oncor recommends the following change to the standard language: Remove 3.3 & 3.4 because R7 and R8 already cover the GO and DP seeking Interpersonal Communication capability with the Transmission Operator. Response: The RCSDT thanks you for your comment and notes that the standard is addressing FERC directives concerning the Generation Owner and Distribution Provider. Entities on each end of the communication capability must have a responsibility to have communications. No change made. Oncor also takes the position that the Reliability Coordinator (RC) is in the best position and not the Transmission Operator to make extensive notifications on a broad basis in the event of a failure of its Interpersonal Communication. In accordance with that position, the Transmission Operator should make a single notification to the RC, and the RC would then make the notification to all impacted

Organization	Yes or No	Question 4 Comment
		entities in the event of the failure of the Transmission Operator’s Interpersonal Communication. Response: The RCSDT notes this implementation is entity-specific and is not achievable by all entities. Each entity is required to make the notifications as applicable to the requirements. No change made. Oncor proposes the following language for R10 “R10. Each Transmission Operator shall notify the Reliability Coordinator and the Balancing Authority within 60 minutes of the detection of a failure of its Interpersonal Communication capability that lasts 30 minutes or longer. After notification by any Transmission Operator, the Reliability Coordinator shall immediately notify entities as identified in Requirements R1, R3, and R5 of any Transmission Operator's detection of a failure of its Interpersonal Communication capability that lasts 30 minutes or longer. Each Reliability Coordinator and Balancing Authority shall notify entities as identified in Requirements R1, R3, and R5 within 60 minutes of the detection of a failure of its own Interpersonal Communication capability that lasts 30 minutes or longer.” Response: The RCSDT disagrees with the method. Each entity is required to make the notifications as applicable to the requirements. No change made.
Response: Please see the above responses.		
Central Lincoln		Prior Central Lincoln Comment 1) The new requirement presents us with a paradoxical situation. The communication has failed, so we must consult; yet consultation requires communication. We note that the SDT used the word “any”, implying that multiple communication paths are required. The reality of the situation at Central Lincoln, due to our remote location, is that a single back hoe incident at the right location can take out all of our of our communication capability (including the terrestrial portion of the cellular networks)

Organization	Yes or No	Question 4 Comment
		with our BA/TO; making this requirement impossible to meet for this circumstance using our present capabilities. Prior RCSDT Response 1) The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure. Furthermore, R11 addresses the direction given in Order 693 that DP and GOP entities do not necessarily need to have Alternative Interpersonal Communication capability. The requirement allows flexibility in “consult with” by not naming the method. If all communications are out, then the DP or GOP may have to meet the requirement by an in-person consultation. New Central Lincoln Response 1) Thank you for the changes made. We realize that in-person consultation is an option, but find it not too hard to imagine the same event that disrupts communications might also block roads. We don’t believe entities should be found non-compliant and sanctioned for events beyond their control. Response: The RCSDT understands the paradoxical situation presented here. The standard addresses the essential communication capability needed to operate the Bulk Electric System reliably. No change made. Prior Central Lincoln Comment 2) We also note that no time limit was indicated. Most interruptions are brief, and fixed before consultation could reasonably take place. CEAs will be finding entities non-compliant for quickly fixing problems at their end without first consulting to ensure the restoration time was agreeable. To avoid non-compliance, entities will be forced to delay repairs while they investigate alternative communication paths for consultation purposes. We fail to see how such an outcome improves reliability. Prior RCSDT Response

Organization	Yes or No	Question 4 Comment
		2) The DP and GOP are only required to have Interpersonal Communication capability. If the DP or GOP restores its Interpersonal Communication capability before it could reasonably contact the affected entity by another method, there is no failure to comply. The DP or GOP could then consult with the affected entity to determine a mutually agreeable action. In this case, the RCSDT believes the "action" would then be the entities acknowledging the failure and the repair; therefore, no mutually agreeable action is needed. The RCSDT recognizes there is no way to account for all the various circumstances in a failure. To comply, the DP and GOP are still required to consult the entity which the failure affected regardless of whether the Interpersonal Communication capability was restored or is still failed. No change made. New Central Lincoln Response 2) If consultation after restoration is acceptable, we suggest that this be made clear in the requirement. Presently it is not at all clear, and there is no accompanying guidance document to suggest so. We also remain unclear what reliability benefit would result from such a consultation following restoration. While accounting for all the various failures might be impossible, we would like to see a few of the more common ones discussed in a guidance document. Response: The RCSDT notes that the requirement allows flexibility for the Distribution Provider and Generator Operator to define what constitutes a failure of its Interpersonal Communication capability. The RCSDT believes it is inappropriate to establish a single-defined threshold or attempt to make a list of the various failures which may potentially affect the numerous entities applicable to this standard. No change made. Prior Central Lincoln Comment 3) The new requirement is one sided, requiring the DP and GOP to consult with no corresponding requirement for the TO or BA to have personnel available for such a consultation. Consultation failure or failure to mutually agree due to actions or

Organization	Yes or No	Question 4 Comment
		inactions on the part of the TO or BA should not result in an enforcement action against the DP or GOP, yet that is how the requirement is written. Prior RCSDT Response 3) The RCSDT notes that once the failure has been detected, the responsible entity must make the consultation with the BA or TOP; that relieves the compliance burden. While the RCSDT understands your concern about single points of failure, the question becomes should this relieve the DP or GOP of the requirement for having Interpersonal Communication capabilities. No change made. New Central Lincoln Response 3) The requirement remains one-sided. If a consultation effort fails due to actions or inactions taken by the BA/TO, the DP or GOP is the only entity that can be found non-compliant. Response: The RCSDT addressed the concern about “mutually agreeable restoration time” by revising the phrase to “mutually agreeable action,” which allows the applicable entities to reach consensus on the effort needed to restore communications. Additionally, working toward a mutually agreeable action also ensures that both parties understand the magnitude of the loss of their Interpersonal Communication capability and agree to the actions needed to restore and minimize the time the capability is unavailable. From a compliance standpoint, the Distribution Provider and Generation Operator that is working to restore its Interpersonal Communication capability is not out of compliance as far as the entity is meeting the requirement for taking action to restore its capability. It is practical on the part of the Balancing Authority or Transmission Operator to reach a mutual agreement, as it will facilitate restoring the capability. No change made. Prior Central Lincoln Comment 4) The new requirement fails to add any “clarity” to the other requirements, and we don’t see that the stakeholders thought there was a problem with DP/GOP obligation clarity. Instead, it adds new obligations with no justification for how they enhance

Organization	Yes or No	Question 4 Comment
		reliability. We suggest removing the requirement. Prior RCSDT Response 4) Based on the RCSDT's understanding of the comments received on the previous posting, the industry desired additional clarity on specifically what communication capabilities the DP and GOP were required to have. There was confusion that the standard did not specifically say that the DP and GOP were required to have Alternative Interpersonal Communication capabilities. R11 clarifies that a DP and GOP are not required to have Alternative Interpersonal Communication capability if the DP or GOP consult with their TOP or BA, whichever is applicable in the given situation, and they mutually agree that the restoration action does not adversely impact the reliability of the BES. No change made. New Central Lincoln Response 4) We disagree that R11 clarifies anything regarding Alternative Interpersonal Communication capabilities; the requirement says nothing on the matter. If other requirements remain unclear, we suggest they be clarified within those requirements. We ask that R11 be removed. Alternatively, we suggest that a plan for communication failure be developed by the affected entities prior to a failure, applicable to both the BA/TO and DP/GOP. Response: The RCSDT contends the desired result is restoring the capability and that the most appropriate and measureable way to address the loss of the Distribution Provider or Generation Operator's capability is to require the entities to communicate the action taken to restore the capability. No change made. Prior Central Lincoln Comment 5) As stated in our prior comments, we continue to have problems with COM-002, R2 and R3 as written. The SDT's answer ("It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive") addresses our concern perfectly, and we would agree with such an expectation. Unfortunately, the expressed expectation

Organization	Yes or No	Question 4 Comment
		is not in the proposed standard or even in a proposed guideline for the standard. Prior RCSDT Response 5) The RCSDT believes this is a process or procedure question that should be determined by the entity in how it handles communication with the RC. The standard, as written does, not preclude the entity from having a procedure. No change made. New Central Lincoln Response 5) We agree that this is a procedure issue, but disagree that the procedure lies with the entity receiving the Reliability Directive. The SDT's words inside the quotation marks above state it is the issuer of the Directive that should request a return call. Procedures like this, in order to ensure the Directive gets to the party who understands it and can take the needed action, are the responsibility of the issuer. If reliability is at risk, it is little to ask that issuers of Reliability Directives be required to attempt to reach the proper party prior to identifying, delivering the directive, and asking for repetition. Response: The standard COM-002-3 was approved by industry in July 2012; therefore, the RCSDT is not able to respond to Central Lincoln's comments and consider changes to the standard. No change made.
Response: Please see responses above.		
Liberty Electric Power		R11 remains an issue even with the revision. The purpose of R11 should be to inform the BA and TO of a loss of interpersonal communications capability so that the BA or TO can react effectively to grid conditions in an emergency. The methods of repair for generator telephone and data lines are properly the business decisions of the generator, and there is no benefit to the reliability of the BES if a standard requires a generator to attempt to gain consensus from the BA and TO on his repair actions. Taking the time to discuss a "mutually agreed action" will delay the start of repairs,

Organization	Yes or No	Question 4 Comment
		and lengthen the time of a communications outage as generators first must discuss the issue with the BA and TO instead of initiating the action on their own and informing those entities of the failure. Further, failure to follow a mutually agreed action plan could become a topic of exploration for audit staff. As telecommunications repairs are generally not in the scope of expertise of electrical generators, this places the entities at the mercy of contractor repair schedules, making following any mutually agreed action problematic. Response: The RCSDT notes that the purpose of consulting with the appropriate entities ensures those entities are aware of the loss of Interpersonal Communication capabilities and will have the necessary information to adjust reliability operations accordingly. There is nothing in Requirement R11 preventing the Distribution Provider or Generator Operator from taking action beforehand. No change made. Further, there is no duration trigger on R11, as opposed to the RC/TO/BA requirement in R10. This forces the generator to inform the listed entities even of losses of capability which last a handful of seconds. If a small generator has a single line into the control room, and the control room operator is on the phone to the TOP, does he then have to inform the TO and BA at the end of the call that they would have received a busy signal? If the operator knocks the phone from the cradle, is the requirement to inform triggered? In a strict reading of the language, it would be. Suggested rewrite of R11: "Upon discovery of an unresolved loss of interpersonal communications which has the potential to last more than 15 minutes, the GOP shall inform the entities listed in R8 of the status of interpersonal communications. The GOP shall initiate the process to restore the interpersonal communications, and inform the entities listed in R8 of the restoration of communications when repairs are complete." Response: The RCSDT notes that the requirement allows flexibility for the Distribution Provider and Generator Operator to define what constitutes a failure of its Interpersonal Communication capability. The RCSDT believes it is inappropriate to

Organization	Yes or No	Question 4 Comment
		establish a single-defined threshold applicable to the numerous entities applicable to this standard. No change made.
Response: Please see responses above.		
Tacoma Power		R9 - The Standard requires that when there is a failure to a primary or alternate communication system that action is initiated within 2 hours of the communication failure. It is not clear what the term “action” means. Tacoma requests clarification for what “actions” are intended by the standard. Response: The RCSDT notes that the requirement is for the entity to “initiate action,” which may include, but is not limited to, notifying or requesting repair to restore the capability. The option is to designate an Alternative Interpersonal Communication capability. Additionally, there is no time constraint for the Interpersonal Communication capability, only the AIC. No change made. R10 - Interpersonal Communication is defined as “any medium that allows two or more individuals to interact, consult, or exchange information”. As it is written, R10 requires an entity to contact another entity “within 60 minutes of the detection of a failure of its Interpersonal Communication capability that lasts 30 minutes or longer”. This contact may not be possible in a situation where there is “a failure of Interpersonal Communication capability”. Response: The RCSDT notes that the responsible entities named in Requirement R10 are also required to have a designated Alternative Interpersonal Communication capability and should be able to make the necessary notifications. No change made. R11 – The lack of a time line in R11 seems inconsistent with the time line requirements in R9 and R10. If there is a communication failure affecting the GO and DP then the standard only requires that they agree on an action to restore communication but does not assign a timeline. Response: The RCSDT notes that the requirement allows flexibility for the Distribution Provider and Generator Operator to define what constitutes a failure of

Organization	Yes or No	Question 4 Comment
		its Interpersonal Communication capability. The RCSDT believes it is inappropriate to establish a single-defined threshold applicable to the numerous entities applicable to this standard. No change made.
Response: Please see responses above.		
LG&E and KU Services		Regarding COM-001-2 and proposed definitions, LG&E and KU Services recommends changing the terms being defined from “Interpersonal Communications” and “Alternative Interpersonal Communication” to “Means for Interpersonal Communication” and “Alternative Means for Interpersonal Communication.” A communication is an exchange of information, not a medium. The medium is simply the means. LG&E and KU Services Company further recommend that each requirement be rewritten with these new defined terms as appropriate and that the word “capabilities” currently following the defined terms be removed from each of the requirements. Response: The RCSDT notes that commenters recommended using the terms, such as, “primary,” “secondary,” “device,” “means,” and “medium” with regard to the proposed definitions. The RCSDT thanks you for your suggestion; however, the requirements are for “capability” and adding such proposed terms is not needed to achieve the necessary clarity. No change made. We suggest the definition for “Means for Interpersonal Communication” be: “A medium utilizing electromagnetic energy that allows two or more individuals to interact, consult or exchange information.” We suggest the definition for “Alternative Means for Interpersonal Communication” be: “Any Means for Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Means for Interpersonal Communications used for day-to-day operation.” Regarding R1 through R10, it is unclear what “shall have Interpersonal Communications capability” means. That could mean that the responsible entity simply has to have an IC capability that is different from our designated AIC capability (as R1 through R8 suggest). That could also mean,

Organization	Yes or No	Question 4 Comment
		differently, that the responsible entity has to designate an IC capability (as R10 suggests). It is also unclear whether the IC capability can change, e.g. from email to land line. There is nothing in the Standard that makes this clear. Regarding R11, as written it is unclear who would be responsible for non-compliance if the consulting entities did not “determine a mutually agreeable action for the restoration of its Interpersonal Communication capability.” Response: The RCSDT believes the definitions and requirements are clear and does not agree with the proposed definition changes. The requirements and definition allow the entity to determine the medium. No change made.
Response: Please see responses above.		
City of Tallahassee (TAL)		TAL has no comments on COM-001-2. However, for COM-002-3, under Data Retention, the second bullet requires the BA, TOP, GOP, and DP to retain evidence for R1, M1; however, R1 is not applicable to the GOP or DP. This should read R2, M2. Response: The RCSDT agrees with your assessment that R1 and M1 should be R2 and M2. The RCSDT has advised NERC staff of the typo in COM-002-3. Also, there is room for debate on the clarity of the VSLs for R3. Specifically, the use of the word "accurately" could be interpreted to mean "verbatim" in cases where varying verbiage results in the same understanding and action between the parties, and therefore no re-issuance of the directive is required in the eyes of the issuer. Response: The standard COM-002-3 was approved by industry in July 2012; therefore, the RCSDT is not able to respond to the City of Tallahassee’s comment to consider changes to the standard. No change made.
Response: Please see responses above.		
American Electric Power		The definition of Alternative Interpersonal Communication is “Any Interpersonal

Organization	Yes or No	Question 4 Comment
		Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.” Does the Alternative Interpersonal Communication have to be a different technology? For example, if a satellite phone is used, but it calls the same land-line on the other end, does this qualify as Alternative Interpersonal Communication? Response: The proposed definitions only specify that the alternative has to utilize a separate medium. The standard is not technology dependent and allows entities flexibility in selecting the capability appropriate for its need. No change made. How does a TOP notify a DP of a failure in its Interpersonal Communications capability per R10, if it there is no Alternative Interpersonal Communication required? Within Requirement 10, the entities to be notified should not reference R1, R3, and R5 but should instead reference R2, R4, and R6 respectively. This change is necessary because the requirements we are referring to are those that have Alternative Interpersonal Communications. You cannot expect notification to entities where an Alternative Interpersonal Communication does not exist. Response: The RCSDT notes that Requirement R10 applies to the TOP and that the TOP is required to have AIC per Requirement R4. The RCSDT disagrees with the suggested change in the requirement references because the current references are specific to the entities that apply to the Interpersonal Communication capability. No change made. With regard to the requirement references in R10, the RCSDT agrees with the ambiguity in both the Requirement R10 and Measure M10 and proposes to clarify Requirement R10, Measure M10, and R10 VSL by inserting the word “respectively.” For example, adding the word “respectively” means that the Reliability Coordinator in R1 is not required to notify the entities identified in Requirement R3 or R5. The RCSDT intended the requirements to map to the entity. Clarifying changes made.
		Response: Please see the responses above.

Organization	Yes or No	Question 4 Comment
Exelon Corporation and its affiliates		The definition of Interpersonal Communication requires further clarification. The use of the term “Any medium” opens the definition up to broad interpretation. It’s not clear whether the definition means to apply to the point of communication owned, managed, and operated by the entity, or the total communications pathway? For example if entity A’s phone system is working fine, but Entity B is experiencing trouble, does Entity A have a compliance concern if Entity B experiences a communication breakdown on their end of the medium? Please provide greater insight on the intended compliance obligation and consider the following revision to the definition: Interpersonal Communication: Any medium, owned, managed, or operated by the applicable entity, that allows two or more individuals to interact, consult, or exchange information. Response: The RCSDT notes that each requirement does not prescribe the “how,” “why,” “who,” or “where” concerning the failure or loss of its Interpersonal Communication (or Alternative Interpersonal Communication) capability. It is the responsibility of the applicable entity to perform the “what” of each requirement. There is no compliance risk based on the “how,” “why,” “who,” or “where.” No change made. The RCSDT appreciates the suggested changes to the defined term. The suggestion introduces specifics which make the definition less flexible and more prescriptive. Such a change could potentially be invalidated by the way an entity operates in the future. No change made. R9 provides ambiguous instruction for the resolution process surrounding tests and failures of Alternative Interpersonal Communication capability. Please confirm whether the intent of the requirement is to initiate repairs within two hours, or to effect repairs within two hours, with the alternate option being to designate a replacement Alternative Interpersonal Communication if repairs cannot be completed within two hours.

Organization	Yes or No	Question 4 Comment
		Response: The RCSDT notes that the requirement is for the entity to “initiate action,” which may include, but is not limited to, notifying or request repair to restore the capability. The option is to designate an Alternative Interpersonal Communication capability. No change made. R10 has similar ambiguity, referencing a 60 minute notification timeframe requirement upon the detection of a failure lasting 30 minutes or longer. Please confirm the intended start of the requirement notification. Does the clock for notification begins at the point of failure, at the point of discovery, or at the point that the failure is discovered to have been effective for 30 minutes or greater? Thank you for the opportunity to comment. Response: The RCSDT notes the 60-minute clock starts at the point the failure has reached the 30-minute threshold. This is to allow time for intermittent failures to be resolved. No change made.
Response: Please see the responses above.		
ISO/RTO Standards Review Committee		The IRC continues to believe that these a certification types of requirements and that they do not belong in a standard. The SRC believes that the requirement to have a medium to communicate should be required to be certified. Response: NERC maintains an Organization Certification Program, the goal of which is to ensure that organizations who apply to register or are registered to perform certain reliability functions deemed particularly crucial to the reliability of the bulk power system will meet or exceed certain minimum criteria (i.e., Reliability Standards) demonstrating they are capable of performing the tasks (i.e., Requirements) for these functions. The process for certification of organizations is included in the NERC Rules of Procedure, Section 500 and Appendix 5A. For example, the first paragraph of Section 500 – Organization Registration and Certification states: “The purpose of the Organization Registration Program is to clearly identify those

Organization	Yes or No	Question 4 Comment
		entities that are responsible for compliance with the FERC approved reliability standards. Organizations that are registered are included on the NERC Compliance Registry (NCR) and are responsible for knowing the content of and for complying with all applicable reliability standards..." The RCSDT has addressed the scope of the SAR in addressing communication requirements for entities through an open industry consensus process. No change made. When you are operating as a registered entity, the requirements should be performance based such as taking corrective actions and if you fail to communicate for any reason you will be found non-compliance. The lack of a communication medium should not be a defense for non-compliance of the performance based standards. Response: The RCSDT thanks you for your comment. Although this standard is not a Results-Based Standard (RBS), it achieves the need to require both Interpersonal Communication and Alternative Interpersonal Communication capability of the applicable entities to ensure reliable operations of the Bulk Electric System. The RCSDT believes the requirements achieve the needed level of communications to ensure reliable operations. No change made. The SDT should require reporting times of failed mediums for GOP and DP similar to that for RC/BA/TOP. Response: The RCSDT notes that the requirement allows flexibility for the Distribution Provider and Generator Operator to define what constitutes a failure of its Interpersonal Communication capability. The RCSDT believes it is inappropriate to establish a single-defined threshold applicable to the numerous entities applicable to this standard. No change made.
Response:		
ISO New England Inc		The ISO-NE continues to believe that these a certification types of requirements and that they do not belong in a standard.

Organization	Yes or No	Question 4 Comment
		ISO-NE believes that the requirement to have a medium to communicate should be required to be certified. Response: NERC maintains an Organization Certification Program, the goal of which is to ensure that organizations who apply to register or are registered to perform certain reliability functions deemed particularly crucial to the reliability of the bulk power system will meet or exceed certain minimum criteria (i.e., Reliability Standards) demonstrating they are capable of performing the tasks (i.e., Requirements) for these functions. The process for certification of organizations is included in the NERC Rules of Procedure, Section 500 and Appendix 5A. For example, the first paragraph of Section 500 – Organization Registration and Certification states: “The purpose of the Organization Registration Program is to clearly identify those entities that are responsible for compliance with the FERC approved reliability standards. Organizations that are registered are included on the NERC Compliance Registry (NCR) and are responsible for knowing the content of and for complying with all applicable reliability standards...” The RCSDT has addressed the scope of the SAR in addressing communication requirements for entities through an open industry consensus process. No change made. When you are operating as a registered entity, the requirements should be performance based such as taking corrective actions and if you fail to communicate for any reason you will be found non-compliance. The lack of a communication medium should not be a defense for non compliance of the performance based standards. Response: The RCSDT thanks you for your comment. Although this standard is not a Results-Based Standard (RBS), it achieves the need to require both Interpersonal Communication and Alternative Interpersonal Communication capability of the applicable entities to ensure reliable operations of the Bulk Electric System. The RCSDT believes the requirements achieve the needed level of communications to ensure reliable operations. No change made. The SDT should require reporting times of failed mediums for GOP and DP similar to

Organization	Yes or No	Question 4 Comment
		that for RC/BA/TOP. Response: The RCSDT notes that the requirement allows flexibility for the Distribution Provider and Generator Operator to define what constitutes a failure of its Interpersonal Communication capability. The RCSDT believes it is inappropriate to establish a single-defined threshold applicable to the numerous entities applicable to this standard. No change made.
Response: Please see responses above.		
SERC OC Standards Review Group		The SERC OC SRG would like to thank the Standard Drafting Team for their service.”The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Standards Review group only and should not be construed as the position of SERC Reliability Corporation, its board or its officers.”
Response: The RCSDT thanks you for your support.		
SPP Standards Review Group		There are a couple of cut & paste errors in the VSLs for R3 and R5. In R3, Reliability Coordinator in the High and Severe VSLs should be replaced with Transmission Operator. Response: The RCSDT appreciates you bringing awareness to this error in Requirement R3 VSL. The reference to “Reliability Coordinator” has been changed to Transmission Operator for Requirement R3 in both the High and Severe VSL. Error correction made. In R5, Reliability Coordinator in the High and Severe VSLs should be replaced with Balancing Authority. Response: The RCSDT appreciates you bringing awareness to this error in Requirement R5. The reference to “Reliability Coordinator” has been changed to Balancing Authority for Requirement R5 in both the High and Severe VSL. Error correction made.

Organization	Yes or No	Question 4 Comment
Response: Please see responses above.		
PacifiCorp		N/A
Arizona Public Service Company		None

END OF REPORT

Exhibit F

Summary and Record of Development of Proposed Reliability Standards

Exhibit F

Summary of Development Authorization, Posting, and Balloting History

Project 2006-06 was initiated in January of 2007 for the purpose of revising IRO-001-1, IRO-002-2, IRO-005-3a, IRO-014-1, IRO-015-1, and IRO-016-1. The SAR for this project described the purpose of the project: “To ensure that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique and enforceable; and to ensure that this set of requirements is sufficient to maintain reliability of the Bulk Electric System.”⁴¹ Given that the draft COM-001-2 and COM-002-3 standards focused on communication protocols rather than responsibilities for Reliability Coordinator actions to prevent instability, uncontrolled separation, or cascading outages, the COM-001-2 and COM-002-3 standards were complete on a separate track from the proposed IRO Reliability Standards, and will be filed by NERC in a separate petition for approval.

Specifically, the standard drafting team worked with industry stakeholders to review applicable standards as follows:

- For each existing requirement, the drafting team will work with stakeholders and:
 - Eliminate redundancy in the requirements.
 - Identify requirements that should be moved into other SARs
 - Eliminate requirements that do not support bulk power system reliability
 - Transfer requirements that need to be in place before an entity begins operation as an RC to certification.
- Ensure they are enforceable as mandatory Reliability Standards with financial penalties — the applicability to bulk power system owners, operators, and users, and as appropriate particular classes of facilities, is clearly defined; the purpose, requirements, and measures

⁴¹ NERC SAR for Project 2006-06, Reliability Coordination at p. 2, available at: http://www.nerc.com/docs/standards/sar/RC%20_SAR_Draft%202_clean_050107.pdf.

are results-focused and unambiguous; the consequences of violating the requirements are clear.

- Consider comments received during the initial development of the standards and other comments or directives received from ERO regulatory authorities and stakeholders.
- Bring the standards into conformance with the latest version of the Reliability Standards Development Procedure and the ERO Rules of Procedure.
- Satisfy the standards procedure requirement for five-year review of the standards.

The first draft of the Reliability Coordination SAR and the proposed standards COM-001-2, COM-002-3, IRO-001-3, IRO-002-3, IRO-005-4, and IRO-014-2 were posted for a 45-day public comment period from August 5–September 16, 2008.⁴² There were 29 sets of comments, including comments from more than 70 different people from more than 50 companies representing 8 of the 10 Industry Segments.

The standard drafting team received very few comments concerning IRO-002-2 and IRO-005-4 and no substantive revisions were made to the Requirements of those standards. Commenters suggested striking the term “as a minimum” in R1 and the standard drafting team modified R1 accordingly. Some commenters did not agree with the language of the two new requirements in IRO-014-2 that were formerly in IRO-016-1. The standard drafting team modified and subdivided the requirements into four requirements (R5 –R8).

Several commenters suggested that the High and Severe VSLs for R2 contradicted the requirement. As a result, the standard drafting team revised the VSLs to better reflect the content of the requirement. Several commenters also suggested revisions for the VSLs for R6, which was imported from IRO-016. VSLs were changed to support the revised requirements.

The second draft of the Reliability Standards was posted for a 30-day public comment period from July 10–August 9, 2009. There were 31 sets of comments, including comments

⁴² The Standards Development Project 2006-06 addresses all of the mentioned Reliability Standards, however, only IRO-001-3, IRO-002-3, IRO-005-4 and IRO-014-02 are being submitted for Commission approval in this filing.

from 87 different people from more than 62 companies representing 8 of the 10 Industry Segments.

The standard drafting team made conforming revisions to IRO-014-2, based on the comments received. Stakeholders suggested revising R8 to include provisions for avoiding implementing actions that would violate safety, equipment or regulatory or statutory requirements. The standard drafting team agreed and added this to the requirement. Other stakeholders suggested adding the following language at the beginning of R1 and R3: “For conditions or activities that impact other Reliability Coordinator Areas....” The standard drafting team agreed with this comment and added the language to the requirements. The Time Horizons for R2 were revised as suggested to “Same Day Operations and Operations Planning.” The Measures M1, M3 and M8 were revised to reflect revisions to their respective Requirements.

The third draft of the Reliability Standards were posted for a 45-day public comment period from January 4–February 18, 2011. There were 42 sets of comments, including comments from more than 150 different people from over 50 companies representing each of the 10 Industry Segments.

Stakeholders identified certain language modifications to provide clarity to the requirements. Each requirement was revised without substantively changing the intent or reliability objective of the requirement.

The proposed set of Reliability Standards, including COM-001-2, COM-002-3, IRO-001-3, IRO-002-3, IRO-005-4, and IRO-014-2, were posted as a single ballot item for the concurrent 45-day pre-ballot review and Initial Ballot from January 18–March 7, 2011, during which time members of the registered ballot body were registered for the ballot pool. The initial ballot was

conducted from February 25–March 7, 2011. The voting statistics are listed below, and the Ballot Results Web page provides a link to the detailed results:⁴³

Quorum: 87.103 percent

Approval: 49.54 percent

Because at least one negative ballot included a comment, these results were not final. As part of the ballot process, the standard drafting team reviewed voter comments and determined that the majority of negative votes were related to the COM-001-2, COM-002-3 and IRO-001-3 Reliability Standards. The standard drafting team requested Standards Committee approval that IRO-001-3, IRO-002-3, IRO-005-4, and IRO-014-2 be allowed to proceed to the recirculation ballot. The standard drafting team developed responses to the negative ballot comments, and the recirculation ballot ensued with only minor clarifying edits to the Reliability Standards. Each Reliability Standard was balloted separately. The recirculation ballots were conducted from July 15-25, 2011. Voting statistics for the recirculation ballot are listed below, and the Ballot Results Web page provides a link to the detailed results:

IRO-002-3: Quorum: 94.13 percent

Approval: 76.99 percent

IRO-005-4: Quorum: 94.13 percent

Approval: 75.17 percent

IRO-014-1⁴⁴: Quorum: 94.13 percent

Approval: 76.27 percent

⁴³ NERC Project 2006-06 Reliability Coordination, available at:
http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html

⁴⁴ The ballot for IRO-014-2 included the revision to IRO-001-3 which involved retiring one requirement in IRO-001-3.

The NERC Board of Trustees approved the IRO-001-3, IRO-002-3, IRO-005-4, and IRO-014-2 Reliability Standards on August 4, 2011 and August 16, 2012.

b. Key Issues during Standard Development

Representatives of the standard drafting team met with FERC Staff on several occasions to discuss the merits of the proposed revisions to the set of Reliability Standards under Project 2006-06. FERC Staff also participated in standard drafting team meetings as an observer on a regular basis throughout the development process. There were two main concerns expressed by FERC Staff relating to IRO-002-3 and IRO-005-4 and the proposed retirement of Requirements from the Reliability Standards. The concerns of FERC Staff relate to:

- Retiring Requirements that relate to monitoring.
- Retiring Requirements related to SOLs.

As noted in this petition, real-time monitoring is a supporting activity and is only one of several processes used to support operation within SOLs or IROLs. The reliability objective is to operate within identified parameters, not to monitor.

As drafting teams work to refine the body of Version 0 Reliability Standards, these teams will support the division of responsibilities as specified in the NERC Functional Model. This division of responsibilities assigns the Reliability Coordinator responsibility for identifying and controlling operations associated with IROLs and assigns the Transmission Operator responsibility for identifying and controlling operations associated with SOLs. As demonstrated during the August 2003 blackout, having a clear division of responsibilities is essential in real-time operations.⁴⁵ Although there is a clear division of duties, this does not mean that the Reliability Coordinator and Transmission Operator cannot assist one another. Indeed, the

⁴⁵ See generally, NERC August 14, 2003 Blackout Investigation, available at: <http://www.nerc.com/filez/blackout.html>.

Reliability Coordinator may direct its Transmission Operators to take actions to prevent or mitigate instances of exceeding specific IROLs. Similarly the Transmission Operator may ask the Reliability Coordinator for assistance in preventing or mitigating instances of exceeding specific SOLs.

The proposed TOP Reliability Standards filed concurrently with this petition includes a set of requirements for Transmission Operators that work cooperatively with the requirements for Reliability Coordinators. The set of requirements proposed for the Transmission Operator includes a requirement for the Transmission Operator to identify a subset of SOLs that, based on the results of the Transmission Operator's Operational Planning Analysis, could adversely impact reliability in the Transmission Operator's area. The Transmission Operator is also required to provide its Reliability Coordinator with those SOLs and is required to inform the Reliability Coordinator when it operates outside those SOLs.

Project 2006-06
Reliability Coordination

[Related Files](#)

Status:

First set of standards:

The industry approved IRO-002, IRO-005, and IRO-014 on July 25, 2011. The BOT approved the standards at their August 4, 2011 meeting. Currently, NERC staff are preparing the filing for these BOT approved standards.

Second set of standards:

The standard COM-001-2 (Communications) comment period ended July 6, 2012 and the second successive ballot ended on July 11, 2012. The standards COM-002-3 (Communication and Coordination) and IRO-001-3 (Reliability Coordination - Responsibilities and Authorities) recirculation ballots ended July 6, 2012.

The team is responding to comments received for COM-001-2 and expects to post the standard for recirculation ballot August 2012. The standard IRO-001-3 will proceed to the Board of Trustees (BOT) for adoption August 2012. The COM-002-3 is expected to proceed to the BOT for adoption upon industry stakeholder approval of COM-001-2.

Purpose/Industry Need:

To ensure that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique and enforceable; and to ensure that this set of requirements is sufficient to maintain reliability of the Bulk Electric System.

Draft	Action	Dates	Results	Consideration of Comments
Draft 6 COM-001-2 Clean Redline to last posting Implementation Plan and Mapping Document Clean Redline to last posting COM-002-3	Recirculation Ballots and Non-binding Polls: COM-002-3 IRO-001-3 Ballot	06/27/12 - 07/06/12 (closed)	Summary(152) Updated Ballot Results: COM-002-3 IRO-001-3(153) Non-binding Poll Results:	

Clean Redline to last posting Implementation Plan and Mapping Document Clean Redline to last posting IRO-001-3 Clean(143) Redline to last posting(144) Implementation Plan and Mapping Document Clean(145) Redline to last posting(146) Supporting Materials: Comment Form (Word) COM-001-1.1 COM-002-2 VRF/VSL Justification for COM-001-1 Clean Redline VRF/VSL Justification for COM-002-3 Clean Redline VRF/VSL Justification for IRO-001-3 Clean (147) Redline(148)	Extension(149) Updated Info(150) Info(151) Vote>>		COM-002-3 IRO-001-3(154)	
	Successive Ballot and Non-binding Poll: COM-001-2 Info>> Vote>>	06/27/12 - 07/11/12 (closed)	Ballot Results: COM-001-2 Non-binding Poll Results: COM-001-2	
	Comment Period Submit Comments>>	06/07/12 - 07/06/12 (closed)	Comments Received>>	
Draft 5 COM-001-2 Clean Redline to last posting	Successive Ballots and Non-Binding Polls Extension(136) Updated	01/30/12 - 02/09/12 (closed)	Full Records: IRO-001-3(139) COM-001-2 COM-002-3 Non-Binding	

Implementation Plan and Mapping Document Clean Implementation Plan Redline to last posting Mapping Document Redline to last posting COM-002-3 Clean Redline to last posting Implementation Plan and Mapping Document Clean Implementation Plan Redline to last posting Mapping Document Redline to last posting IRO-001-3 Clean(128) Redline to last posting(129) Redline to last approved(130) Implementation Plan and Mapping Document Clean(131) Implementation Plan Redline to last posting(132) Mapping Document Redline to last posting(133) Supporting Materials: Comment Form (Word)(134) COM-001-1.1 COM-002-2 VRF/VSL Justification for COM-001-1 VRF/VSL Justification for	Info(137) Info(138) Vote>>		Poll Results: IRO-001-3(140) COM-001-2 COM-002-3	
	Comment Period Submit Comments>>	01/09/12 - 02/09/12 (closed)	Comments Received(141)	Consideration of Comments(142)

COM-002-3				
VRF/VSL Justification for IRO-001-3(135)				
Draft 5 IRO-002-3 Clean(98) Redline to last posting(99) Redline to last approval(100) Implementation Plan Clean(101) Redline(102) VRFs and VSLs for IRO-002-3(103) IRO-005-4 Clean (104) Redline to last posting (105) Redline to last approval (106) Implementation Plan Clean(107) Redline(108) VRFs and VSLs for IRO-005-4(109) Definition of Adverse Reliability Impact(110) Information on Revision of Definition of Adverse Reliability Impact(111) IRO-014-2 Clean(112) Redline to last posting(113) Redline to last approval(114) Implementation Plan Clean (115) Redline(116) VRFs and VSLs for IRO-014-2(117) Supporting Materials: IRO-001-2	Recirculation Ballot Info(120) Vote>>	07/15/11 - 07/25/11 (closed)	Summary(121) Full Record - IRO-002(122) Full Record - IRO-005(123) Full Record - IRO-014(124) Non-Binding Results - IRO-002(125) Non-Binding Results - IRO-005(126) Non-Binding Results - IRO-014(127)	

Clean(118) Redline to last approval(119)				
Draft 4 Reliability Coordination Standards COM-001-2 Clean Redline to last posting Implementation Plan Clean Redline to last posting	Initial Ballot Updated Info(88) Info(89) Vote>>	02/25/11 - 03/07/11 (closed)	Summary(92) Full Record(93) Comments Received(94)	Consideration of Comments(96)
	Ballot Pool Join>>	01/25/11 - 02/25/11 (closed)		
	Formal Comment Period Current Info(90) Info(91) Submit Comments>>	01/18/11 - 03/07/11 (closed)	Comments Received(95)	Consideration of Comments(97)
COM-002-3 Clean Redline to last posting Implementation Plan Clean Redline to last posting IRO-001-2 Clean(67) Redline to last posting(68) Implementation Plan Clean(69) Redline to last posting(70) IRO-002-2 Clean(71) Redline(72) Implementation Plan(73) IRO-005-2 Clean (74) Redline to last posting(75) Redline to first posting(76)				

Implementation Plan Clean(77) Redline to last posting (78)				
IRO-014-2 Clean(79) Redline to last posting (80) Implementation Plan Clean(81) Redline to last posting (82)				
IRO-015-1 Redline (83) Implementation Plan(84)				
IRO-016-1 Redline(85) Implementation Plan(86)				
Supporting Materials: Comment Form (Word)(87)				
Supplemental SAR(63) Supporting Materials: Comment Form (Word)(64)	Formal Comment Period Submit Comments>> Info(65)	08/04/10 - 09/03/10 (closed)	Comments Received(66)	
Draft 3 Reliability Coordination Standards	Comment Period	01/04/10 - 02/18/10 (closed)	Comments Received(61)	

COM-001-2 Clean Redline to last posting Implementation Plan Clean Redline to last posting COM-002-3 Clean Redline to last posting Implementation Plan Clean Redline to last posting IRO-001-2 Clean(50) Redline to last posting(51) Implementation Plan Clean(52) Redline to last posting(53) IRO-014-2 Clean(54) Redline to last posting(55) Implementation Plan Clean(56) Redline to last posting(57) Supporting Materials: Comment Form (Word)(58)	Info>>(59) Submit Comments>>	Info on Extension of Comment Period(60)		Consideration of Comments(62)
Draft 2 Reliability Coordination Standards COM-001-2 Clean Redline to first posting COM-002-3 Clean Redline to first posting	Comment Period Info(47) Submit Comments>>	07/10/09 - 08/09/09 (closed)	Comments Received(48)	Consideration of Comments(49)

IRO-001-2 Clean(38) Redline to first posting(39) IRO-014-2 Clean(40) Redline to first posting(41) Supporting Materials: Comment Form (Word)(42) COM-001-2 Implementation Plan Clean Redline to first posting COM-002-3 Implementation Plan Clean Redline to first posting IRO-001-2 Implementation Plan Clean (43) Redline to first posting(44) IRO-014-2 Implementation Plan Clean(45) Redline to first posting(46)				
Draft 1 Reliability Coordination Standards Supporting Materials: Comment Form (Word) (35) Comments	Comment Period Submit Comments>>	08/05/08 - 09/16/08 (closed)	Comments Received>>(36)	Consideration of Comments>>(37)
Project 2006-06 — Reliability Coordination — How Scope of Work was Addressed (34)				
COM-001-2				

Clean Redline to last approval COM-002-3 Clean Redline to last approval Supporting Materials: Implementation Plan (001) Implementation Plan (002)				
IRO-001-2 Clean (25) Redline to last approval(26) IRO-002-2 Clean (27) Redline to last approval(28) IRO-005-1 Clean (29) Redline to last approval(30) Supporting Materials: Implementation Plan (001)(31) Implementation Plan (002)(32) Implementation Plan (005)(33)				
IRO-014-2 Clean(16) Redline to last approval(17) IRO-015-1 Clean(18) Redline to last approval(19) IRO-016-1 Clean(20) Redline to last				

approval(21) Supporting Materials: Implementation Plan (014)(22) Implementation Plan (015)(23) Implementation Plan (016)(24)				
Final SAR Approved by SC (11) Clean(12) Redline to last posted (13)	Nominations for Standard Drafting Team Info(14) Submit Nomination(15)	05/14/07 - 05/25/07 (closed)		
Draft SAR Version 2 Reliability Coordination Standards Draft SAR Version 2(6)	Comment Period Info(7) Submit Comments(8)	03/19/07 - 04/17/07 (closed)	Comments Received(9)	Consideration of Comments(10)
Draft SAR Version 1 Reliability Coordination Standards Draft SAR Version 1(1)	Comment Period Info(2) Submit Comments(3)	01/15/07 - 02/14/07 (closed)	Comments Received(4)	Consideration of Comments(5)

Standard Authorization Request Form

Title of Proposed Standard	Reliability Coordination (Project 2006-06)
Request Date	December 18, 2006

SAR Requestor Information	SAR Type <i>(Check a box for each one that applies.)</i>
Name Ellis Rankin	☐ New Standard
Primary Contact Ellis Rankin	☒ Revision to existing Standards – see list below
Telephone 214-743-6828 Fax 972-263-6710	☐ Withdrawal of existing Standard
E-mail erankin@txued.com	☐ Urgent Action

Purpose

The purpose of this set of standards is to ensure that the reliability coordinator has processes, procedures, plans, and can use their tools and authorities to support real-time operating reliability within its own reliability area and between reliability coordinator areas in support of reliability of the interconnected bulk power systems.

COM-001 — Telecommunications
 COM-002 — Communications and Coordination
 IRO-001 — Reliability Coordination – Responsibilities and Authorities
 IRO-002 — Reliability Coordination – Facilities
 IRO-003 — Reliability Coordination – Wide Area View
 IRO-004 — Reliability Coordination – Operations Planning
 IRO-005 — Reliability Coordination – Current Day Operations
 IRO-007 — Monitoring the Wide Area
 IRO-008 — Reliability Coordinator Analyses and Assessments
 IRO-009 — Reliability Coordinator Actions to Operate Within IROLs
 IRO-010 — Reliability Coordinator Data Specification and Collection
 IRO-011 — Providing Data to the Reliability Coordinator
 IRO-012 — Procedures, Processes or Plans for Preventing and Mitigating IROLs
 IRO-013 — Reliability Coordinator Directives Relative to IROLs
 IRO-014 — Procedures to Support Coordination between Reliability Coordinators
 IRO-015 — Notifications and Information Exchange Between Reliability Coordinators
 IRO-016 — Coordination of Real-time Activities between Reliability Coordinators
 ORG-020 — Reliability Coordinator Certification - Certification
 ORG-021 — Reliability Coordinator Certification - Agreements
 ORG-022 — Reliability Coordinator Certification - Personnel
 ORG-023 — Reliability Coordinator Certification - Data Acquisition and Monitoring
 ORG-024 — Reliability Coordinator Certification – System Analysis
 ORG-025 — Reliability Coordinator Certification – Emergency Operations
 ORG-026 — Reliability Coordinator Certification – Loss of Control Center Functionality
 ORG-027 — Reliability Coordinator Certification – Restoration

Standards Authorization Request Form

PER-004 — Reliability Coordination – Staffing
PRC-001 — System Protection Coordination

Several of the standards in this set are Version 0 standards. As the electric reliability organization begins enforcing compliance with reliability standards under Section 215 of the Federal Power Act in the United States and applicable statutes and regulations in Canada, the industry needs a set of clear, measurable, and enforceable reliability standards. The Version 0 standards, while a good foundation, were translated from historical operating and planning policies and guides that were appropriate in an era of voluntary compliance. The Version 0 standards and recent updates were put in place as a temporary starting point to stand up the electric reliability organization and begin enforcement of mandatory standards. However, it is important to update the standards in a timely manner, incorporating improvements to make the standards more suitable for enforcement and to capture prior recommendations that were deferred during the Version 0 translation.

Industry Need

1. Provide an adequate level of reliability for the North American bulk power systems — the standards are complete and the requirements are set at an appropriate level to ensure reliability.
2. Ensure they are enforceable as mandatory reliability standards with financial penalties — the applicability to bulk power system owners, operators, and users, and as appropriate particular classes of facilities, is clearly defined; the purpose, requirements, and measures are results-focused and unambiguous; the consequences of violating the requirements are clear.
3. Consider comments received during the initial development of this set of standards and other comments received from ERO regulatory authorities and stakeholders (Attachment 1)
4. Bring the standards into conformance with the latest version of the Reliability Standards Development Procedure and the ERO Rules of Procedure. (Attachment 2)
5. Satisfy the standards procedure requirement for five-year review of the standards.

Brief Description

The drafting team will review all of the requirements in this set of standards and eliminate all of the requirements that are redundant. There are redundancies between requirements in the IRO-sequence of standards and also redundancies between requirements in the IRO-sequence of standards and the ORG-sequence of standards, and redundancies with PER-004, COM-001, COM-002, and PRC-001. Note that there will be a new standard to address communication protocols (Project 2007-02) and requirements for real-time communication protocols need to be transferred to that new standard.

The drafting team also needs to review requirements and ensure that the distinctions between the functional entity and the real-time system operator are clear and distinct. The requirements should be written for the functional entity.

The drafting team also needs to clarify the responsibilities and authorities in the requirements when comparing the “reliability coordinator” and the “transmission operator.”

The drafting team needs to verify that requirements exempt the real time-operator from

liability when making a good faith effort at preserving reliability.

A challenge has been to require that entities have 'facilities' in place and available to the real-time system operators. These facilities are reviewed during certification, and unless there is a specific requirement to review these facilities, they may not be reviewed after the initial certification. To eliminate redundancy between the 'certification' standards and the standards that are aimed more at real-time operations, the certification standards could be phrased to clarify that entities are required to 'have and maintain' the specified facilities. This would enable the compliance monitor to check facilities on a periodic basis. While checking the facilities that are used on a daily basis may not be necessary, making periodic checks of the facilities that are infrequently would motivate entities to maintain these facilities, e.g., "Shall have a back up power supply for critical operations, and shall maintain and test at least once per year."

The results of the Operating Committee study on operator situational awareness tools should be used to verify that the requirements in the certification standards will meet reliability needs.

This project also needs to be coordinated with the project for developing Transmission Operator and Balancing Authority standards (2007-06).

IRO-001 has some 'fill-in-the-blank' components to eliminate.

The development may include other improvements to the standards deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing high quality, enforceable and technically sufficient bulk power system reliability standards.

Reliability Functions

The Standard will Apply to the Following Functions <i>(Check box for each one that applies.)</i>		
☒	Reliability Coordinator	The entity that is the highest level of authority who is responsible for the reliable operation of the Bulk Electric System, has the Wide Area view of the Bulk Electric System, and has the operating tools, processes and procedures, including the authority to prevent or mitigate emergency operating situations in both next-day analysis and real-time operations. The Reliability Coordinator has the purview that is broad enough to enable the calculation of Interconnection Reliability Operating Limits, which may be based on the operating parameters of transmission systems beyond any Transmission Operator's vision.
☒	Balancing Authority	Integrates resource plans ahead of time, and maintains load-interchange-resource balance within its metered boundary and supports system frequency in real time.
☒	Interchange Authority	Authorizes valid and balanced Interchange Schedules.
☒	Planning Authority	Plans the Bulk Electric System.
☒	Resource Planner	Develops a long-term (>one year) plan for the resource adequacy of specific loads within a Planning Authority area.
☒	Transmission Planner	Develops a long-term (>one year) plan for the reliability of transmission systems within its portion of the Planning Authority area.
☒	Transmission Service Provider	Provides transmission services to qualified market participants under applicable transmission service agreements
☒	Transmission Owner	Owns transmission facilities.
☒	Transmission Operator	Operates and maintains the transmission facilities, and executes switching orders.
☒	Distribution Provider	Provides and operates the "wires" between the transmission system and the customer.
☒	Generator Owner	Owns and maintains generation unit(s).
☒	Generator Operator	Operates generation unit(s) and performs the functions of supplying energy and Interconnected Operations Services.
☐	Purchasing-Selling Entity	The function of purchasing or selling energy, capacity, and all necessary Interconnected Operations Services as required.

Standards Authorization Request Form

☐	Market Operator	Integrates energy, capacity, balancing, and transmission resources to achieve an economic, reliability-constrained dispatch.
☒	Load-Serving Entity	Secures energy and transmission (and related generation services) to serve the end user.

Reliability and Market Interface Principles

Applicable Reliability Principles <i>(Check box for all that apply.)</i>	
☒	1. Interconnected bulk electric systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Standards.
☒	2. The frequency and voltage of interconnected bulk electric systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand.
☒	3. Information necessary for the planning and operation of interconnected bulk electric systems shall be made available to those entities responsible for planning and operating the systems reliably.
☒	4. Plans for emergency operation and system restoration of interconnected bulk electric systems shall be developed, coordinated, maintained and implemented.
☒	5. Facilities for communication, monitoring and control shall be provided, used and maintained for the reliability of interconnected bulk electric systems.
☒	6. Personnel responsible for planning and operating interconnected bulk electric systems shall be trained, qualified, and have the responsibility and authority to implement actions.
☒	7. The security of the interconnected bulk electric systems shall be assessed, monitored and maintained on a wide area basis.
Does the proposed Standard comply with all of the following Market Interface Principles? <i>(Select 'yes' or 'no' from the drop-down box.)</i>	
1. The planning and operation of bulk electric systems shall recognize that reliability is an essential requirement of a robust North American economy. Yes	
2. An Organization Standard shall not give any market participant an unfair competitive advantage. Yes	
3. An Organization Standard shall neither mandate nor prohibit any specific market structure. Yes	
4. An Organization Standard shall not preclude market solutions to achieving compliance with that Standard. Yes	
5. An Organization Standard shall not require the public disclosure of commercially sensitive information. All market participants shall have equal opportunity to access commercially non-sensitive information that is required for compliance with reliability standards. Yes	

Related Standards – Listed under description

Standard No.	Explanation

Related SARs

SAR ID	Explanation

Regional Differences

Region	Explanation
ERCOT	
FRCC	
MRO	
NPCC	
SERC	
RFC	
SPP	
WECC	

The drafting team will assist stakeholders in considering these comments in determining what changes to make to the standards:

COM-001-0 Telecommunications

FERC NOPR

- o Include Measures and Levels of Non-Compliance;
- o Include generator operators and distribution provider as applicable entities; and
- o Include requirements for communication facilities for use during emergency situations.

FERC Staff Report

- o Lacks adequacy, redundancy and routing requirements
- o Generation owners missing
- o Expect new standard in November

V0 Industry Comments

- o Redundant with Policy 5A, R1
- o Many players missing
- o Apply R1 to all but smallest entities

Violation Risk Factor Drafting Team Comments

- o R6 – administrative requirement

COM-002-1 Communications and Coordination

FERC NOPR

- o Include Measures and Levels of Non-Compliance;
- o Include a Requirement for the reliability coordinator to assess and approve actions that have impacts beyond the area views of transmission operators or balancing authorities;
- o Include distribution providers as applicable entities; and
- o Require tightened communications protocols, especially for communications during alerts and emergencies.

FERC Staff Report

- o Missing requirement for approval of actions
- o Lack of compliance and measures
- o Expect November update

V0 Industry Comments

- o Voice with generators not required
- o R1 – include reliability authority
- o R2 – include sabotage and security
- o R4 – clarify repeat back requirement with regard to emergency

IRO-001-0 Reliability Coordination – Responsibilities and Authorities

FERC NOPR

- o Reflect the process set forth in the NERC Rules of Procedures; and
- o Eliminate the regional reliability organization as an applicable entity.

FERC Staff Report

- o RC not explicitly mentioned in Purpose

Regional Fill-in-the-Blank Team Comments

- o Remove ", sub-region, or interregional coordinating group" from R1

SAR for Project 2006-06 Reliability Coordination – Attachment 1

- o Consider removing "Standards of conduct are necessary to ensure the Reliability Coordinator does not act in a manner that favors one market participant over another." from the Purpose section of the standard.

V0 Industry Comments

- o Inability to perform needs to be communicated
- o What is meant by 'interest of other entity'?

Violation Risk Factor Drafting Team Comments

- o R6 - Since the RC must be NERC certified, it stands to reason that anyone performing RC tasks should be certified. However, since the RC still retains the accountability for actions, and requirement 4 handles the agreements, this requirement is a medium risk.

IRO-002-0 Reliability Coordination – Facilities

FERC NOPR

- o Include Measures and Levels of Non-Compliance and
- o Modify Requirement R7 to explicitly require a minimum set of tools for the reliability coordinator.

FERC Staff Report

- o Lack of Measures & Compliance
- o Expect new standard in November

V0 Industry Comments

- o R5 – define synchronized information system
- o R7 – define 'adequate' tools and 'wide-area'
- o Words such as 'easily understood' and 'particular emphasis' need to be tightened

IRO-005-1 Reliability Coordination – Current Day Operations

FERC NOPR

- o Include Measures and Levels of Non-Compliance. We propose that the Measures and Levels of Non-Compliance specific to IROL violations should be commensurate with the magnitude, duration, frequency and causes of the violation.
- o Further, as discussed above, we propose that the ERO conduct a survey on IROL practices and experiences.
- o The Commission may propose further modifications to IRO-005-1 based on the survey results.

FERC Staff Report

- o Concern with timing of critical outage during initial correction period
- o Ambiguous with respect to IROL limits
- o Lack of Measures & Compliance

Regional Fill-in-the-Blank Team Comments

- o R14 has regional reference

V0 Industry Comments

- o R10, 11 & 12 – RA not empowered to do this

SAR for Project 2006-06 Reliability Coordination – Attachment 1

IRO-014-1 Procedures, Processes, or Plans to Support Coordination Between Reliability Coordinators

FERC NOPR

- o No changes identified.

IRO-015-1 Notifications and Information Exchange Between Reliability Coordinators

FERC NOPR

- o No changes identified.

IRO-016-1 Coordination of Real-Time Activities Between Reliability Coordinators

FERC NOPR

- o No changes identified.

Violation Risk Factors Drafting Team Comments

- o R1.2.1 & R2 – ambiguous

PER-004-0 Reliability Coordination – Staffing

FERC NOPR

- o Include formal training requirements for reliability coordinators similar to those addressed under the personnel training Reliability Standard PER-002-0;
- o Include requirements pertaining to personnel credentials for reliability coordinators similar to those in PER-003-0; and
- o Include Levels of Non-Compliance and Measures that address staffing requirements and the requirement for five days of emergency training.

FERC Staff Report

- o Min. expectations and # of hours per year missing
- o Blackout Report items not addressed
- o Formal program not specified
- o Measures & Compliance missing

V0 Industry Comments

- o Calendar year timing increment
- o Other training needs to be defined

PRC-001-0 System Protection Coordination

FERC NOPR

- o Include Measures and Levels of Non-Compliance;
- o Include a requirement that relevant transmission operators and generator operators must be informed immediately upon the detection of failures in relays or protection system elements on the Bulk-Power System that would threaten reliable operation, so that these entities can carry out the appropriate corrective control actions consistent with those used in mitigating IROL violations; and
- o Clarify that, after being informed of failures in relays or protection system elements on the Bulk-Power System, transmission operators or generator operators shall carry out corrective control actions, i.e., returning the system to a stable state that respects system requirements as soon as possible and no longer than 30 minutes.

FERC Staff Report

- o Max. time period for corrective actions missing
- o Expect new standard in November

V0 Industry Comments

SAR for Project 2006-06 Reliability Coordination – Attachment 1

- o Effects on reliability may not be known
- o Consistent terminology as to neighbor vs. affected
- o Not all criteria moved over from policies

The following standards have been proposed for retirement because they will be displaced by IRO-007 and IRO-008 but are included here in the event their retirement is not approved:

IRO-003-1 — Reliability Coordination – Wide-Area View

FERC NOPR

- o Include Measures and Levels of Non-Compliance; and
- o Include criteria to define the term “critical facilities” in a reliability coordinator’s area and its adjacent systems.

FERC Staff Report

- o Need to define critical facilities
- o Lack of Measures & Compliance
- o Expect new standard in November

IRO-004-1 — Reliability Coordination – Operations Planning

FERC NOPR

- o Require the next-day analysis to identify effective control actions that can be implemented within 30 minutes during contingency conditions.

FERC Staff Report

- o No system assessment required

V0 Industry Comments

- o Change ‘particular attention to’ to ‘to monitor’

The following standards are under development and have not yet been approved, so there are no FERC comments or stakeholder comments on a ‘finished’ standard. These standards will be reviewed and may be modified as needed to meet the goals identified in the purpose statement of this SAR:

IRO-007 — Monitoring the Wide Area

IRO-008 — Reliability Coordinator Operational Analyses and Real-Time Assessments

IRO-009 — Reliability Coordinator Actions to Operate Within IROLs

IRO-010 — Reliability Coordinator Data Specification and Collection

IRO-012 — Reliability Coordinator Processes, Procedures, or Plans for Preventing and Mitigating Reliability Operating Limits

ORG-020 — Reliability Coordinator Certification - Certification

ORG-021 — Reliability Coordinator Certification - Agreements

ORG-022 — Reliability Coordinator Certification - Personnel

ORG-023 — Reliability Coordinator Certification - Data Acquisition and Monitoring

ORG-024 — Reliability Coordinator Certification – System Analysis

ORG-025 — Reliability Coordinator Certification – Emergency Operations

ORG-026 — Reliability Coordinator Certification – Loss of Control Center Functionality

ORG-027 — Reliability Coordinator Certification – Restoration

The drafting team will reference these guidelines in determining what changes to make to the standards to bring them into conformance with the *Reliability Standards Development Procedure Manual, Version 6* and the *ERO Rules of Procedure*:

Standard Review Guidelines

Applicability

Does this reliability standard clearly identify the functional classes of entities responsible for complying with the reliability standard, with any specific additions or exceptions noted? Where multiple functional classes are identified is there a clear line of responsibility for each requirement identifying the functional class and entity to be held accountable for compliance? Does the requirement allow overlapping responsibilities between Registered Entities possibly creating confusion for who is ultimately accountable for compliance?

Does this reliability standard identify the geographic applicability of the standard, such as the entire North American bulk power system, an interconnection, or within a regional entity area? If no geographic limitations are identified, the default is that the standard applies throughout North America.

Does this reliability standard identify any limitations on the applicability of the standard based on electric facility characteristics, such as generators with a nameplate rating of 20 MW or greater, or transmission facilities energized at 200 kV or greater or some other criteria? If no functional entity limitations are identified, the default is that the standard applies to all identified functional entities.

Purpose

Does this reliability standard have a clear statement of purpose that describes how the standard contributes to the reliability of the bulk power system? Each purpose statement should include a value statement.

Performance Requirements

Does this reliability standard state one or more performance requirements, which if achieved by the applicable entities, will provide for a reliable bulk power system, consistent with good utility practices and the public interest?

Does each requirement identify who shall do what under what conditions and to what outcome?

Measurability

Is each performance requirement stated so as to be objectively measurable by a third party with knowledge or expertise in the area addressed by that requirement?

Does each performance requirement have one or more associated measures used to objectively evaluate compliance with the requirement?

If performance results can be practically measured quantitatively, are metrics provided within the requirement to indicate satisfactory performance?

Technical Basis in Engineering and Operations

Is this reliability standard based upon sound engineering and operating judgment, analysis, or experience, as determined by expert practitioners in that particular field?

Completeness

Is this reliability standard complete and self-contained? Does the standard depend on external information to determine the required level of performance?

Consequences for Noncompliance

In combination with guidelines for penalties and sanctions, as well as other ERO and regional entity compliance documents, are the consequences of violating a standard clearly known to the responsible entities?

Clear Language

Is the reliability standard stated using clear and unambiguous language? Can responsible entities, using reasonable judgment and in keeping with good utility practices, arrive at a consistent interpretation of the required performance?

Practicality

Does this reliability standard establish requirements that can be practically implemented by the assigned responsible entities within the specified effective date and thereafter?

Capability Requirements versus Performance Requirements

In general, requirements for entities to have 'capabilities' (this would include facilities for communication, agreements with other entities, etc.) should be located in the standards for certification. The certification requirements should indicate that entities have a responsibility to 'maintain' their capabilities.

Consistent Terminology

To the extent possible, does this reliability standard use a set of standard terms and definitions that are approved through the NERC reliability standards development process?

If the standard uses terms that are included in the NERC Glossary of Terms Used in Reliability Standards, then the term must be capitalized when it is used in the standard. New terms should not be added unless they have a 'unique' definition when used in a NERC reliability standard. Common terms that could be found in a college dictionary should not be defined and added to the NERC Glossary.

Are the verbs on the 'verb list' from the DT Guidelines? If not – do new verbs need to be added to the guidelines or could you use one of the verbs from the verb list?

Violation Risk Factors (Risk Factor)

High Risk Requirement

A requirement that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures;

or a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.

Medium Risk Requirement

A requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures;

or a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.

Lower Risk Requirement

A requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. A requirement that is administrative in nature;

or a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. A planning requirement that is administrative in nature.

Mitigation Time Horizon

The drafting team should also indicate the time horizon available for mitigating a violation to the requirement using the following definitions:

- **Long-term Planning** — a planning horizon of one year or longer.
- **Operations Planning** — operating and resource plans from day-ahead up to and including seasonal.
- **Same-day Operations** — routine actions required within the timeframe of a day, but not real-time.
- **Real-time Operations** — actions required within one hour or less to preserve the reliability of the bulk electric system.
- **Operations Assessment** — follow-up evaluations and reporting of real time operations.

Violation Severity Levels

The drafting team should indicate a set of violation severity levels that can be applied for the requirements within a standard. ('Violation severity levels' replace existing 'levels of non-compliance.')

The violation severity levels may be applied for each requirement or combined to cover multiple requirements, as long as it is clear which requirements are included.

The violation severity levels should be based on the following definitions:

- **Lower: mostly compliant with minor exceptions** — The responsible entity is mostly compliant with and meets the intent of the requirement but is deficient with respect to one or more minor details. Equivalent score: 95% to 99% compliant.
- **Moderate: mostly compliant with significant exceptions** — The responsible entity is mostly compliant with and meets the intent of the requirement but is deficient with respect to one or more significant elements. Equivalent score: 85% to 94% compliant.
- **High: marginal performance or results** — The responsible entity has only partially achieved the reliability objective of the requirement and is missing one or more significant elements. Equivalent score: 70% to 84% compliant.
- **Severe: poor performance or results** — The responsible entity has failed to meet the reliability objective of the requirement. Equivalent score: less than 70% compliant.

Compliance Monitor

Replace, 'Regional Reliability Organization' with 'Electric Reliability Organization'

Fill-in-the-blank Requirements

Do not include any 'fill-in-the-blank' requirements. These are requirements that assign one entity responsibility for developing some performance measures without requiring that the performance measures be included in the body of a standard – then require another entity to comply with those requirements.

Every reliability objective can be met, at least at a threshold level, by a North American standard. If we need regions to develop regional standards, such as in under-frequency load shedding, we can always write a uniform North American standard for the applicable functional entities as a means of encouraging development of the regional standards.

Requirements for Regional Reliability Organization

Do not write any requirements for the Regional Reliability Organization. Any requirements currently assigned to the RRO should be re-assigned to the applicable functional entity.

Effective Dates

Must be 1st day of 1st quarter after entities are expected to be compliant – must include time to file with regulatory authorities and provide notice to responsible entities of the obligation to comply. If the standard is to be actively monitored, time for the Compliance Monitoring and Enforcement Program to develop reporting instructions and modify the Compliance Data Management System(s) both at NERC and Regional Entities must be provided in the implementation plan.

Associated Documents

If there are standards that are referenced within a standard, list the full name and number of the standard under the section called, 'Associated Documents'.

Functional Model Version 3

Review the requirements against the latest descriptions of the responsibilities and tasks assigned to functional entities as provided in pages 13 through 53 of the draft Functional Model Version 3.

January 15, 2007

TO: REGISTERED BALLOT BODY

Ladies and Gentlemen:

Announcement: Comment Periods Open for SAR to Modify Vegetation Management, SAR for Reliability Coordination and SAR and Standard to Modify Facility Ratings Standards

The Standards Committee (SC) announces the following standards actions:

SAR to Modify the Vegetation Management Standard FAC-003-1 Posted for 30-day Comment Period January 15–February 14, 2007

The SAR for [Project 2007-07](#) proposes modifying the Vegetation Management standard FAC-003-1 to address concerns raised by FERC and stakeholders and to bring the standard into conformance with the ERO Rules of Procedure and the latest version of the *Reliability Standards Development Procedure*. Please use the [comment form](#) to provide comments on this SAR.

SAR to Modify the Reliability Coordinator Standards Posted for 30-day Comment Period January 15–February 14, 2007

The SAR for [Project 2006-06](#) proposes retiring, modifying, or adding to existing requirements for the reliability coordinator to ensure that the complete set of requirements addresses all the processes, procedures, plans, tools, and authorities the reliability coordinator needs to support the reliable operation of the interconnected bulk power systems. This project involves addressing concerns raised by FERC and stakeholders and also involves bringing the set of standards into conformance with the ERO Rules of Procedure and the latest version of the *Reliability Standards Development Procedure*. Please use the [comment form](#) to provide comments on this SAR.

SAR and Standard to Modify the Facility Ratings Standards Posted for 45-day Comment Period January 15–February 28, 2007

The SAR for [Project 2006-09](#) proposes modifying two Facility Ratings standards, FAC-008-1 and FAC-009-1, to address concerns raised by FERC and stakeholders and to bring the standard into conformance with the ERO Rules of Procedure and the latest version of the *Reliability Standards Development Procedure*. Because there were relatively few technical changes recommended for this set of standards, the revised standard, which combines FAC-008-1 and FAC-009-1, is posted for comment along with an implementation plan. Please use the [comment form](#) to provide comments on this SAR, standard and implementation plan.

Standards Development Process

The [Reliability Standards Development Procedure](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate. If you have any questions, please contact me at 813-468-5998 or maureen.long@nerc.net.

Sincerely,

Maureen E. Long

cc: Registered Ballot Body Registered Users
Standards Mailing List
NERC Roster

Comment Form — 1st Posting of Reliability Coordination SAR

Please use this form to submit comments on the Reliability Coordination SAR. Comments must be submitted by **February 14, 2007**. You may submit the completed form by e-mail to sarcomm@nerc.com with the words "Reliability Coordination" in the subject line. If you have questions, please contact Maureen Long at maureen.long@nerc.net or by telephone at 813-468-5998.

Individual Commenter Information (Complete this page for comments from one organization or individual.)		
Name:		
Organization:		
Telephone:		
E-mail:		
NERC Region		Registered Ballot Body Segment
☐ ERCOT	☐	1 — Transmission Owners
☐ FRCC	☐	2 — RTOs, ISOs,
☐ MRO	☐	3 — Load-serving Entities
☐ NPCC	☐	4 — Transmission-dependent Utilities
☐ RFC	☐	5 — Electric Generators
☐ SERC	☐	6 — Electricity Brokers, Aggregators, and Marketers
☐ SPP	☐	7 — Large Electricity End Users
☐ WECC	☐	8 — Small Electricity End Users
☐ NA – Not Applicable	☐	9 — Federal, State, Provincial Regulatory or other Government Entities
	☐	10 — Regional Reliability Organizations, Regional Entities

Comment Form — 1st Posting of Reliability Coordination SAR

Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

Additional Member Name	Additional Member Organization	Region*	Segment*

*If more than one region or segment applies, indicate the best fit for the purpose of these comments. Regional acronyms and segment numbers are shown on prior page.

Background Information

The purpose of this SAR is to review the set of standards that includes reliability coordinator requirements with the intent of eliminating duplicate requirements and upgrading and reorganizing the requirements to ensure that there are requirements that address the reliability coordinator's processes, procedures, plans, tools, and authorities to support real-time operating reliability within its own reliability area and between reliability coordinator areas in support of reliability of the interconnected bulk power systems.

The scope of the SAR includes the following:

- The drafting team will review all of the requirements in this set of standards and eliminate all of the requirements that are redundant. There are redundancies between requirements in the IRO-sequence of standards and also redundancies between requirements in the IRO-sequence of standards and the ORG-sequence of standards, and redundancies with PER-004, COM-001, COM-002, and PRC-001. Note that there will be a new standard to address communication protocols (Project 2007-02) and requirements for real-time communication protocols need to be transferred to that new standard.
- The drafting team also needs to review requirements and ensure that the distinctions between the functional entity and the real-time system operator are clear and distinct. The requirements should be written for the functional entity.
- The drafting team also needs to clarify the responsibilities and authorities in the requirements when comparing the "reliability coordinator" and the "transmission operator."
- The drafting team needs to verify that requirements exempt the real time-operator from liability when making a good faith effort at preserving reliability.
- The drafting team needs to address the reliability coordinator's facilities. A challenge has been to require that entities have "facilities" in place and available to the real-time system operators. These facilities are reviewed during certification, and unless there is a specific requirement to review these facilities, they may not be reviewed after the initial certification. To eliminate redundancy between the "certification" standards and the standards that are aimed more at real-time operations, the certification standards could be phrased to clarify that entities are required to "have and maintain" the specified facilities. This would enable the compliance monitor to check facilities on a periodic basis. While checking the facilities that are used on a daily basis may not be necessary, making periodic checks of the facilities that are infrequently would motivate entities to maintain these facilities, e.g., "Shall have a back-up power supply for critical operations, and shall maintain and test at least once per year."
- The results of the Operating Committee's study on operator situational awareness tools should be used to verify that the requirements in the certification standards will meet reliability needs.
- This project also needs to be coordinated with the project for developing transmission operator and balancing authority standards (2007-06).
- IRO-001 has some "fill-in-the-blank" components to eliminate.

Comment Form — 1st Posting of Reliability Coordination SAR

- The development may include other improvements to the standards deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing high quality, enforceable and technically sufficient bulk power system reliability standards.

Comment Form — 1st Posting of Reliability Coordination SAR

You do not have to answer all questions. Enter All Comments in Simple Text Format.

Insert a “check” mark in the appropriate boxes by double-clicking the gray areas.

1. Do you agree that there is a reliability-related need to for the proposed revisions to this set of standards? If not, please explain in the comment area.

☐ Yes

☐ No

Comments:

2. Do you agree with the scope of the SAR? If not, please explain in the comment area.

☐ Yes

☐ No

Comments:

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

☐ Yes

☐ No

Comments:

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Individual Commenter Information		
(Complete this page for comments from one organization or individual.)		
Name:	Brian Thumm	
Organization:	ITC Transmission	
Telephone:	248.374.7846	
E-mail:	bthumm@itctransco.com	
NERC Region		Registered Ballot Body Segment
☐ ERCOT	☒	1 — Transmission Owners
☐ FRCC	☐	2 — RTOs, ISOs,
☐ MRO	☐	3 — Load-serving Entities
☐ NPCC	☐	4 — Transmission-dependent Utilities
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Group Name:

Lead Contact:**Contact Organization:**

Contact Segment:

Contact Telephone:

Contact E-mail:

[illegible]

*If more than one region or segment applies, indicate the best fit for the purpose of these comments. Regional acronyms and segment numbers are shown on prior page.

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Comment Form — 1st Posting of Reliability Coordination SAR

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You do not have to answer all questions. Enter All Comments in Simple Text Format.

Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.

1. Do you agree that there is a reliability-related need to for the proposed revisions to this set of standards? If not, please explain in the comment area.

☒ Yes

☐ No

Comments: Yes, there is a reliability need to revise the Standards identified in this SAR. Not all of the revisions described, however, are reliability related and in fact should not be included in the standards (e.g., exempting an operator from liability).

2. Do you agree with the scope of the SAR? If not, please explain in the comment area.

☐ Yes

☒ No

Comments: The Standard Drafting Team should not be given latitude to "include other improvements to the standards deemed appropriate by the drafting team." The purpose of the SAR is to identify the changes contemplated by the need for the Standard Revision. If there are changes that the SAR requestor would like to make to the Standard, they should be spelled out in the SAR. If the SAR requestor does not really know the changes that should be made to the standard, then the SAR should be withdrawn until the need for a SAR can be adequately justified.

The remainder of the SAR is very broad; perhaps too broad. The requestor should consider reducing the scope of the SAR to make specific changes to the standards, rather than try to consolidate all of the Standards in one swift stroke.

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

☒ Yes

☐ No

Comments: Uncertain to say what they would be at this point.

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Comment Form — 1st Posting of Reliability Coordination SAR

Group Comments (Complete this page if comments are from a group.)

Group Name: IRC Standards Review Committee

Lead Contact: Charles Yeung

Contact Organization: SPP

Contact Segment: 2

Contact Telephone: 832-724-6142

Contact E-mail: cyeung@spp.org

Additional Member Name	Additional Member Organization	Region*	Segment*
Mike Calimano	NYISO	NPCC	2
Alicia Daugherty	PJM	RFC	2
Ron Falsetti	IESO	NPCC	2
Matt Goldberg	ISO-NE	NPCC	2
Brent Kingsford	CAISO	WECC	2
Anita Lee	AESO	WECC	2
Steve Myers	ERCOT	ERCOT	2
Bill Phillips	MISO	RFC	2
		SERC	
		MRO	

*If more than one region or segment applies, indicate the best fit for the purpose of these comments. Regional acronyms and segment numbers are shown on prior page.

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Comment Form — 1st Posting of Reliability Coordination SAR

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Comment Form — 1st Posting of Reliability Coordination SAR

You do not have to answer all questions. Enter All Comments in Simple Text Format.

Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.

1. Do you agree that there is a reliability-related need to for the proposed revisions to this set of standards? If not, please explain in the comment area.

☒ Yes

☒ No

Comments: The IRC agrees with the objective but does not agree with the process.

We agree there is a general need to clean up the standards and where appropriate consolidate the standards. However, this SAR covers too large a swath of standards, and as a consequence the resulting standard has the potential of being too large for reasoned comments.

The SRC believes that the wide perspective proposed by this SAR could compromise the internal consistency within individual standards. Subject Matter experts created interrelated requirements in given areas. This SAR proposes to impose a vertically integrated prospective, linking standards in widely dispersed areas of operational expertise. While a review of the vertical integration is useful and in places needed, it is recommended that the results of the review should themselves be sent as recommended SARs for industry consideration by the SMEs for the individual standards, and not as a proposed ad hoc standard. Grouping them as proposed in the SAR may result in unintended disconnects within the other standards, and in the worst case result in an ongoing series of iterative SARs.

2. Do you agree with the scope of the SAR? If not, please explain in the comment area.

☐ Yes

☒ No

Comments: We do agree the standards should be consolidated and redundancies eliminated where appropriate.

However, it is not appropriate to include standards in this SAR that have not yet been approved. For example, it is not necessary to expand on the requirement to have facilities in place by adding a testing requirement. If an entity is required to have facilities in place and they are not maintained and available, they do not meet the requirement.

The "boiler plate" language that this "development may include other improvements deemed appropriate by the drafting team" is too vague and essentially opens the scope to include anything the drafting team wants to do with the standard. This is not appropriate. The scope should be specific and the drafting team should only focus on those specifics.

The SRC supports the approach of prioritizing and revising individual standards to include FERC's comments as part of the consideration process. Only a few standards should be revised at a time to make the process more manageable.

Comment Form — 1st Posting of Reliability Coordination SAR

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

☐ Yes

☒ No

Comments:

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Individual Commenter Information		
(Complete this page for comments from one organization or individual.)		
Name:	David Kiguel	
Organization:	Hydro One Networks Inc.	
Telephone:	416-345-5313	
E-mail:	David.Kiguel@HydroOne.com	
NERC Region		Registered Ballot Body Segment
☐ ERCOT	☒	1 — Transmission Owners
☐ FRCC	☐	2 — RTOs, ISOs,
☐ MRO	☐	3 — Load-serving Entities
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Comment Form — 1st Posting of Reliability Coordination SAR

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Insert a “check” mark in the appropriate boxes by double-clicking the gray areas.

1. Do you agree that there is a reliability-related need to for the proposed revisions to this set of standards? If not, please explain in the comment area.

☒ Yes

☐ No

Comments:

2. Do you agree with the scope of the SAR? If not, please explain in the comment area.

☐ Yes

☒ No

Comments: Please see our answer to question No. 3.

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

☒ Yes

☐ No

Comments: This project involves the revision of 27 NERC Standards, not a small task by any measure. The extent of the proposed work and the necessary expertise is beyond what can be found in one single SAR team and drafting team.

We respectfully submit that the project be divided into as many SARs and teams as necessary with the work directed and monitored by the Standards Committee.

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Individual Commenter Information		
(Complete this page for comments from one organization or individual.)		
Name:		
Organization:		
Telephone:		
E-mail:		
NERC Region		Registered Ballot Body Segment
☐ ERCOT	☐	1 — Transmission Owners
☐ FRCC	☐	2 — RTOs, ISOs,
☐ MRO	☐	3 — Load-serving Entities
☐ NPCC	☐	4 — Transmission-dependent Utilities
☐ RFC	☐	5 — Electric Generators
☐ SERC	☐	6 — Electricity Brokers, Aggregators, and Marketers
☐ SPP	☐	7 — Large Electricity End Users
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	☐	10 — Regional Reliability Organizations, Regional Entities

Comment Form — 1st Posting of Reliability Coordination SAR

Group Comments (Complete this page if comments are from a group.)

Group Name: Midwest ISO Stakeholders Standards Collaboration Participants

Lead Contact: Jason Marshall

Contact Organization: Midwest ISO

Contact Segment: 2

Contact Telephone: 317-249-5494

Contact E-mail: jmarshall@midwestiso.org

[illegible]

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Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.

1. Do you agree that there is a reliability-related need to for the proposed revisions to this set of standards? If not, please explain in the comment area.

☒ Yes

☒ No

Comments: We agree there is a general need to consolidate where necessary and clean up the standards. However, this SAR covers too large a swath of standards. It very confusing what the overall goal is. Additionally, we are concerned that the range of expertise required by this SAR will result in a drafting team that is too large and will result in little to no progress unless the drafting team is subdivided. If the drafting team is subdivided, then this SAR should be subdivided into other SARs.

2. Do you agree with the scope of the SAR? If not, please explain in the comment area.

☐ Yes

☒ No

Comments: We do agree the standards should be consolidated and redundancies eliminated where appropriate. However, it is not appropriate to include standards in this SAR that have not yet been approved.

It is not necessary to expand on the requirement to have facilities in place by adding a testing requirement. If an entity is required to have facilities in place and they are not maintained and available, they do not meet the requirement of having facilities in place.

The "boiler plate" language that this "development may include other improvements deemed appropriate by the drafting team is too vague and essentially opens the scope to include anything the drafting team wants to do with the standard. This is not appropriate. The scope should be specific and the drafting team should only focus on those specifics.

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

☒ Yes

☒ No

Comments: Because of the overbroad nature of this SAR, the answer is likely yes. However, it is nearly impossible to determine all the additional required changes without missing important items. This SAR needs to be broken down to address individual standards.

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Individual Commenter Information		
(Complete this page for comments from one organization or individual.)		
Name:	Kathleen Goodman	
Organization:	ISO New England	
Telephone:	(413) 535-4111	
E-mail:	kgoodman@iso-ne.com	
NERC Region		Registered Ballot Body Segment
☐ ERCOT	☐	1 — Transmission Owners
☐ FRCC	☒	2 — RTOs, ISOs,
☐ MRO	☐	3 — Load-serving Entities
☒ NPCC	☐	4 — Transmission-dependent Utilities
☐ RFC	☐	5 — Electric Generators
☐ SERC	☐	6 — Electricity Brokers, Aggregators, and Marketers
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Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

Additional Member Name	Additional Member Organization	Region*	Segment*

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Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.

1. Do you agree that there is a reliability-related need to for the proposed revisions to this set of standards? If not, please explain in the comment area.

☒ Yes

☒ No

Comments: ISO New England supports the objective but does not agree with the process.

We agree there is a general need to clean up the standards and where appropriate consolidate the standards. However, this SAR covers too large a swath of standards, and as a consequence the resulting standard has the potential of being too large for reasoned comments.

We are concerned that the wide perspective proposed by this SAR could compromise the internal consistency within individual standards. Subject Matter Experts created interrelated requirements in given areas. This SAR proposes to impose a vertically integrated prospective, linking standards in widely dispersed areas of operational expertise. While a review of the vertical integration is useful and in places needed, it is recommended that the results of the review should themselves be sent as recommended SARs for industry consideration by the SMEs for the individual standards, and not as a proposed ad hoc standard. Grouping them as proposed in the SAR may result in unintended disconnects within the other standards, and in the worst case result in an ongoing series of iterative SARs.

2. Do you agree with the scope of the SAR? If not, please explain in the comment area.

☐ Yes

☒ No

Comments: We do agree the standards should be consolidated and redundancies eliminated where appropriate.

However, it is not appropriate to include standards in this SAR that have not yet been approved. For example, it is not necessary to expand on the requirement to have facilities in place by adding a testing requirement. If an entity is required to have facilities in place and they are not maintained and available, they do not meet the requirement.

The "boiler plate" language that this "development may include other improvements deemed appropriate by the drafting team" is too vague and essentially opens the scope to include anything the drafting team wants to do with the standard. This is not appropriate. The scope should be specific and the drafting team should only focus on those specifics.

ISO New England supports the approach of prioritizing and revising individual standards to include FERC's comments as part of the consideration process. We also support the

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consideration of non-FERC industry comments submitted previously in the commenting process where the requirements were not available for commenting.

Only a few standards should be revised at a time to make the process more manageable.

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

☐ Yes

☒ No

Comments:

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Individual Commenter Information		
(Complete this page for comments from one organization or individual.)		
Name:	Mike Gentry	
Organization:	Salt River Project	
Telephone:	602-236-6408	
E-mail:	Mike.Gentry@srpnet.com	
NERC Region		Registered Ballot Body Segment
☐ ERCOT	☒	1 — Transmission Owners
☐ FRCC	☐	2 — RTOs, ISOs,
☐ MRO	☐	3 — Load-serving Entities
☐ NPCC	☐	4 — Transmission-dependent Utilities
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Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

[illegible]

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1. Do you agree that there is a reliability-related need to for the proposed revisions to this set of standards? If not, please explain in the comment area.

☒ Yes

☐ No

Comments:

2. Do you agree with the scope of the SAR? If not, please explain in the comment area.

☒ Yes

☐ No

Comments:

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

☐ Yes

☒ No

Comments:

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Comment Form — 1st Posting of Reliability Coordination SAR

Group Comments (Complete this page if comments are from a group.)

Group Name: WECC Reliability Coordination Comments Work Group
Lead Contact: Nancy Bellows
Contact Organization: WACM
Contact Segment: 10
Contact Telephone: 970-461-7246
Contact E-mail: bellows@wapa.gov

Additional Member Name	Additional Member Organization	Region*	Segment*
Jack Bernhardson	PNSC	WECC	10
Bob Johnson	PSC	WECC	10
Frank McElvain	RDRC	WECC	10
Greg Tillitson	CMRC	WECC	10

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1. Do you agree that there is a reliability-related need to for the proposed revisions to this set of standards? If not, please explain in the comment area.

☒ Yes

☐ No

Comments:

2. Do you agree with the scope of the SAR? If not, please explain in the comment area.

☒ Yes

☐ No

Comments: We believe that the drafting needs to verify that requirements exempt the reliability coordinator real-time supervision, as well as the real-time operator from liability when making a good faith effort at preserving reliability.

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

☒ Yes

☒ No

Comments:

The WECC RCCWG believes that the FERC Staff Report suggestion that COM-001 "generation owners missing" should not translate to addition of generation owners in the applicability. "Generator Operator" is an applicable entity, but not "Generator Owner".

The WECC RCCWG believes the Reliability Coordination SAR should address those V0 comments on requirements, when those specific are no longer part of the standard referenced in the V0 comments identified in Attachment 1 of the SAR if those comments were not previously addressed. One example: posted "V0 Industry Comments" suggest inclusion of sabotage and security in R2 of COM-002. That comment is no longer applicable to COM-002 R2 - the standard requirements have changed. That said, the comment intent should not be lost.

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Group Comments (Complete this page if comments are from a group.)

Group Name: Public Service Commission of South Carolina
Lead Contact: Phil Riley
Contact Organization: Public Service Commission of South Carolina
Contact Segment: 9
Contact Telephone: 803-896-5154
Contact E-mail: philip.riley@psc.sc.gov

Additional Member Name	Additional Member Organization	Region*	Segment*
Mignon L. Clyburn	Public Service Commission of SC	SERC	9
Elizabeth B. Fleming	Public Service Commission of SC	SERC	9
G. O'Neal Hamilton	Public Service Commission of SC	SERC	9
John E. Howard	Public Service Commission of SC	SERC	9
Randy Mitchell	Public Service Commission of SC	SERC	9
C. Robert Moseley	Public Service Commission of SC	SERC	9
David A. Wright	Public Service Commission of SC	SERC	9

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- The results of the Operating Committee's study on operator situational awareness tools should be used to verify that the requirements in the certification standards will meet reliability needs.
- This project also needs to be coordinated with the project for developing transmission operator and balancing authority standards (2007-06).
- IRO-001 has some "fill-in-the-blank" components to eliminate.

Comment Form — 1st Posting of Reliability Coordination SAR

- The development may include other improvements to the standards deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing high quality, enforceable and technically sufficient bulk power system reliability standards.

Comment Form — 1st Posting of Reliability Coordination SAR

You do not have to answer all questions. Enter All Comments in Simple Text Format.

Insert a “check” mark in the appropriate boxes by double-clicking the gray areas.

1. Do you agree that there is a reliability-related need to for the proposed revisions to this set of standards? If not, please explain in the comment area.

☒ Yes

☐ No

Comments:

2. Do you agree with the scope of the SAR? If not, please explain in the comment area.

☒ Yes

☐ No

Comments:

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

☐ Yes

☒ No

Comments:

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Individual Commenter Information		
(Complete this page for comments from one organization or individual.)		
Name:	Roger Champagne	
Organization:	Hydro Québec TransÉnergie	
Telephone:	514 289-2211; X 2766	
E-mail:	champagne.roger.2@hydro.qc.ca	
NERC Region		Registered Ballot Body Segment
☐ ERCOT	☒	1 — Transmission Owners
☐ FRCC	☐	2 — RTOs, ISOs,
☐ MRO	☐	3 — Load-serving Entities
☒ NPCC	☐	4 — Transmission-dependent Utilities
☐ RFC	☐	5 — Electric Generators
☐ SERC	☐	6 — Electricity Brokers, Aggregators, and Marketers
☐ SPP	☐	7 — Large Electricity End Users
☐ WECC	☐	8 — Small Electricity End Users
☐ NA – Not Applicable	☐	9 — Federal, State, Provincial Regulatory or other Government Entities
	☐	10 — Regional Reliability Organizations, Regional Entities

Comment Form — 1st Posting of Reliability Coordination SAR

Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

Additional Member Name	Additional Member Organization	Region*	Segment*

*If more than one region or segment applies, indicate the best fit for the purpose of these comments. Regional acronyms and segment numbers are shown on prior page.

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The scope of the SAR includes the following:

- The drafting team will review all of the requirements in this set of standards and eliminate all of the requirements that are redundant. There are redundancies between requirements in the IRO-sequence of standards and also redundancies between requirements in the IRO-sequence of standards and the ORG-sequence of standards, and redundancies with PER-004, COM-001, COM-002, and PRC-001. Note that there will be a new standard to address communication protocols (Project 2007-02) and requirements for real-time communication protocols need to be transferred to that new standard.
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Comment Form — 1st Posting of Reliability Coordination SAR

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Insert a “check” mark in the appropriate boxes by double-clicking the gray areas.

1. Do you agree that there is a reliability-related need to for the proposed revisions to this set of standards? If not, please explain in the comment area.

☒ Yes

☐ No

Comments:

2. Do you agree with the scope of the SAR? If not, please explain in the comment area.

☐ Yes

☒ No

Comments: Please see our answer to question No. 3.

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

☒ Yes

☐ No

Comments: This project involves the revision of 27 NERC Standards, not a small task by any measure. The extent of the proposed work and the necessary expertise is beyond what can be found in one single SAR team and drafting team.

We respectfully submit that the project be divided into as many SARs and teams as necessary with the work directed and monitored by the Standards Committee.

Also, coordination with the Standards in development IRO-007-1 to IRO-010-1 that are also the object of a separate revision and commentary period should be taken care of.

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Individual Commenter Information		
(Complete this page for comments from one organization or individual.)		
Name:	Ron Falsetti	
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Telephone:	905-855-6187	
E-mail:	ron.falsetti@ieso.ca	
NERC Region		Registered Ballot Body Segment
☐ ERCOT	☐	1 — Transmission Owners
☐ FRCC	☒	2 — RTOs, ISOs,
☐ MRO	☐	3 — Load-serving Entities
☒ NPCC	☐	4 — Transmission-dependent Utilities
☐ RFC	☐	5 — Electric Generators
☐ SERC	☐	6 — Electricity Brokers, Aggregators, and Marketers
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	☐	10 — Regional Reliability Organizations, Regional Entities

Comment Form — 1st Posting of Reliability Coordination SAR

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Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

Additional Member Name	Additional Member Organization	Region*	Segment*

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Comment Form — 1st Posting of Reliability Coordination SAR

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Insert a “check” mark in the appropriate boxes by double-clicking the gray areas.

1. Do you agree that there is a reliability-related need to for the proposed revisions to this set of standards? If not, please explain in the comment area.

☒ Yes

☒ No

Comments: The IESO agrees with the objective but does not agree with the process. There is a general need to clean up the standards and where appropriate consolidate the standards. However, this SAR covers too large a swath of standards, and as a consequence the resulting standard has the potential of being too large for reasoned comments.

2. Do you agree with the scope of the SAR? If not, please explain in the comment area.

☒ Yes

☒ No

Comments:

We agree with the intent to fill in the gaps and eliminate duplications among standards, and applaud the SDT for taking on this huge and challenging task. We are concerned, however, that the scope itself is too wide but yet not wide enough. Some of the listed standards are still being commented on, for example: IROL-007 to IRO-010, while some others had been commented on but are now in a dormant state, for example: the organization certification standards. These standards are not yet approved, and hence are subject to change and become moving targets for this holistic review task. The scope description does not suggest an approach to deal with ongoing changes to the standards identified. We are concerned that the wide scope and the massive task may not ensure that a one time change will cover all affected standards - those approved and those under development.

We suggest the SDT compare this approach to an alternative approach which is to revise a few standards at a time, on a priority basis and considering FERC's views on the status of the standards, thereby limiting the corresponding changes within a more manageable scope. Overtime, when all standards have gone through revisions, all corresponding changes will be duly made.

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

☒ Yes

☐ No

Comments:

Comment Form — 1st Posting of Reliability Coordination SAR

There are likely additional standard revisions beyond those identified, but we find it's almost impossible to pre-determine which other standards will be affected as a result of changes to those identified in this SAR.

For example, changes currently proposed for IRO-007 to IRO-010 will precipitate corresponding changes to other affected standards, e.g. TOP-003, TOP-005, etc. However, we are unable to provide any specific list of standards that will require corresponding changes not knowing what changes will be made to the standards listed in the SAR.

Given the above, it should not be taken for granted that the list is exhaustive in terms of revisions required.

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Individual Commenter Information		
(Complete this page for comments from one organization or individual.)		
Name:	Jason Shaver	
Organization:	American Transmission Co.	
Telephone:	262 506 6885	
E-mail:	jshaver@atcllc.com	
NERC Region		Registered Ballot Body Segment
☐ ERCOT	☒	1 — Transmission Owners
☐ FRCC	☐	2 — RTOs, ISOs,
☒ MRO	☐	3 — Load-serving Entities
☐ NPCC	☐	4 — Transmission-dependent Utilities
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Comment Form — 1st Posting of Reliability Coordination SAR

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Comment Form — 1st Posting of Reliability Coordination SAR

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Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.

1. Do you agree that there is a reliability-related need to for the proposed revisions to this set of standards? If not, please explain in the comment area.

☒ Yes

☐ No

Comments:

2. Do you agree with the scope of the SAR? If not, please explain in the comment area.

☐ Yes

☒ No

Comments: ATC agrees with the spirit of the SAR but believes that more details should be provided.

Identify which of the redundant requirements will be deleted.

Lastly ATC does not understand how a SDT can tackle the ORG -020 – 027 when these standards have not been approved by the board. In other words how can the SDT move forward on the scope when eight of the standards are still in being worked on? To approve the scope of the SAR references to ORG-020 – 027 should be deleted and considered out of bounds for the SDT.

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

☐ Yes

☒ No

Comments:

Consideration of Comments on 1st Posting of Reliability Coordination SAR

The Reliability Coordination SAR Requesters thank all commenters who submitted comments on Draft 1 of the Reliability Coordination SAR. This SAR was posted for a 30- day public comment period from January 15 through February 14, 2007. The requesters asked stakeholders to provide feedback on the standard through a special standard Comment Form. There were 11 sets of comments, including comments from more than 31 different people from more than 15 companies representing 9 of the 10 Industry Segments as shown in the table on the following pages.

While most stakeholders agreed with the reliability-related need to modify the standards addressed by this SAR, most stakeholders disagreed with the proposed scope of the original SAR and the drafting team made the following revisions to reduce the scope:

- Revised the purpose statement to more narrowly focus on the reliability-related purpose of revising the set of standards addressed by the SAR
- Removed the standards that were listed in the original SAR that are still under development, including the certification standards (ORG-020-1 through ORG-027-1), the Version 1 IROL Standards that are still under development (IRO-007-1 through IRO-013-1) and the standards that are identified in the Version 1 IROL Implementation Plan as proposed for retirement when the Version 1 IROL Standards become effective (IRO-003-1, IRO-004-1).
- Removed the paragraph that referenced facilities.
- Removed the paragraph that would have allowed the standard drafting team to make 'any' additions to requirements as long as those additions met stakeholder approval.
- Added more specificity to the drafting team's approach to modifying the set of standards identified in the SAR.

Based on the comments received, the drafting team is posting the revised SAR for another comment period.

In this "Consideration of Comments" document stakeholder comments have been organized so that it is easier to see the responses associated with each question. All comments received on the standards can be viewed in their original format at:

http://www.nerc.com/~filez/standards/Reliability-Coordination_Project_2006-6.html

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Director of Standards, Gerry Adamski, at 609-452-8060 or at gerry.adamski@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.¹

¹ The appeals process is in the Reliability Standards Development Procedures: <http://www.nerc.com/standards/newstandardsprocess.html>.

Consideration of Comments on 1st Posting of Reliability Coordination SAR

Commenter		Organization	Industry Segment									
			1	2	3	4	5	6	7	8	9	10
1.	Jason Shaver	American Transmission Co.	✓									
2.	David Kiguel	Hydro One Networks, Inc.	✓									
3.	Roger Champagne	Hydro Québec TransÉnergie	✓									
4.	Ron Falsetti	Independent Electricity System Operator		✓								
5.	Kathleen Goodman	ISO New England		✓								
6.	Charles Yeung (SPP)	ISO/RTO Council		✓								
7.	Mike Calimano (NYISO)	ISO/RTO Council		✓								
8.	Alicia Daughtery (PJM)	ISO/RTO Council		✓								
9.	Ron Falsetti (IESO)	ISO/RTO Council		✓								
10.	Matt Goldberg (ISONE)	ISO/RTO Council		✓								
11.	Brent Kingsford (CAISO)	ISO/RTO Council		✓								
12.	Anita Lee (AESO)	ISO/RTO Council		✓								
13.	Steve Myers (ERCOT)	ISO/RTO Council		✓								
14.	Bill Phillips (MISO)	ISO/RTO Council		✓								
15.	Brian Thumm	ITC Transmission	✓									
16.	Jim Cyrulewski	JDRJC Associates								✓		
17.	Jason Marshall	Midwest ISO Stakeholders Standards Collaboration Participants		✓								
18.	Phil Riley	PSC of South Carolina									✓	
19.	Mignon L. Clyburn	PSC of South Carolina									✓	
20.	Elizabeth B. Fleming	PSC of South Carolina									✓	
21.	G. O'Neal Hamilton	PSC of South Carolina									✓	
22.	John E. Howard	PSC of South Carolina									✓	
23.	Randy Mitchell	PSC of South Carolina									✓	
24.	C. Robert Moseley	PSC of South Carolina									✓	
25.	David A. Wright	PSC of South Carolina									✓	
26.	Mike Gentry	Salt River Project	✓									✓
27.	Nancy Bellows (WACM)	WECC Reliability Coordination Comments Work Group										✓
28.	Jack Bernhardsen (PNSC)	WECC Reliability Coordination Comments Work Group										✓
29.	Bob Johnson (PSC)	WECC Reliability Coordination Comments Work Group										✓
30.	Frank McElvain (RDRC)	WECC Reliability Coordination Comments Work Group										✓
31.	Greg Tillitson (CMRC)	WECC Reliability Coordination Comments Work Group										✓

Index to Questions, Comments, and Responses

1. Do you agree that there is a reliability-related need for the proposed revisions to this set of standards? If not, please explain in the comment area.	4
2. Do you agree with the scope of the SAR? If not, please explain in the comment area.	6
3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?	11

Consideration of Comments on 1st Draft of the Reliability Coordination SAR

1. Do you agree that there is a reliability-related need for the proposed revisions to this set of standards? If not, please explain in the comment area.

Summary Consideration: Most commenters indicated that they do believe that there is a reliability-related need for the proposed revisions to the standards.

Question #1			
Commenter	Yes	No	Comment
ISO/RTO Council ISO New England	☒	☒	The IRC and ISO-NE agrees with the objective but does not agree with the process. We agree there is a general need to clean up the standards and where appropriate consolidate the standards. However, this SAR covers too large a swath of standards, and as a consequence the resulting standard has the potential of being too large for reasoned comments. The SRC believes that the wide perspective proposed by this SAR could compromise the internal consistency within individual standards. Subject Matter experts created interrelated requirements in given areas. This SAR proposes to impose a vertically integrated prospective, linking standards in widely dispersed areas of operational expertise. While a review of the vertical integration is useful and in places needed, it is recommended that the results of the review should themselves be sent as recommended SARs for industry consideration by the SMEs for the individual standards, and not as a proposed ad hoc standard. Grouping them as proposed in the SAR may result in unintended disconnects within the other standards, and in the worst case result in an ongoing series of iterative SARs.
Response: The intent is not to develop a single standard from the list of standards. The Standards Committee may assign more than one drafting team to develop the standards and when the SAR drafting team asks the Standards Committee for authorization to move the SAR forward to standard drafting, the drafting team may recommend that more than one SDT be assigned to draft the standards. The list of standards included in the scope of this SAR has been reduced to eliminate standards that will already be addressed by the IROL SDT and to eliminate the list of proposed certification standards.			
Midwest ISO Stakeholders Standards Collaboration Participants	☒	☒	We agree there is a general need to consolidate where necessary and clean up the standards. However, this SAR covers too large a swath of standards. It very confusing what the overall goal is. Additionally, we are concerned that the range of expertise required by this SAR will result in a drafting team that is too large and will result in little to no progress unless the drafting team is subdivided. If the drafting team is subdivided,

Consideration of Comments on 1st Draft of the Reliability Coordination SAR

Question #1			
Commenter	Yes	No	Comment
			then this SAR should be subdivided into other SARs.
Response: The SAR was revised to more clearly define the scope of work. The Standards Committee may assign more than one drafting team to develop the standards and when the SAR drafting team asks the Standards Committee for authorization to move the SAR forward to standard drafting, the drafting team may recommend that more than one SDT be assigned to draft the standards. The list of standards included in the scope of this SAR has been reduced to eliminate standards that will already be addressed by the IROL SDT and to eliminate the list of proposed certification standards.			
Independent Electricity System Operator	☒	☒	The IESO agrees with the objective but does not agree with the process. There is a general need to clean up the standards and where appropriate consolidate the standards. However, this SAR covers too large a swath of standards, and as a consequence the resulting standard has the potential of being too large for reasoned comments.
Response: The SAR was revised to more clearly define the scope of work. The Standards Committee may assign more than one drafting team to develop the standards and when the SAR drafting team asks the Standards Committee for authorization to move the SAR forward to standard drafting, the drafting team may recommend that more than one SDT be assigned to draft the standards. The list of standards included in the scope of this SAR has been reduced to eliminate standards that will already be addressed by the IROL SDT and to eliminate the list of proposed certification standards.			
ITC Transmission	☒		Yes, there is a reliability need to revise the Standards identified in this SAR. Not all of the revisions described, however, are reliability related and in fact should not be included in the standards (e.g., exempting an operator from liability).
Response: The SAR was revised to omit the reference to the liability exemption.			
American Transmission Co.	☒		
Hydro One Networks, Inc. Hydro Québec TransÉnergie	☒		
Salt River Project	☒		
WECC Reliability Coordination Comments Work Group	☒		
PSC of South Carolina	☒		

Consideration of Comments on 1st Draft of the Reliability Coordination SAR

2. Do you agree with the scope of the SAR? If not, please explain in the comment area.

Summary Consideration: Most commenters disagreed with the scope of the original SAR and the drafting team made major modifications to reduce the scope of the SAR to only include standards that are already approved and to identify more specifically the range of changes contemplated to the standards that remain in the revised SAR.

Question #2			
Commenter	Yes	No	Comment
Hydro One Networks, Inc. Hydro Québec TransÉnergie		☒	Please see our answer to question No. 3.
Response: Please see the response to question 3.			
ITC		☒	The Standard Drafting Team should not be given latitude to "include other improvements to the standards deemed appropriate by the drafting team." The purpose of the SAR is to identify the changes contemplated by the need for the Standard Revision. If there are changes that the SAR requestor would like to make to the Standard, they should be spelled out in the SAR. If the SAR requestor does not really know the changes that should be made to the standard, then the SAR should be withdrawn until the need for a SAR can be adequately justified. The remainder of the SAR is very broad; perhaps too broad. The requestor should consider reducing the scope of the SAR to make specific changes to the standards, rather than try to consolidate all of the Standards in one swift stroke.
Response: The intent is not to develop a single standard from the list of standards. The list of standards included in the scope of this SAR has been reduced to eliminate standards that will already be addressed by the IROL SDT and to eliminate the list of proposed certification standards. The intent of the <i>original</i> SAR was to give the Standard Drafting Team enough latitude to address requirements that fall within a list of performance requirements. Looking to the future, the Standard Drafting Team cannot expand on the scope of its SAR but may develop a set of requirements that is smaller than the scope of the SAR. Based on stakeholder comments, the scope has been revised and is more clearly and more narrowly defined.			
ISO/RTO Council ISO New England		☒	We do agree the standards should be consolidated and redundancies eliminated where appropriate. However, it is not appropriate to include standards in this SAR that have not yet been approved. For example, it is not necessary to expand on the requirement to have facilities in place by adding a testing requirement. If an entity is required to

Consideration of Comments on 1st Draft of the Reliability Coordination SAR

Question #2			
Commenter	Yes	No	Comment
			have facilities in place and they are not maintained and available, they do not meet the requirement. The "boiler plate" language that this "development may include other improvements deemed appropriate by the drafting team" is too vague and essentially opens the scope to include anything the drafting team wants to do with the standard. This is not appropriate. The scope should be specific and the drafting team should only focus on those specifics. The SRC supports the approach of prioritizing and revising individual standards to FERC's comments as part of the consideration process. Only a few standards should be revised at a time to make the process more manageable.
Response: The SAR was revised to omit all of the standards that were listed in the original SAR but weren't approved (draft IROL Standards and the draft Certification Standards). The SAR was revised to omit the paragraph that referenced facilities. Note that there is a new performance objective in the revised SAR that indicates the resultant standards will have requirements to address the RC's facility capabilities. The intent of the <i>original</i> SAR was to give the Standard Drafting Team enough latitude to address requirements that fall within a list of performance requirements. Looking to the future, the Standard Drafting Team cannot expand on the scope of its SAR but may develop a set of requirements that is smaller than the scope of the SAR. Based on stakeholder comments, the scope has been revised and is more clearly and more narrowly defined. The drafting team revised the SAR to omit the 'boiler plate' language. The intent is not to develop a single standard from the list of standards. The SAR DT can recommend that the standards be revised in a specific sequence but the final determination of which standards are revised or developed first is a decision that belongs to the Standards Committee. The Standards Committee may assign more than one drafting team to develop the standards and when the SAR drafting team asks the Standards Committee for authorization to move the SAR forward to standard drafting, the drafting team may recommend that more than one SDT be assigned to draft the standards.			
Midwest ISO Stakeholders Standards Collaboration Participants		☒	We do agree the standards should be consolidated and redundancies eliminated where appropriate. However, it is not appropriate to include standards in this SAR that have not yet been approved. It is not necessary to expand on the requirement to have facilities in place by

Consideration of Comments on 1st Draft of the Reliability Coordination SAR

Question #2			
Commenter	Yes	No	Comment
			adding a testing requirement. If an entity is required to have facilities in place and they are not maintained and available, they do not meet the requirement of having facilities in place. The "boiler plate" language that this "development may include other improvements deemed appropriate by the drafting team is too vague and essentially opens the scope to include anything the drafting team wants to do with the standard. This is not appropriate. The scope should be specific and the drafting team should only focus on those specifics.
Response: The list of standards included in the scope of this SAR has been reduced to eliminate standards that will already be addressed by the IROL SDT and to eliminate the list of proposed certification standards. The SAR was revised to omit the paragraph that referenced facilities. Note that there is a new performance objective in the revised SAR that indicates the resultant standards will have requirements to address the RC's facility capabilities. The intent of the <i>original</i> SAR was to give the Standard Drafting Team enough latitude to address requirements that fall within a list of performance requirements. Looking to the future, the Standard Drafting Team cannot expand on the scope of its SAR but may develop a set of requirements that is smaller than the scope of the SAR. Based on stakeholder comments, the scope has been revised and is more clearly and more narrowly defined. The drafting team revised the SAR to omit the 'boiler plate' language.			
American Transmission Co.		☒	ATC agrees with the spirit of the SAR but believes that more details should be provided. Identify which of the redundant requirements will be deleted. Lastly ATC does not understand how a SDT can tackle the ORG -020 – 027 when these standards have not been approved by the board. In other words how can the SDT move forward on the scope when eight of the standards are still in being worked on? To approve the scope of the SAR references to ORG-020 – 027 should be deleted and considered out of bounds for the SDT.
Response: The SAR drafting team will let the standard drafting team determine what requirements will be deleted. The list of standards included in the scope of this SAR has been reduced to eliminate standards that will already be addressed by the IROL SDT and to eliminate the list of proposed certification standards.			

Consideration of Comments on 1st Draft of the Reliability Coordination SAR

Question #2			
Commenter	Yes	No	Comment
Independent Electricity System Operator	☒	☒	We agree with the intent to fill in the gaps and eliminate duplications among standards, and applaud the SDT for taking on this huge and challenging task. We are concerned, however, that the scope itself is too wide but yet not wide enough. Some of the listed standards are still being commented on, for example: IROL-007 to IRO-010, while some others had been commented on but are now in a dormant state, for example: the organization certification standards. These standards are not yet approved, and hence are subject to change and become moving targets for this holistic review task. The scope description does not suggest an approach to deal with ongoing changes to the standards identified. We are concerned that the wide scope and the massive task may not ensure that a one time change will cover all affected standards - those approved and those under development. We suggest the SDT compare this approach to an alternative approach which is to revise a few standards at a time, on a priority basis and considering FERC's views on the status of the standards, thereby limiting the corresponding changes within a more manageable scope. Overtime, when all standards have gone through revisions, all corresponding changes will be duly made.
Response: The list of standards included in the scope of this SAR has been reduced to eliminate standards that will already be addressed by the IROL SDT and to eliminate the list of proposed certification standards. The list of standards included in the scope of this SAR has been reduced to eliminate standards that will already be addressed by the IROL SDT and to eliminate the list of proposed certification standards. The SAR was modified to state that the standard drafting team will work with stakeholders to: - Eliminate redundancy in the requirements. - Identify requirements that should be moved into other SARs - Eliminate requirements that do not support bulk power system reliability - Transfer requirements that need to be in place before an entity begins operation as an RC to certification. - Fill identified gaps in the requirements for Reliability Coordination The intent is not to develop a single standard from the list of standards. The SAR DT can recommend that the standards be revised in a specific sequence but the final determination of which standards are revised or developed first is a decision that belongs to the Standards Committee.			

Consideration of Comments on 1st Draft of the Reliability Coordination SAR

Question #2			
Commenter	Yes	No	Comment
The Standards Committee may assign more than one drafting team to develop the standards and when the SAR drafting team asks the Standards Committee for authorization to move the SAR forward to standard drafting, the drafting team may recommend that more than one SDT be assigned to draft the standards.			
WECC Reliability Coordination Comments Work Group	☒		We believe that the drafting needs to verify that requirements exempt the reliability coordinator real-time supervision, as well as the real-time operator from liability when making a good faith effort at preserving reliability.
Response: The drafting team removed the reference to liability from the SAR.			
Salt River Project	☒		
PSC of South Carolina	☒		

Consideration of Comments on 1st Draft of the Reliability Coordination SAR

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

Question #3			
Commenter	Yes	No	Comment
ITC Transmission			Uncertain to say what they would be at this point.
Hydro One Networks, Inc. Hydro Québec TransÉnergie	☒		This project involves the revision of 27 NERC Standards, not a small task by any measure. The extent of the proposed work and the necessary expertise is beyond what can be found in one single SAR team and drafting team. We respectfully submit that the project be divided into as many SARs and teams as necessary with the work directed and monitored by the Standards Committee.
Response: The list of standards included in the scope of this SAR has been reduced to eliminate standards that will already be addressed by the IROL SDT and to eliminate the list of proposed certification standards. The Standards Committee may assign more than one drafting team to develop the standards and when the SAR drafting team asks the Standards Committee for authorization to move the SAR forward to standard drafting, the drafting team may recommend that more than one SDT be assigned to draft the standards.			
Independent Electricity System Operator	☒		There are likely additional standard revisions beyond those identified, but we find it's almost impossible to pre-determine which other standards will be affected as a result of changes to those identified in this SAR. For example, changes currently proposed for IRO-007 to IRO-010 will precipitate corresponding changes to other affected standards, e.g. TOP-003, TOP-005, etc. However, we are unable to provide any specific list of standards that will require corresponding changes not knowing what changes will be made to the standards listed in the SAR. Given the above, it should not be taken for granted that the list is exhaustive in terms of revisions required.
Response: The intent of the <i>original</i> SAR was to give the Standard Drafting Team enough latitude to address requirements that fall within a list of performance requirements. Looking to the future, the Standard Drafting Team cannot expand on the scope of its SAR but may develop a set of requirements that is smaller than the scope of the SAR. Based on stakeholder comments, the SAR DT eliminated the paragraph that would have allowed the Standard Drafting Team to expand the scope of activities to address new issues that may come up after the SAR is finalized. If new ideas are identified during standard drafting, the standard drafting team will need to revise its SAR or develop a new SAR to address those additional ideas.			

Consideration of Comments on 1st Draft of the Reliability Coordination SAR

Question #3			
Commenter	Yes	No	Comment
WECC Reliability Coordination Comments Work Group	☒	☒	The WECC RCCWG believes that the FERC Staff Report suggestion that COM-001 "generation owners missing" should not translate to addition of generation owners in the applicability. "Generator Operator" is an applicable entity, but not "Generator Owner". The WECC RCCWG believes the Reliability Coordination SAR should address those V0 comments on requirements, when those specific are no longer part of the standard referenced in the V0 comments identified in Attachment 1 of the SAR if those comments were not previously addressed. One example: posted "V0 Industry Comments" suggest inclusion of sabotage and security in R2 of COM-002. That comment is no longer applicable to COM-002 R2 - the standard requirements have changed. That said, the comment intent should not be lost
Response: The FERC comments are 'issues to consider' but are not directives for changes to the standards. The SAR was revised and any outdated V0 comments (or other organization or committee comments) comments have been removed.			
Midwest ISO Stakeholders Standards Collaboration Participants	☒	☒	Because of the overbroad nature of this SAR, the answer is likely yes. However, it is nearly impossible to determine all the additional required changes without missing important items. This SAR needs to be broken down to address individual standards.
Response: The list of standards included in the scope of this SAR has been reduced to eliminate standards that will already be addressed by the IROL SDT and to eliminate the list of proposed certification standards. The list of standards included in the scope of this SAR has been reduced to eliminate standards that will already be addressed by the IROL SDT and to eliminate the list of proposed certification standards. The SAR was modified to state that the standard drafting team will work with stakeholders to: - Eliminate redundancy in the requirements. - Identify requirements that should be moved into other SARs - Eliminate requirements that do not support bulk power system reliability - Transfer requirements that need to be in place before an entity begins operation as an RC to certification. - Fill identified gaps in the requirements for Reliability Coordination			
ISO/RTO Council ISO New England		☒	
American Transmission Co.		☒	

Consideration of Comments on 1st Draft of the Reliability Coordination SAR

Question #3			
Commenter	Yes	No	Comment
Salt River Project		☒	
PSC of South Carolina		☒	

Standard Authorization Request Form

Title of Proposed Standard	Reliability Coordination (Project 2006-06)
Request Date	December 18, 2006

SAR Requestor Information	SAR Type <i>(Check a box for each one that applies.)</i>
Name Ellis Rankin	☐ New Standard
Primary Contact Ellis Rankin	☒ Revision to existing Standards – see list below COM-001 — Telecommunications COM-002 — Communications and Coordination IRO-001 — Reliability Coordination – Responsibilities and Authorities IRO-002 — Reliability Coordination – Facilities IRO-005 — Reliability Coordination – Current Day Operations IRO-014 — Procedures to Support Coordination between Reliability Coordinators IRO-015 — Notifications and Information Exchange Between Reliability Coordinators IRO-016 — Coordination of Real-time Activities between Reliability Coordinators PER-004 — Reliability Coordination – Staffing PRC-001 — System Protection Coordination
Telephone 214-743-6828 Fax 972-263-6710	☒ Withdrawal of existing Standard Some requirements in the above standards
E-mail erankin@txued.com	☐ Urgent Action

Purpose

To ensure that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique and enforceable; and to ensure that this set of requirements is sufficient to maintain reliability of the Bulk Electric System.

Brief Description

Most of the requirements in this set of standards were translated from Operating Policies as part of the Version 0 process. There have been suggestions for improving these requirements, and the drafting team will consider comments submitted by stakeholders, drafting teams and FERC in determining what changes should be proposed to stakeholders.

The drafting team will review all of the requirements in this set of standards and make a determination, with stakeholders, on whether to:

- Modify the requirement to improve its quality
- Move the requirement (into another SAR or Standard or to the certification process or standards)
- Eliminate the requirement (either because it is redundant or because it doesn't support bulk power system reliability).

Detailed Description

The drafting team will review all of the requirements in the following set of standards:

COM-001 — Telecommunications
COM-002 — Communications and Coordination
IRO-001 — Reliability Coordination – Responsibilities and Authorities
IRO-002 — Reliability Coordination – Facilities
IRO-005 — Reliability Coordination – Current Day Operations
IRO-014 — Procedures to Support Coordination between Reliability Coordinators
IRO-015 — Notifications and Information Exchange Between Reliability Coordinators
IRO-016 — Coordination of Real-time Activities between Reliability Coordinators
PER-004 — Reliability Coordination – Staffing
PRC-001 — System Protection Coordination

For each existing requirement, the drafting team will work with stakeholders and:

- Eliminate redundancy in the requirements.
- Identify requirements that should be moved into other SARs
- Eliminate requirements that do not support bulk power system reliability
- Transfer requirements that need to be in place before an entity begins operation as an RC to certification.

The standard drafting team will also:

Coordinate with the drafting teams working on the SAR and standards for Transmission Operator and Balancing Authority standards (Project 2007-06).
Consider comments received during the initial development of this set of standards and other comments received from ERO regulatory authorities and stakeholders (Attachment 1)

Bring the standards into conformance with the latest version of the Reliability Standards Development Procedure and the ERO Rules of Procedure. (Attachment 2)

This review of the set of identified standards will satisfy the standards procedure requirement to review each approved standard at least once every five years.

Reliability Functions

The Standard will Apply to the Following Functions (Check box for each one that applies.)		
☒	Reliability Coordinator	Responsible for the real-time operating reliability of its Reliability Coordinator Area in coordination with its neighboring Reliability Coordinator's wide area view.
☒	Balancing Authority	Integrates resource plans ahead of time, and maintains load-interchange-resource balance within a Balancing Authority Area and supports system frequency in real time.
☒	Interchange Authority	Ensures communication of interchange transactions for reliability evaluation purposes and coordinates implementation of valid and balanced interchange schedules between Balancing Authority Areas.
☒	Planning Coordinator	Assesses the longer-term reliability of its Planning Coordinator Area.
☒	Resource Planner	Develops a >one year plan for the resource adequacy of its specific loads within a Planning Coordinator Area.
☒	Transmission Planner	Develops a >one year plan for the reliability of the interconnected Bulk Electric System within its portion of the Planning Coordinator area.
☒	Transmission Service Provider	Administers the transmission tariff and provides transmission services under applicable transmission service agreements (e.g., the pro forma tariff).
☒	Transmission Owner	Owns and maintains transmission facilities.
☒	Transmission Operator	Ensures the real-time operating reliability of the transmission assets within a Transmission Operator Area.
☒	Distribution Provider	Delivers electrical energy to the End-use customer.
☒	Generator Owner	Owns and maintains generation facilities.
☒	Generator Operator	Operates generation unit(s) to provide real and reactive power.
☐	Purchasing-Selling Entity	Purchases or sells energy, capacity, and necessary reliability-related services as required.
☐	Market Operator	Interface point for reliability functions with commercial functions.
☒	Load-Serving Entity	Secures energy and transmission service (and related reliability-related services) to serve the end-use customer.

Reliability and Market Interface Principles

Applicable Reliability Principles <i>(Check box for all that apply.)</i>	
☒	1. Interconnected bulk electric systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Standards.
☒	2. The frequency and voltage of interconnected bulk electric systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand.
☒	3. Information necessary for the planning and operation of interconnected bulk electric systems shall be made available to those entities responsible for planning and operating the systems reliably.
☒	4. Plans for emergency operation and system restoration of interconnected bulk electric systems shall be developed, coordinated, maintained and implemented.
☒	5. Facilities for communication, monitoring and control shall be provided, used and maintained for the reliability of interconnected bulk electric systems.
☒	6. Personnel responsible for planning and operating interconnected bulk electric systems shall be trained, qualified, and have the responsibility and authority to implement actions.
☒	7. The security of the interconnected bulk electric systems shall be assessed, monitored and maintained on a wide area basis.
Does the proposed Standard comply with all of the following Market Interface Principles? <i>(Select 'yes' or 'no' from the drop-down box.)</i>	
1. The planning and operation of bulk electric systems shall recognize that reliability is an essential requirement of a robust North American economy. Yes	
2. An Organization Standard shall not give any market participant an unfair competitive advantage. Yes	
3. An Organization Standard shall neither mandate nor prohibit any specific market structure. Yes	
4. An Organization Standard shall not preclude market solutions to achieving compliance with that Standard. Yes	
5. An Organization Standard shall not require the public disclosure of commercially sensitive information. All market participants shall have equal opportunity to access commercially non-sensitive information that is required for compliance with reliability standards. Yes	

Related Standards – Listed under description

Standard No.	Explanation

Related SARs

SAR ID	Explanation

Regional Differences

Region	Explanation
ERCOT	
FRCC	
MRO	
NPCC	
SERC	
RFC	
SPP	
WECC	

The drafting team will assist stakeholders in considering these comments in determining what changes to make to the standards:

COM-001-0 Telecommunications

FERC NOPR

- o Include generator operators and distribution provider as applicable entities; and
- o Include requirements for communication facilities for use during emergency situations.

V0 Industry Comments

- o Many players missing
- o Apply R1 to all but smallest entities

Violation Risk Factor Drafting Team Comments

- o R6 – administrative requirement

COM-002-1 Communications and Coordination

FERC NOPR

- o Include a Requirement for the reliability coordinator to assess and approve actions that have impacts beyond the area views of transmission operators or balancing authorities;
- o Include distribution providers as applicable entities; and
- o Require tightened communications protocols, especially for communications during alerts and emergencies.

V0 Industry Comments

- o Voice with generators not required
- o R1 – include reliability authority
- o R2 – include sabotage and security
- o R4 – clarify repeat back requirement with regard to emergency

IRO-001-0 Reliability Coordination – Responsibilities and Authorities

FERC NOPR

- o Reflect the process set forth in the NERC Rules of Procedures; and
- o Eliminate the regional reliability organization as an applicable entity.

Regional Fill-in-the-Blank Team Comments

- o Remove ", sub-region, or interregional coordinating group" from R1
- o Consider removing "Standards of conduct are necessary to ensure the Reliability Coordinator does not act in a manner that favors one market participant over another." from the Purpose section of the standard.

V0 Industry Comments

- o Inability to perform needs to be communicated
- o What is meant by 'interest of other entity'?

Violation Risk Factor Drafting Team Comments

- o R6 - Since the RC must be NERC certified, it stands to reason that anyone performing RC tasks should be certified. However, since the RC still retains the accountability for actions, and requirement 4 handles the agreements, this requirement is a medium risk.

IRO-002-0 Reliability Coordination – Facilities

FERC NOPR

- o Modify Requirement R7 to explicitly require a minimum set of tools for the reliability coordinator.

V0 Industry Comments

- o R5 – define synchronized information system
- o R7 – define ‘adequate’ tools and ‘wide-area’
- o Words such as ‘easily understood’ and ‘particular emphasis’ need to be tightened

IRO-005-1 Reliability Coordination – Current Day Operations

FERC NOPR

- o Propose that the ERO conduct a survey on IROL practices and experiences.
- o The Commission may propose further modifications to IRO-005-1 based on the survey results.

V0 Industry Comments

- o R10, 11 & 12 – RA not empowered to do this

IRO-016-1 Coordination of Real-Time Activities Between Reliability Coordinators

Violation Risk Factors Drafting Team Comments

- o R1.2.1 & R2 – ambiguous

PER-004-0 Reliability Coordination – Staffing

FERC NOPR

- o Include formal training requirements for reliability coordinators similar to those addressed under the personnel training Reliability Standard PER-002-0;
- o Include requirements pertaining to personnel credentials for reliability coordinators similar to those in PER-003-0; and

V0 Industry Comments

- o Calendar year timing increment
- o Other training needs to be defined

PRC-001-0 System Protection Coordination

FERC NOPR

- o Include a requirement that relevant transmission operators and generator operators must be informed immediately upon the detection of failures in relays or protection system elements on the Bulk-Power System that would threaten reliable operation, so that these entities can carry out the appropriate corrective control actions consistent with those used in mitigating IROL violations; and
- o Clarify that, after being informed of failures in relays or protection system elements on the Bulk-Power System, transmission operators or generator operators shall carry out corrective control actions, i.e., returning the system to a stable state that respects system requirements as soon as possible and no longer than 30 minutes.

V0 Industry Comments

- o Effects on reliability may not be known
- o Consistent terminology as to neighbor vs. affected
- o Not all criteria moved over from policies

The drafting team will reference these guidelines in determining what changes to make to the standards to bring them into conformance with the *Reliability Standards Development Procedure Manual, Version 6* and the *ERO Rules of Procedure*:

Standard Review Guidelines

Applicability

Does this reliability standard clearly identify the functional classes of entities responsible for complying with the reliability standard, with any specific additions or exceptions noted? Where multiple functional classes are identified is there a clear line of responsibility for each requirement identifying the functional class and entity to be held accountable for compliance? Does the requirement allow overlapping responsibilities between Registered Entities possibly creating confusion for who is ultimately accountable for compliance?

Does this reliability standard identify the geographic applicability of the standard, such as the entire North American bulk power system, an interconnection, or within a regional entity area? If no geographic limitations are identified, the default is that the standard applies throughout North America.

Does this reliability standard identify any limitations on the applicability of the standard based on electric facility characteristics, such as generators with a nameplate rating of 20 MW or greater, or transmission facilities energized at 200 kV or greater or some other criteria? If no functional entity limitations are identified, the default is that the standard applies to all identified functional entities.

Purpose

Does this reliability standard have a clear statement of purpose that describes how the standard contributes to the reliability of the bulk power system? Each purpose statement should include a value statement.

Performance Requirements

Does this reliability standard state one or more performance requirements, which if achieved by the applicable entities, will provide for a reliable bulk power system, consistent with good utility practices and the public interest?

Does each requirement identify who shall do what under what conditions and to what outcome?

Measurability

Is each performance requirement stated so as to be objectively measurable by a third party with knowledge or expertise in the area addressed by that requirement?

Does each performance requirement have one or more associated measures used to objectively evaluate compliance with the requirement?

If performance results can be practically measured quantitatively, are metrics provided within the requirement to indicate satisfactory performance?

Technical Basis in Engineering and Operations

Is this reliability standard based upon sound engineering and operating judgment, analysis, or experience, as determined by expert practitioners in that particular field?

Completeness

Is this reliability standard complete and self-contained? Does the standard depend on external information to determine the required level of performance?

Consequences for Noncompliance

In combination with guidelines for penalties and sanctions, as well as other ERO and regional entity compliance documents, are the consequences of violating a standard clearly known to the responsible entities?

Clear Language

Is the reliability standard stated using clear and unambiguous language? Can responsible entities, using reasonable judgment and in keeping with good utility practices, arrive at a consistent interpretation of the required performance?

Practicality

Does this reliability standard establish requirements that can be practically implemented by the assigned responsible entities within the specified effective date and thereafter?

Capability Requirements versus Performance Requirements

In general, requirements for entities to have ‘capabilities’ (this would include facilities for communication, agreements with other entities, etc.) should be located in the standards for certification. The certification requirements should indicate that entities have a responsibility to ‘maintain’ their capabilities.

Consistent Terminology

To the extent possible, does this reliability standard use a set of standard terms and definitions that are approved through the NERC reliability standards development process?

If the standard uses terms that are included in the NERC Glossary of Terms Used in Reliability Standards, then the term must be capitalized when it is used in the standard. New terms should not be added unless they have a ‘unique’ definition when used in a NERC reliability standard. Common terms that could be found in a college dictionary should not be defined and added to the NERC Glossary.

Are the verbs on the ‘verb list’ from the DT Guidelines? If not – do new verbs need to be added to the guidelines or could you use one of the verbs from the verb list?

Violation Risk Factors (Risk Factor)

High Risk Requirement

A requirement that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures;

or a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or

contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.

Medium Risk Requirement

A requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures;

or a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.

Lower Risk Requirement

A requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. A requirement that is administrative in nature;

or a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. A planning requirement that is administrative in nature.

Time Horizon

The drafting team should also indicate the time horizon available for mitigating a violation to the requirement using the following definitions:

- **Long-term Planning** — a planning horizon of one year or longer.
- **Operations Planning** — operating and resource plans from day-ahead up to and including seasonal.
- **Same-day Operations** — routine actions required within the timeframe of a day, but not real-time.
- **Real-time Operations** — actions required within one hour or less to preserve the reliability of the bulk electric system.
- **Operations Assessment** — follow-up evaluations and reporting of real time operations.

Violation Severity Levels

The drafting team should indicate a set of violation severity levels that can be applied for the requirements within a standard. ('Violation severity levels' replace existing 'levels of non-compliance.')

The violation severity levels must be applied for each requirement and may be combined to cover multiple requirements, as long as it is clear which requirements are included and that all requirements are included.

The violation severity levels should be based on the following definitions:

- **Lower: mostly compliant with minor exceptions** — The responsible entity is mostly compliant with and meets the intent of the requirement but is deficient with respect to one or more minor details. Equivalent score: 95% to 99% compliant.
- **Moderate: mostly compliant with significant exceptions** — The responsible entity is mostly compliant with and meets the intent of the requirement but is deficient with respect to one or more significant elements. Equivalent score: 85% to 94% compliant.
- **High: marginal performance or results** — The responsible entity has only partially achieved the reliability objective of the requirement and is missing one or more significant elements. Equivalent score: 70% to 84% compliant.
- **Severe: poor performance or results** — The responsible entity has failed to meet the reliability objective of the requirement. Equivalent score: less than 70% compliant.

Compliance Monitor

Replace, ‘Regional Reliability Organization’ with ‘Regional Entity’

Fill-in-the-blank Requirements

Do not include any ‘fill-in-the-blank’ requirements. These are requirements that assign one entity responsibility for developing some performance measures without requiring that the performance measures be included in the body of a standard – then require another entity to comply with those requirements.

Every reliability objective can be met, at least at a threshold level, by a North American standard. If we need regions to develop regional standards, such as in under-frequency load shedding, we can always write a uniform North American standard for the applicable functional entities as a means of encouraging development of the regional standards.

Requirements for Regional Reliability Organization

Do not write any requirements for the Regional Reliability Organization. Any requirements currently assigned to the RRO should be re-assigned to the applicable functional entity.

Effective Dates

Must be 1st day of 1st quarter after entities are expected to be compliant – must include time to file with regulatory authorities and provide notice to responsible entities of the obligation to comply. If the standard is to be actively monitored, time for the Compliance Monitoring and Enforcement Program to develop reporting instructions and modify the Compliance Data Management System(s) both at NERC and Regional Entities must be provided in the implementation plan.

Associated Documents

If there are standards that are referenced within a standard, list the full name and number of the standard under the section called, ‘Associated Documents’.

Functional Model Version 3

Review the requirements against the latest descriptions of the responsibilities and tasks assigned to functional entities as provided in pages 13 through 53 of the draft Functional Model Version 3.

March 19, 2007

TO: REGISTERED BALLOT BODY

Ladies and Gentlemen:

Announcement: Comment Periods Open for SAR for Reliability Coordination, SAR for Operating Personnel Communications Protocols, and Relay Loadability Standard

The Standards Committee (SC) announces the following standards actions:

SAR to Modify the Reliability Coordinator Standards (March 19–April 17, 2007)

The Reliability Coordination SAR drafting team posted the second draft of its SAR for [Project 2006-06](#) for a 30-day comment period from March 19 through April 17, 2007.

The SAR proposes retiring, modifying or moving to other standards the Reliability Coordinator requirements contained within a set of ten already approved standards. The purpose of making these modifications is to ensure that the remaining requirements are clear, measurable, unique and enforceable; and to ensure that this set of requirements is sufficient to maintain reliability of the Bulk Electric System. This project also involves addressing concerns raised by FERC and stakeholders and involves bringing the set of standards into conformance with the ERO Rules of Procedure and the latest version of the Reliability Standards Development Procedure. Please use the [comment form](#) to provide comments on this SAR.

SAR for Project 2007-02 Operating Personnel Communications Protocols (March 19–April 17, 2007)

The Operating Personnel Communications Protocols SAR for [Project 2007-02](#) is posted for a 30-day comment period from March 19 through April 17, 2007.

This SAR calls for the development of communications protocols for use by real-time system operators to improve situational awareness and shorten response time. The need for improved real-time communications protocols was identified during the investigation of the August 2003 Blackout. Please use the [comment form](#) to provide comments on this SAR.

Transmission Relay Loadability Standard (March 19–April 17, 2007)

The [Transmission Relay Loadability](#) drafting team posted the third draft of its standard for a 30-day comment period from March 19 through April 17, 2007. The drafting team is seeking comments on a change in the requirements that assigns responsibility for identifying certain critical facilities to the planning coordinator, in support of the latest approved version of the [Functional Model](#).

The standard codifies the relay loadability criteria embodied in the NERC Recommendation 8a, *Improve System Protection to Slow or Limit the Spread of Future Cascading Outages*, and U.S.–Canada Power System Outage Task Force Recommendation 21A, *Make More Effective and*

REGISTERED BALLOT BODY

March 19, 2007

Page Two

Wider Use of System Protection Measures. Please use the [comment form](#) to provide comments on this standard.

Standards Development Process

The [Reliability Standards Development Procedure](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate. If you have any questions, please contact me at 813-468-5998 or maureen.long@nerc.net.

Sincerely,

Maureen E. Long

cc: Registered Ballot Body Registered Users
Standards Mailing List
NERC Roster

Comment Form — 2nd Posting of Reliability Coordination SAR

Please use this form to submit comments on the second draft of the Reliability Coordination SAR. Comments must be submitted by **April 17, 2007**. You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Reliability Coordination" in the subject line. If you have questions please contact Maureen Long at maureen.long@nerc.net or by telephone at 813-468-5998.

Individual Commenter Information (Complete this page for comments from one organization or individual.)		
Name:		
Organization:		
Telephone:		
E-mail:		
NERC Region		Registered Ballot Body Segment
☐ ERCOT	☐	1 — Transmission Owners
☐ FRCC	☐	2 — RTOs, ISOs,
☐ MRO	☐	3 — Load-serving Entities
☐ NPCC	☐	4 — Transmission-dependent Utilities
☐ RFC	☐	5 — Electric Generators
☐ SERC	☐	6 — Electricity Brokers, Aggregators, and Marketers
☐ SPP	☐	7 — Large Electricity End Users
☐ WECC	☐	8 — Small Electricity End Users
☐ NA – Not Applicable	☐	9 — Federal, State, Provincial Regulatory or other Government Entities
	☐	10 — Regional Reliability Organizations, Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:[illegible]

*If more than one Region or Segment applies, indicate the best fit for the purpose of these comments. Regional acronyms and segment numbers are shown on prior page.

Background Information

The purpose of this SAR is to review a set of standards that includes reliability coordinator requirements with the intent of eliminating duplicate requirements and upgrading and reorganizing the requirements.

Based on stakeholder comments, the drafting team made several significant changes to the first draft of the SAR, including the following:

- Reduced the number of standards addressed in this project by eliminating consideration of standards that have not been approved, and standards expected to be retired as part of the IROL Implementation Plan.
- Revised the Descriptions to state more clearly the approach the standard drafting team will take in determining what action to take with each requirement in the set of standards. The drafting team will work with stakeholders to determine whether to:
 - o Modify the requirement to improve its quality
 - o Move the requirement (into another SAR or Standard or to the certification process or standards)
 - o Eliminate the requirement (either because it is redundant or because it doesn't support Bulk Electric System reliability).
- Revised the descriptions of the 'Reliability Functions' to reflect the latest version of the Functional Model (V3).

The SAR Drafting Team asks that you review the revised SAR and then answer the questions on the following page.

You do not have to answer all questions. Enter All Comments in Simple Text Format.

Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.

1. The drafting team reduced the scope of this SAR to eliminate review of standards that are still under development, including IRO-007-1 through IRO-010-1, and ORG-027-1. Do you agree with this modification? If not, please explain in the comment area.

☐ Yes

☐ No

Comments:

2. The drafting team modified the SAR to be more exacting in describing the scope of changes proposed for the set of standards. The revised SAR clarifies that the Standard Drafting Team will work with stakeholders to determine what to do with each of the existing requirements:

- Modify the requirement to improve its quality
- Move the requirement (into another SAR or Standard or to the certification process or standards)
- Eliminate the requirement (either because it is redundant or because it doesn't support Bulk Electric System reliability).

Do you agree with this approach to reviewing the requirements? If not, please explain in the comment area.

☐ Yes

☐ No

Comments:

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

☐ Yes

☐ No

Comments:

4. Several stakeholders indicated that the drafting team should remove the language in the original SAR that would have allowed the standard drafting team to add requirements to the standards if those additions were supported by stakeholders. The drafting team modified the SAR in support of those comments. The SAR drafting team thinks that additional SARs can be developed in the future to address any gaps in this set of requirements. Any new SARs generated by this effort would follow the normal standards development process. Do you support this approach?

☐ Yes

☐ No

Comments:

5. If you have any other comments on this SAR that you have not already submitted above, please provide them here.

☐ No additional comments

Comments:

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Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

[illegible]

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☒ Yes

☐ No

Comments:

2. The drafting team modified the SAR to be more exacting in describing the scope of changes proposed for the set of standards. The revised SAR clarifies that the Standard Drafting Team will work with stakeholders to determine what to do with each of the existing requirements:

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Do you agree with this approach to reviewing the requirements? If not, please explain in the comment area.

☒ Yes

☐ No

Comments: However, this is a large scope (a large amount of work) for the standard drafting team. Wherever possible, it is recommended that the drafting team list and explain the criteria it is using so that it may be easier to achieve stakeholder consensus where many related changes are made. With such a large scope the drafting team should consider carefully how the changes are balloted so ballots don't fail because stakeholders object to a minor subset of issues in a particular ballot.

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

☐ Yes

☒ No

Comments:

4. Several stakeholders indicated that the drafting team should remove the language in the original SAR that would have allowed the standard drafting team to add requirements to the standards if those additions were supported by stakeholders. The drafting team modified the SAR in support of those comments. The SAR drafting team thinks that additional SARs can be developed in the future to address any gaps in this

Comment Form — 2nd Posting of Reliability Coordination SAR

set of requirements. Any new SARs generated by this effort would follow the normal standards development process. Do you support this approach?

☒ Yes

☐ No

Comments:

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Comment Form — 2nd Posting of Reliability Coordination SAR

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Comment Form — 2nd Posting of Reliability Coordination SAR

Group Comments (Complete this page if comments are from a group.)

Group Name: Midwest Standards Collaboration Group
Lead Contact: Terry Bilke
Contact Organization: Midwest ISO
Contact Segment: 2
Contact Telephone: 317-249-5463
Contact E-mail: tbilke@midwestiso.org

Additional Member Name	Additional Member Organization	Region*	Segment*
David Lemmons	Xcel Energy	MRO	6
Jim Cyrulewski	JDRJC Associates	RFC	8

*If more than one Region or Segment applies, indicate the best fit for the purpose of these comments. Regional acronyms and segment numbers are shown on prior page.

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You do not have to answer all questions. Enter All Comments in Simple Text Format.

Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.

1. The drafting team reduced the scope of this SAR to eliminate review of standards that are still under development, including IRO-007-1 through IRO-010-1, and ORG-027-1. Do you agree with this modification? If not, please explain in the comment area.

☒ Yes

☐ No

Comments:

2. The drafting team modified the SAR to be more exacting in describing the scope of changes proposed for the set of standards. The revised SAR clarifies that the Standard Drafting Team will work with stakeholders to determine what to do with each of the existing requirements:

- Modify the requirement to improve its quality
- Move the requirement (into another SAR or Standard or to the certification process or standards)
- Eliminate the requirement (either because it is redundant or because it doesn't support Bulk Electric System reliability).

Do you agree with this approach to reviewing the requirements? If not, please explain in the comment area.

☒ Yes

☒ No

Comments: We agree with improving the quality of the requirements, removing redundancies and those things that do not contribute to reliability.

It isn't clear what stakeholders will be involved to improve these standards. Is it the ballot body as a whole or some other forum? Since there is no drafting team roster, we are not sure who is working on this project and who are the stakeholders suggesting the changes to requirements.

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

☒ Yes

☐ No

Comments: The FERC NOPR should not be used to change the standards. Items in the final order should be given due consideration.

Several of V0 comments items are not clear. They are primarily bullet notes with no context. Is there additional information about these comments somewhere?

4. Several stakeholders indicated that the drafting team should remove the language in the original SAR that would have allowed the standard drafting team to add requirements to the standards if those additions were supported by stakeholders. The drafting team modified the SAR in support of those comments. The SAR drafting team thinks that additional SARs can be developed in the future to address any gaps in this set of requirements. Any new SARs generated by this effort would follow the normal standards development process. Do you support this approach?

☒ Yes

☐ No

Comments:

5. If you have any other comments on this SAR that you have not already submitted above, please provide them here.

☐ No additional comments

Comments: We disagree with the assignment of Violation Severity Levels (VSL). The drafting team should assess the likely bounds of performance and the VSLs should be divided into four relatively equal portions. Yes/No requirements should not arbitrarily be counted as Severe violations. The proposed VSL breakdown in the SAR is not part of the Sanctions Guidelines and the proposed process has not been vetted in the industry.

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Comment Form — 2nd Posting of Reliability Coordination SAR

Group Comments (Complete this page if comments are from a group.)

Group Name: Midwest Reliability Organization
Lead Contact: Terry Bilke
Contact Organization: MRO for Group (Midwest ISO for Lead)
Contact Segment: 2
Contact Telephone: 317-249-5463
Contact E-mail: tbilke@midwestiso.org

Additional Member Name	Additional Member Organization	Region*	Segment*
Neal Balu	WPSR	MRO	10
Joe Knight	GRE	MRO	10
Al Boesch	NPPD	MRO	10
Robert Coish, Chair	MHEB	MRO	10
Carol Gerou	MP	MRO	10
Ken Goldsmith	ALT	MRO	10
Todd Gosnell	OPPD	MRO	10
Jim Haigh	WAPA	MRO	10
Pam Oreschnik	XEL	MRO	10
Dave Rudolph	BEPC	MRO	10
Eric Ruskamp	LES	MRO	10
Mike Brytowski, Secretary	MRO	MRO	10
27 Additional MRO Members	Not Named Above	MRO	10

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The SAR Drafting Team asks that you review the revised SAR and then answer the questions on the following page.

You do not have to answer all questions. Enter All Comments in Simple Text Format.

Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.

1. The drafting team reduced the scope of this SAR to eliminate review of standards that are still under development, including IRO-007-1 through IRO-010-1, and ORG-027-1. Do you agree with this modification? If not, please explain in the comment area.

☒ Yes

☐ No

Comments: We agree with excluding standards still under development.

2. The drafting team modified the SAR to be more exacting in describing the scope of changes proposed for the set of standards. The revised SAR clarifies that the Standard Drafting Team will work with stakeholders to determine what to do with each of the existing requirements:

- Modify the requirement to improve its quality
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- Eliminate the requirement (either because it is redundant or because it doesn't support Bulk Electric System reliability).

Do you agree with this approach to reviewing the requirements? If not, please explain in the comment area.

☒ Yes

☒ No

Comments: We agree with improving the quality of the requirements, removing redundancies and those things that do not contribute to reliability. We do not see a listing of the drafting team members and it is unclear what stakeholders will be involved to improve these standards.

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

☒ Yes

☐ No

Comments: The FERC NOPR should not be used to change the standards. Items in the final order should be considered.

Several of V0 comments items are not clear. It would help if these fill comments were posted somewhere for reference.

We disagree with the assignment of Violation Severity Levels (VSL). VSLs should not be skewed to inflate the sanctions associated with a requirement. The drafting team should assess the likely bounds of performance and the VSLs should be divided into four relatively equal portions. The proposed breakdown in the SAR is not part of the Sanctions Guidelines and has not been vetted in the industry.

4. Several stakeholders indicated that the drafting team should remove the language in the original SAR that would have allowed the standard drafting team to add requirements to the standards if those additions were supported by stakeholders. The drafting team modified the SAR in support of those comments. The SAR drafting team thinks that additional SARs can be developed in the future to address any gaps in this set of requirements. Any new SARs generated by this effort would follow the normal standards development process. Do you support this approach?

☒ Yes

☐ No

Comments:

5. If you have any other comments on this SAR that you have not already submitted above, please provide them here.

☒ No additional comments

Comments:

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Comment Form — 2nd Posting of Reliability Coordination SAR

Group Comments (Complete this page if comments are from a group.)

Group Name: NPCC CP9 Reliability Standards Working Group
Lead Contact: Guy V. Zito
Contact Organization: Northeast Power Coordinating Council
Contact Segment: 10
Contact Telephone: 212-840-1070
Contact E-mail: gzito@npcc.org

Additional Member Name	Additional Member Organization	Region*	Segment*
Ralph Rufrano	New York Power Authority	NPCC	1
Ron Falsetti	The IESO, Ontario	NPCC	2
Roger Champagne	TransEnergie HydroQuebec	NPCC	1
Randy Macdonald	New Brunswick System Operator	NPCC	2
Herb Schrayshuen	National Grid US	NPCC	1
Al Adamson	New York State Reliability Council	NPCC	10
Kathleen Goodman	ISO-New England	NPCC	2
David Kiguel	Hydro One Networks	NPCC	1
William Shemley	ISO-New England	NPCC	2
Murale Gopinathan	Northeast Utilities	NPCC	1
Michael Schiavone	National Grid US	NPCC	1
Greg Campoli	New York ISO	NPCC	2
Donald Nelson	MA Dept of Tel.and Energy	NPCC	9
Ed Thompson	ConEd	NPCC	1
Guy V. Zito	NPCC	NPCC	10
Michael Rinalli	National Grid US	NPCC	1

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☒ Yes

☐ No

Comments:

2. The drafting team modified the SAR to be more exacting in describing the scope of changes proposed for the set of standards. The revised SAR clarifies that the Standard Drafting Team will work with stakeholders to determine what to do with each of the existing requirements:

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Do you agree with this approach to reviewing the requirements? If not, please explain in the comment area.

☒ Yes

☐ No

Comments:

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

☐ Yes

☒ No

Comments:

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☐ No

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Individual Commenter Information (Complete this page for comments from one organization or individual.)		
Name:	Michael Calimano	
Organization:	New York Independent System Operator	
Telephone:	518-356-6129	
E-mail:	mcalimano@nyiso.com	
NERC Region		Registered Ballot Body Segment
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☐ MRO	☐	3 — Load-serving Entities
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☐ RFC	☐	5 — Electric Generators
☐ SERC	☐	6 — Electricity Brokers, Aggregators, and Marketers
☐ SPP	☐	7 — Large Electricity End Users
☐ WECC	☐	8 — Small Electricity End Users
☐ NA – Not Applicable	☐	9 — Federal, State, Provincial Regulatory or other Government Entities
	☐	10 — Regional Reliability Organizations, Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:**Contact E-mail:**[illegible]

*If more than one Region or Segment applies, indicate the best fit for the purpose of these comments. Regional acronyms and segment numbers are shown on prior page.

Background Information

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 - o Move the requirement (into another SAR or Standard or to the certification process or standards)
 - o Eliminate the requirement (either because it is redundant or because it doesn't support Bulk Electric System reliability).
- Revised the descriptions of the 'Reliability Functions' to reflect the latest version of the Functional Model (V3).

The SAR Drafting Team asks that you review the revised SAR and then answer the questions on the following page.

You do not have to answer all questions. Enter All Comments in Simple Text Format.

Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.

1. The drafting team reduced the scope of this SAR to eliminate review of standards that are still under development, including IRO-007-1 through IRO-010-1, and ORG-027-1. Do you agree with this modification? If not, please explain in the comment area.

☒ Yes

☐ No

Comments:

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- Eliminate the requirement (either because it is redundant or because it doesn't support Bulk Electric System reliability).

Do you agree with this approach to reviewing the requirements? If not, please explain in the comment area.

☒ Yes

☐ No

Comments:

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

☐ Yes

☒ No

Comments:

4. Several stakeholders indicated that the drafting team should remove the language in the original SAR that would have allowed the standard drafting team to add requirements to the standards if those additions were supported by stakeholders. The drafting team modified the SAR in support of those comments. The SAR drafting team thinks that additional SARs can be developed in the future to address any gaps in this set of requirements. Any new SARs generated by this effort would follow the normal standards development process. Do you support this approach?

☒ Yes

☐ No

Comments:

5. If you have any other comments on this SAR that you have not already submitted above, please provide them here.

☒ No additional comments

Comments:

Comment Form — 1st Posting of Reliability Coordination SAR

Please use this form to submit comments on the Reliability Coordination SAR. Comments must be submitted by **February 14, 2007**. You may submit the completed form by e-mail to sarcomm@nerc.com with the words "Reliability Coordination" in the subject line. If you have questions, please contact Maureen Long at maureen.long@nerc.net or by telephone at 813-468-5998.

Individual Commenter Information		
(Complete this page for comments from one organization or individual.)		
Name:	Mike Gentry	
Organization:	Salt River Project	
Telephone:	602-236-6408	
E-mail:	Mike.Gentry@srpnet.com	
NERC Region		Registered Ballot Body Segment
☐ ERCOT	☒	1 — Transmission Owners
☐ FRCC	☐	2 — RTOs, ISOs,
☐ MRO	☐	3 — Load-serving Entities
☐ NPCC	☐	4 — Transmission-dependent Utilities
☐ RFC	☐	5 — Electric Generators
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Comment Form — 1st Posting of Reliability Coordination SAR

Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

[illegible]

*If more than one region or segment applies, indicate the best fit for the purpose of these comments. Regional acronyms and segment numbers are shown on prior page.

Background Information

The purpose of this SAR is to review the set of standards that includes reliability coordinator requirements with the intent of eliminating duplicate requirements and upgrading and reorganizing the requirements to ensure that there are requirements that address the reliability coordinator's processes, procedures, plans, tools, and authorities to support real-time operating reliability within its own reliability area and between reliability coordinator areas in support of reliability of the interconnected bulk power systems.

The scope of the SAR includes the following:

- The drafting team will review all of the requirements in this set of standards and eliminate all of the requirements that are redundant. There are redundancies between requirements in the IRO-sequence of standards and also redundancies between requirements in the IRO-sequence of standards and the ORG-sequence of standards, and redundancies with PER-004, COM-001, COM-002, and PRC-001. Note that there will be a new standard to address communication protocols (Project 2007-02) and requirements for real-time communication protocols need to be transferred to that new standard.
- The drafting team also needs to review requirements and ensure that the distinctions between the functional entity and the real-time system operator are clear and distinct. The requirements should be written for the functional entity.
- The drafting team also needs to clarify the responsibilities and authorities in the requirements when comparing the "reliability coordinator" and the "transmission operator."
- The drafting team needs to verify that requirements exempt the real time-operator from liability when making a good faith effort at preserving reliability.
- The drafting team needs to address the reliability coordinator's facilities. A challenge has been to require that entities have "facilities" in place and available to the real-time system operators. These facilities are reviewed during certification, and unless there is a specific requirement to review these facilities, they may not be reviewed after the initial certification. To eliminate redundancy between the "certification" standards and the standards that are aimed more at real-time operations, the certification standards could be phrased to clarify that entities are required to "have and maintain" the specified facilities. This would enable the compliance monitor to check facilities on a periodic basis. While checking the facilities that are used on a daily basis may not be necessary, making periodic checks of the facilities that are infrequently would motivate entities to maintain these facilities, e.g., "Shall have a back-up power supply for critical operations, and shall maintain and test at least once per year."
- The results of the Operating Committee's study on operator situational awareness tools should be used to verify that the requirements in the certification standards will meet reliability needs.
- This project also needs to be coordinated with the project for developing transmission operator and balancing authority standards (2007-06).
- IRO-001 has some "fill-in-the-blank" components to eliminate.

Comment Form — 1st Posting of Reliability Coordination SAR

- The development may include other improvements to the standards deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing high quality, enforceable and technically sufficient bulk power system reliability standards.

Comment Form — 1st Posting of Reliability Coordination SAR

You do not have to answer all questions. Enter All Comments in Simple Text Format.

Insert a “check” mark in the appropriate boxes by double-clicking the gray areas.

1. Do you agree that there is a reliability-related need to for the proposed revisions to this set of standards? If not, please explain in the comment area.

☒ Yes

☐ No

Comments:

2. Do you agree with the scope of the SAR? If not, please explain in the comment area.

☐ Yes

☒ No

Comments: The FERC NOPR and FERC Staff comments under Standard PRC-001-0, System Protection Coordination, do not apply to Reliability Coordination. In fact, the current Standard, PRC-001-1, does not apply to Reliability Coordinators. This Standard should be removed from the scope of this SAR.

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

☐ Yes

☒ No

Comments:

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Please use this form to submit comments on the second draft of the Reliability Coordination SAR. Comments must be submitted by **April 17, 2007**. You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Reliability Coordination" in the subject line. If you have questions please contact Maureen Long at maureen.long@nerc.net or by telephone at 813-468-5998.

Individual Commenter Information (Complete this page for comments from one organization or individual.)		
Name:		
Organization:		
Telephone:		
E-mail:		
NERC Region		Registered Ballot Body Segment
☐ ERCOT	☐	1 — Transmission Owners
☐ FRCC	☐	2 — RTOs, ISOs,
☐ MRO	☐	3 — Load-serving Entities
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Comment Form — 2nd Posting of Reliability Coordination SAR

Group Comments (Complete this page if comments are from a group.)

Group Name: WECC Reliability Coordination Comments Work Group
Lead Contact: Nancy Bellows
Contact Organization: WECC
Contact Segment: 10
Contact Telephone: 970-461-7246
Contact E-mail: bellows@wapa.gov

Additional Member Name	Additional Member Organization	Region*	Segment*
Mike Gentry	SRP	WECC	10
Robert Johnson	Xcel - PSC	WECC	10
Frank McElvain	RDRC	WECC	10
Greg Tillitson	CMRC	WECC	10

*If more than one Region or Segment applies, indicate the best fit for the purpose of these comments. Regional acronyms and segment numbers are shown on prior page.

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Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.

1. The drafting team reduced the scope of this SAR to eliminate review of standards that are still under development, including IRO-007-1 through IRO-010-1, and ORG-027-1. Do you agree with this modification? If not, please explain in the comment area.

☒ Yes

☐ No

Comments:

2. The drafting team modified the SAR to be more exacting in describing the scope of changes proposed for the set of standards. The revised SAR clarifies that the Standard Drafting Team will work with stakeholders to determine what to do with each of the existing requirements:

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- Eliminate the requirement (either because it is redundant or because it doesn't support Bulk Electric System reliability).

Do you agree with this approach to reviewing the requirements? If not, please explain in the comment area.

☒ Yes

☐ No

Comments: The WECC RCCWG agrees with the overall approach. That said, there is currently another SAR in process that addresses communications protocols and paths. The referenced SAR, "Operating Personnel Communications Protocols" is also meant to address FERC comments relative to communications protocols. Having two separate SARs that address the same comment seems redundant.

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

☐ Yes

☒ No

Comments:

4. Several stakeholders indicated that the drafting team should remove the language in the original SAR that would have allowed the standard drafting team to add requirements to the standards if those additions were supported by stakeholders. The drafting team modified the SAR in support of those comments. The SAR drafting team thinks that additional SARs can be developed in the future to address any gaps in this set of requirements. Any new SARs generated by this effort would follow the normal standards development process. Do you support this approach?

☒ Yes

☐ No

Comments:

5. If you have any other comments on this SAR that you have not already submitted above, please provide them here.

☐ No additional comments

Comments: The WECC RCCWG believes that revision to each existing Standard, as a result of this SAR, should be individually balloted, instead of grouped together in one ballot on the entire group of changes.

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Individual Commenter Information (Complete this page for comments from one organization or individual.)		
Name:	Jeff Hackman	
Organization:	Ameren Services	
Telephone:	314.554.2839	
E-mail:	jhackman@ameren.com	
NERC Region		Registered Ballot Body Segment
☐ ERCOT	☒	1 — Transmission Owners
☐ FRCC	☐	2 — RTOs, ISOs,
☐ MRO	☐	3 — Load-serving Entities
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Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

[illegible]

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☒ Yes

☐ No

Comments:

2. The drafting team modified the SAR to be more exacting in describing the scope of changes proposed for the set of standards. The revised SAR clarifies that the Standard Drafting Team will work with stakeholders to determine what to do with each of the existing requirements:

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Do you agree with this approach to reviewing the requirements? If not, please explain in the comment area.

☒ Yes

☒ No

Comments: We agree with improving the quality of the requirements, removing redundancies and those things that do not contribute to reliability.

It isn't clear what stakeholders will be involved to improve these standards. Is it the ballot body as a whole or some other forum? Since there is no drafting team roster, we are not sure who is working on this project and who are the stakeholders suggesting the changes to requirements.

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

☒ Yes

☐ No

Comments: The FERC NOPR should not be used to change the standards. Items in the final order should be given due consideration.

Several of V0 comments items are not clear. They are primarily bullet notes with no context. Is there additional information about these comments somewhere?

4. Several stakeholders indicated that the drafting team should remove the language in the original SAR that would have allowed the standard drafting team to add requirements to the standards if those additions were supported by stakeholders. The drafting team modified the SAR in support of those comments. The SAR drafting team thinks that additional SARs can be developed in the future to address any gaps in this set of requirements. Any new SARs generated by this effort would follow the normal standards development process. Do you support this approach?

☒ Yes

☐ No

Comments:

5. If you have any other comments on this SAR that you have not already submitted above, please provide them here.

☐ No additional comments

Comments: We disagree with the assignment of Violation Severity Levels (VSL). The drafting team should assess the likely bounds of performance and the VSLs should be divided into four relatively equal portions. Yes/No requirements should not arbitrarily be counted as Severe violations. The proposed VSL breakdown in the SAR is not part of the Sanctions Guidelines and the proposed process has not been vetted in the industry.

To the extent that requirements are modified or moved, care should be taken to make sure that the two-way exchange of information between RC and TOP and RC and BA should be preserved.

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Individual Commenter Information (Complete this page for comments from one organization or individual.)		
Name:	Jason Shaver	
Organization:	American Transmission Company	
Telephone:	262 506 6885	
E-mail:	jshaver@atcllc.com	
NERC Region		Registered Ballot Body Segment
☐ ERCOT	☒	1 — Transmission Owners
☐ FRCC	☐	2 — RTOs, ISOs,
☒ MRO	☐	3 — Load-serving Entities
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Group Name:

Lead Contact:

Contact Organization:**Contact Segment:****Contact Telephone:**

Contact E-mail:

[illegible]

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☒ Yes

☐ No

Comments:

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Do you agree with this approach to reviewing the requirements? If not, please explain in the comment area.

☒ Yes

☐ No

Comments:

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

☒ Yes

☐ No

Comments: The SAR needs to be further refined to identify those specific requirements that will be:

- 1) Reviewed as being duplicative
- 2) Considered being relocated
- 3) Considered being eliminated

4. Several stakeholders indicated that the drafting team should remove the language in the original SAR that would have allowed the standard drafting team to add requirements to the standards if those additions were supported by stakeholders. The drafting team modified the SAR in support of those comments. The SAR drafting team thinks that additional SARs can be developed in the future to address any gaps in this set of requirements. Any new SARs generated by this effort would follow the normal standards development process. Do you support this approach?

☒ Yes

☐ No

Comments: The SAR identified standards IRO-014 and IRO-015 on its first page but does not address these standards in Attachment 1. The SAR needs to be updated to either acknowledge that these two standards will not be changed or identify what needs to be corrected.

Attachment 1:

COM-001-0

NERC has a current effort to address communication facilities in standard EOP-008. This group needs to be aware of that effort and should insure that any change to COM-001 does not counter that effort of EOP-008.

How will this effort differ from the other NERC effort?

COM-002-1

NERC has a current effort to address communication protocol in emergencies with "Operating Personnel Communications Protocols." Similar to our previous comment this group needs to be aware of that effort and should insure that any change to COM-002 does not counter that groups efforts.

How will this effort differ from the other NERC effort?

IRO-001-0

Please provide additional information on the following bullet point:

"Reflect the process set forth in the NERC Rules of Procedures"

What specific sections of NERC Rules of Procedure will be reflected in IRO-001-0?

IRO-005-1

The first bullet point does not seem to fall within the goal of this SAR.

"Propose that the ERO conduct a survey of IROL practices and experiences."

This effort does not need to go through NERC Reliability Standards Development Process to be performed. NERC could take up this effort at any time and it will slow down this process if it is going to be included in this SAR.

PER-004-0

NERC has another group that is looking into to these concerns.

How will this effort differ from that effort?

Comment Form — 2nd Posting of Reliability Coordination SAR

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☐ No additional comments

Comments:

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Individual Commenter Information (Complete this page for comments from one organization or individual.)		
Name:	Susan Renne	
Organization:	Bonneville Power Administration	
Telephone:	(360) 418-2912	
E-mail:	smrenne@bpa.gov	
NERC Region		Registered Ballot Body Segment
☐ ERCOT	☒	1 — Transmission Owners
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☒ Yes

☐ No

Comments: No comments

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- Eliminate the requirement (either because it is redundant or because it doesn't support Bulk Electric System reliability).

Do you agree with this approach to reviewing the requirements? If not, please explain in the comment area.

☒ Yes

☐ No

Comments: No comments

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

☒ Yes

☐ No

Comments: No comments at this time. We will comment when the standards are up for comment.

4. Several stakeholders indicated that the drafting team should remove the language in the original SAR that would have allowed the standard drafting team to add requirements to the standards if those additions were supported by stakeholders. The drafting team modified the SAR in support of those comments. The SAR drafting team thinks that additional SARs can be developed in the future to address any gaps in this set of requirements. Any new SARs generated by this effort would follow the normal standards development process. Do you support this approach?

☐ Yes

☒ No

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Comments: No comments

5. If you have any other comments on this SAR that you have not already submitted above, please provide them here.

☒ No additional comments

Comments: No comments at this time. We will comment when the standards are up for comment.

Comment Form — 2nd Posting of Reliability Coordination SAR

Please use this form to submit comments on the second draft of the Reliability Coordination SAR. Comments must be submitted by **April 17, 2007**. You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Reliability Coordination" in the subject line. If you have questions please contact Maureen Long at maureen.long@nerc.net or by telephone at 813-468-5998.

Individual Commenter Information		
(Complete this page for comments from one organization or individual.)		
Name:	CJ Ingersoll	
Organization:	Constellation	
Telephone:	713-332-2906	
E-mail:	c.j.ingersoll@constellation.com	
NERC Region		Registered Ballot Body Segment
☐ ERCOT	☐	1 — Transmission Owners
☐ FRCC	☐	2 — RTOs, ISOs,
☐ MRO	☒	3 — Load-serving Entities
☐ NPCC	☐	4 — Transmission-dependent Utilities
☐ RFC	☐	5 — Electric Generators
☐ SERC	☐	6 — Electricity Brokers, Aggregators, and Marketers
☐ SPP	☐	7 — Large Electricity End Users
☐ WECC	☐	8 — Small Electricity End Users
☐ NA – Not Applicable	☐	9 — Federal, State, Provincial Regulatory or other Government Entities
	☐	10 — Regional Reliability Organizations, Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

[illegible]

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- Revised the descriptions of the 'Reliability Functions' to reflect the latest version of the Functional Model (V3).

The SAR Drafting Team asks that you review the revised SAR and then answer the questions on the following page.

You do not have to answer all questions. Enter All Comments in Simple Text Format.

Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.

1. The drafting team reduced the scope of this SAR to eliminate review of standards that are still under development, including IRO-007-1 through IRO-010-1, and ORG-027-1. Do you agree with this modification? If not, please explain in the comment area.

☒ Yes

☐ No

Comments: CECD feels that given the number of standards that IRO-007-1 and IRO-010-1 may impact [IRO-002-1 R2, IRO-002-1 R6, IRO-003-2, IRO-004-1 R4 and R5, IRO-005-2 R1, TOP-003-0 R1.2, TOP-005-1 R1] CECD disagrees with removing them from consideration. We do agree with the decision to exclude ORG-027-1.

2. The drafting team modified the SAR to be more exacting in describing the scope of changes proposed for the set of standards. The revised SAR clarifies that the Standard Drafting Team will work with stakeholders to determine what to do with each of the existing requirements:

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Do you agree with this approach to reviewing the requirements? If not, please explain in the comment area.

☒ Yes

☐ No

Comments:

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

☒ Yes

☐ No

Comments:

4. Several stakeholders indicated that the drafting team should remove the language in the original SAR that would have allowed the standard drafting team to add requirements to the standards if those additions were supported by stakeholders. The drafting team modified the SAR in support of those comments. The SAR drafting team thinks that additional SARs can be developed in the future to address any gaps in this set of requirements. Any new SARs generated by this effort would follow the normal standards development process. Do you support this approach?

☒ Yes

Comment Form — 2nd Posting of Reliability Coordination SAR

☐ No

Comments:

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☐ No additional comments

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Individual Commenter Information (Complete this page for comments from one organization or individual.)		
Name:	Ed Davis	
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NERC Region		Registered Ballot Body Segment
☐ ERCOT	☒	1 — Transmission Owners
☐ FRCC	☐	2 — RTOs, ISOs,
☐ MRO	☐	3 — Load-serving Entities
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Group Name:

Lead Contact:

Contact Organization:**Contact Segment:****Contact Telephone:**

Contact E-mail:

[illegible]

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☐ Yes

☒ No

Comments:

We agree with the reduction of standards to be included in this body of work. However, we suggest PRC-001 should also be eliminated from this SAR.

The title of the SAR is Reliability Coordination, but the purpose is to ensure requirements applicable to the Reliability Coordinator are clear, etc., etc. The second part of the Purpose is to ensure that "this set of requirements" is sufficient... , referring back to the first part of the sentence. PRC-001 does not apply to the Reliability Coordinators and is out of place in this SAR.

PRC-001 should not be included in this SAR nor the resulting standard development work under this SAR. First, PRC-001 does not apply to Reliability Coordinators and there is already a significantly large amount of work related to Reliability Coordinators under this SAR. Second, the SDT's attention should not be redirected to system protection coordination among BAs, TOPs, and GOPs. We disagree if the intent of the Requestor is to make PRC-001 applicable to Reliability Coordinators under this SAR; If that is the intent we suggest it be done in a separate SAR activity.

2. The drafting team modified the SAR to be more exacting in describing the scope of changes proposed for the set of standards. The revised SAR clarifies that the Standard Drafting Team will work with stakeholders to determine what to do with each of the existing requirements:

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Do you agree with this approach to reviewing the requirements? If not, please explain in the comment area.

☒ Yes

☐ No

Comments:

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

☐ Yes

☒ No

Comments:

4. Several stakeholders indicated that the drafting team should remove the language in the original SAR that would have allowed the standard drafting team to add requirements to the standards if those additions were supported by stakeholders. The drafting team modified the SAR in support of those comments. The SAR drafting team thinks that additional SARs can be developed in the future to address any gaps in this set of requirements. Any new SARs generated by this effort would follow the normal standards development process. Do you support this approach?

☒ Yes

☐ No

Comments:

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Individual Commenter Information (Complete this page for comments from one organization or individual.)		
Name:	Dave Folk	
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NERC Region		Registered Ballot Body Segment
☐ ERCOT	☒	1 — Transmission Owners
☐ FRCC	☐	2 — RTOs, ISOs,
☐ MRO	☒	3 — Load-serving Entities
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Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

[illegible]

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You do not have to answer all questions. Enter All Comments in Simple Text Format.

Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.

1. The drafting team reduced the scope of this SAR to eliminate review of standards that are still under development, including IRO-007-1 through IRO-010-1, and ORG-027-1. Do you agree with this modification? If not, please explain in the comment area.

☐ Yes

☒ No

Comments: While IRO-007-1 through IRO-010-1 are currently open for a 30-day comment period until 4/20/07, this standards work plan effort should leave no stone unturned in developing quality standards. Consequently, IRO-007-1 through IRO-010-1 may contain requirements that are valuable and easily consolidated with the standards under review by this SAR. In addition, they may also contain duplicative requirements that could be consolidated as part of the review process of this SAR.

2. The drafting team modified the SAR to be more exacting in describing the scope of changes proposed for the set of standards. The revised SAR clarifies that the Standard Drafting Team will work with stakeholders to determine what to do with each of the existing requirements:

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- Move the requirement (into another SAR or Standard or to the certification process or standards)
- Eliminate the requirement (either because it is redundant or because it doesn't support Bulk Electric System reliability).

Do you agree with this approach to reviewing the requirements? If not, please explain in the comment area.

☒ Yes

☐ No

Comments: Rather than using the word quality to describe the outcome, the first bullet point above should say, "Modify the requirement to improve clarity and measureability while removing ambiguity." This way the drafting team could use a check list against each requirement to test whether it is clear, measureable, and unambiguous.

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

☒ Yes

☐ No

Comments: Under the detailed description in the second paragraph, the SAR should be modified to include a line item to include "Improve clarity of, improve measureability of, and remove ambiguity from the requirements."

4. Several stakeholders indicated that the drafting team should remove the language in the original SAR that would have allowed the standard drafting team to add requirements to the standards if those additions were supported by stakeholders. The drafting team modified the SAR in support of those comments. The SAR drafting team thinks that additional SARs can be developed in the future to address any gaps in this set of requirements. Any new SARs generated by this effort would follow the normal standards development process. Do you support this approach?

☐ Yes

☒ No

Comments: This effort should leave no stone unturned in developing quality standards within the expertise and domain of this effort. Therefore, every effort must be made to ensure this round of work plan related standard revisions is as complete and all encompassing as is humanly possible to ensure to the extent possible that this standards process reaches a point that these standards are complete, accurate and only minor revisions are required to maintain them going forward. Tying the hands of the drafting team as suggested by "Several stakeholders" will only prolong the industry's work to achieve good, high quality requirements and standards. In addition, we should be using our resources as efficiently as possible. Allowing some latitude to the drafting teams to find and fix issues with standards that are related to the standards within their area of expertise and charge is a good thing to do at this point in the standards evolution process and conducive to the efficient use of resources. As a practical matter this process may never end, but it should reach a point that is much more manageable sooner rather than later.

5. If you have any other comments on this SAR that you have not already submitted above, please provide them here.

☒ No additional comments

Comments:

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Individual Commenter Information (Complete this page for comments from one organization or individual.)		
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NERC Region		Registered Ballot Body Segment
☐ ERCOT	☒	1 — Transmission Owners
☐ FRCC	☐	2 — RTOs, ISOs,
☐ MRO	☐	3 — Load-serving Entities
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Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

[illegible]

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Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.

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☒ Yes

☐ No

Comments:

2. The drafting team modified the SAR to be more exacting in describing the scope of changes proposed for the set of standards. The revised SAR clarifies that the Standard Drafting Team will work with stakeholders to determine what to do with each of the existing requirements:

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Do you agree with this approach to reviewing the requirements? If not, please explain in the comment area.

☒ Yes

☐ No

Comments:

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

☐ Yes

☒ No

Comments:

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☒ Yes

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Individual Commenter Information (Complete this page for comments from one organization or individual.)		
Name:	Ron Falsetti	
Organization:	IESO	
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NERC Region		Registered Ballot Body Segment
☐ ERCOT	☐	1 — Transmission Owners
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Group Name:

Lead Contact:

Contact Organization:**Contact Segment:****Contact Telephone:**

Contact E-mail:

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Comments:

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E-mail:		
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Group Comments (Complete this page if comments are from a group.)

Group Name: IRC Standards Review Committee

Lead Contact: Charles Yeung

Contact Organization: SPP

Contact Segment: 2

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Contact E-mail: cyeung@spp.org

Additional Member Name	Additional Member Organization	Region*	Segment*
Mike Calimano	NYISO	NPCC	2
Alicia Daugherty	PJM	RFC	2
Ron Falsetti	IESO	NPCC	2
Matt Goldberg	ISO-NE	NPCC	2
Brent Kingsford	CAISO	WECC	2
Anita Lee	AESO	WECC	2
Steve Myers	ERCOT	ERCOT	2
William Phillips	MISO	RFC+SERC+MRO	2

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Comments:

Comment Form — 2nd Posting of Reliability Coordination SAR

Please use this form to submit comments on the second draft of the Reliability Coordination SAR. Comments must be submitted by **April 17, 2007**. You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Reliability Coordination" in the subject line. If you have questions please contact Maureen Long at maureen.long@nerc.net or by telephone at 813-468-5998.

Individual Commenter Information		
(Complete this page for comments from one organization or individual.)		
Name:	Kathleen Goodman	
Organization:	ISO New England	
Telephone:	(413) 535-4111	
E-mail:	kgoodman@iso-ne.com	
NERC Region		Registered Ballot Body Segment
☐ ERCOT	☐	1 — Transmission Owners
☐ FRCC	☒	2 — RTOs, ISOs,
☐ MRO	☐	3 — Load-serving Entities
☒ NPCC	☐	4 — Transmission-dependent Utilities
☐ RFC	☐	5 — Electric Generators
☐ SERC	☐	6 — Electricity Brokers, Aggregators, and Marketers
☐ SPP	☐	7 — Large Electricity End Users
☐ WECC	☐	8 — Small Electricity End Users
☐ NA – Not Applicable	☐	9 — Federal, State, Provincial Regulatory or other Government Entities
	☐	10 — Regional Reliability Organizations, Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

[illegible]

*If more than one Region or Segment applies, indicate the best fit for the purpose of these comments. Regional acronyms and segment numbers are shown on prior page.

Background Information

The purpose of this SAR is to review a set of standards that includes reliability coordinator requirements with the intent of eliminating duplicate requirements and upgrading and reorganizing the requirements.

Based on stakeholder comments, the drafting team made several significant changes to the first draft of the SAR, including the following:

- Reduced the number of standards addressed in this project by eliminating consideration of standards that have not been approved, and standards expected to be retired as part of the IROL Implementation Plan.
- Revised the Descriptions to state more clearly the approach the standard drafting team will take in determining what action to take with each requirement in the set of standards. The drafting team will work with stakeholders to determine whether to:
 - o Modify the requirement to improve its quality
 - o Move the requirement (into another SAR or Standard or to the certification process or standards)
 - o Eliminate the requirement (either because it is redundant or because it doesn't support Bulk Electric System reliability).
- Revised the descriptions of the 'Reliability Functions' to reflect the latest version of the Functional Model (V3).

The SAR Drafting Team asks that you review the revised SAR and then answer the questions on the following page.

You do not have to answer all questions. Enter All Comments in Simple Text Format.

Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.

1. The drafting team reduced the scope of this SAR to eliminate review of standards that are still under development, including IRO-007-1 through IRO-010-1, and ORG-027-1. Do you agree with this modification? If not, please explain in the comment area.

☒ Yes

☐ No

Comments:

2. The drafting team modified the SAR to be more exacting in describing the scope of changes proposed for the set of standards. The revised SAR clarifies that the Standard Drafting Team will work with stakeholders to determine what to do with each of the existing requirements:

- Modify the requirement to improve its quality
- Move the requirement (into another SAR or Standard or to the certification process or standards)
- Eliminate the requirement (either because it is redundant or because it doesn't support Bulk Electric System reliability).

Do you agree with this approach to reviewing the requirements? If not, please explain in the comment area.

☒ Yes

☐ No

Comments:

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

☐ Yes

☒ No

Comments:

4. Several stakeholders indicated that the drafting team should remove the language in the original SAR that would have allowed the standard drafting team to add requirements to the standards if those additions were supported by stakeholders. The drafting team modified the SAR in support of those comments. The SAR drafting team thinks that additional SARs can be developed in the future to address any gaps in this set of requirements. Any new SARs generated by this effort would follow the normal standards development process. Do you support this approach?

☒ Yes

☐ No

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☒ No additional comments

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Individual Commenter Information (Complete this page for comments from one organization or individual.)		
Name:	Brian F Thumm	
Organization:	ITC Transmission	
Telephone:	248-374-7846	
E-mail:	bthumm@itctransco.com	
NERC Region		Registered Ballot Body Segment
☐ ERCOT	☒	1 — Transmission Owners
☐ FRCC	☐	2 — RTOs, ISOs,
☐ MRO	☐	3 — Load-serving Entities
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☒ Yes

☐ No

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Individual Commenter Information (Complete this page for comments from one organization or individual.)		
Name:	Michael Gammon	
Organization:	Kansas City Power & Light	
Telephone:	816-654-1242	
E-mail:	816-654-1245	
NERC Region		Registered Ballot Body Segment
☐ ERCOT	☒	1 — Transmission Owners
☐ FRCC	☐	2 — RTOs, ISOs,
☐ MRO	☐	3 — Load-serving Entities
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Contact Organization:**Contact Segment:****Contact Telephone:**

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Comments:

5. If you have any other comments on this SAR that you have not already submitted above, please provide them here.

☒ No additional comments

Comments:

Consideration of Comments for SAR to Modify Reliability Coordinator Standards

The SAR to Modify Reliability Coordinator standards requesters thank all commenters who submitted comments on Draft 1 of the SAR. This SAR was posted for a 30-day public comment period from March 19 through April 17, 2007. The requesters asked stakeholders to provide feedback on the SAR through a special SAR Comment Form. There were 19 sets of comments, including comments from 52 different people from more than 40 companies representing 8 of the 10 Industry Segments as shown in the table on the following pages.

Based on comments received, the drafting team made two changes to the SAR:

- Replaced references to the FERC NOPR with references to the FERC Order 693
- Added a bullet to the detailed description that says, "Improve clarity of, improve measureability of, and remove abiguity from the requirement" and revised the bullets in the brief description to match this language.

The drafting team is recommending that the Standards Committee authorize moving the SAR forward to the standard drafting stage of the standards process.

In this "Consideration of Comments" document stakeholder comments have been organized so that it is easier to see the responses associated with each question. All comments received on the standards can be viewed in their original format at:

http://www.nerc.com/~filez/standards/Reliability-Coordination_Project_2006-6.html

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Director of Standards, Gerry Adamski, at 609-452-8060 or at gerry.adamski@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.¹

¹ The appeals process is in the Reliability Standards Development Procedures:
<http://www.nerc.com/standards/newstandardsprocess.html>.

Consideration of Comments for SAR to Modify Reliability Coordinator Standards

The Industry Segments are:

- 1 — Transmission Owners
- 2 — RTOs, ISOs
- 3 — Load-serving Entities
- 4 — Transmission-dependent Utilities
- 5 — Electric Generators
- 6 — Electricity Brokers, Aggregators, and Marketers
- 7 — Large Electricity End Users
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Commenter			Industry Segment									
			1	2	3	4	5	6	7	8	9	10
1.	Anita Lee (G1)	AESO		✓								
2.	Ken Goldsmith (G4)	ALT										✓
3.	Jeff Hackman	Ameren Services		✓								
4.	Jason Shaver	American Transmission Co.	✓									
5.	Dave Rudolph (G4)	BEPC										✓
6.	Susan Renne	BPA	✓									
7.	Brent Kingsford (G1)	CAISO		✓								
8.	Greg Tillitson (G5)	CMRC										✓
9.	Ed Thompson (G2)	ConEd	✓									
10.	CJ Ingersoll	Constellation			✓							
11.	Ed Davis	Entergy Services, Inc.	✓									
12.	Steve Myers (G1)	ERCOT		✓								
13.	David Folk	FirstEnergy Corp.	✓		✓		✓	✓				
14.	Joe Knight (G4)	GRE										✓
15.	David Kiguel (G2)	Hydro One Networks	✓									
16.	Roger Champagne (I) (G2)	Hydro-Québec TransÉnergie	✓									
17.	Ron Falsetti (I) (G1) (G2)	IESO		✓								
18.	Matt Goldbert (G1)	ISO-NE		✓								
19.	Kathleen Goodman (I) (G2)	ISO-NE		✓								
20.	William Shemley (G2)	ISO-NE		✓								
21.	Brian F. Thumm	ITC Transco	✓									
22.	Jim Cyrulewski (G3)	JDRJC Associates								✓		
23.	Michael Gammon	Kansas City Power & Light	✓									
24.	Eric Ruskamp (G4)	LES										✓
25.	Donald Nelson (G2)	MA Dept. of Tel. and Energy									✓	
26.	Robert CoisH (I) (G4)	Manitoba Hydro	✓		✓		✓	✓				
27.	William Phillips (G1)	MISO		✓								
28.	Terry Bilke (G3) (G4)	MISO		✓								

Consideration of Comments for SAR to Modify Reliability Coordinator Standards

Commenter			Organization		Industry Segment									
					1	2	3	4	5	6	7	8	9	10
29.	Carol Gerou (G4)		MP											✓
30.	Mike Brytowski (G4)		MRO											✓
31.	Randy Macdonald (G2)		NBSO			✓								
32.	Herb Schrayshuen(G2)		NGRID		✓									
33.	Michael Schiavone (G2)		NGRID		✓									
34.	Michael Rinalli (G2)		NGRID		✓									
35.	Guy V. Zito(G2)		NPCC											✓
36.	Al Boesch (G4)		NPPC											✓
37.	Murale Gopinathan (G2)		NU		✓									
38.	Mike Calimano (I) (G1)		NYISO			✓								
39.	Greg Campoli (G2)		NYISO			✓								
40.	Ralph Rufrano (G2)		NYPA		✓									
41.	Al Adamson (G2)		NYSRC											✓
42.	Todd Gosnell (G4)		OPPD											✓
43.	Alicia Daugherty (G1)		PJM			✓								
44.	Frank McElvain (G5)		RDRRC											✓
45.	Charles Yeung (G1)		SPP			✓								
46.	Mike Gentry (I) G5)		SRP		✓									
47.	Jim Haigh (G4)		WAPA											✓
48.	Nancy Bellows (G5)		WECC											✓
49.	Neal Balu (G4)		WPSR											✓
50.	Robert Johnson (G5)		Xcel – PSC											✓
51.	David Lemmons (G3)		Xcel Energy							✓				✓
52.	Pam Oreschnik (G4)		XEL											✓

I – Indicates that individual comments were submitted in addition to comments submitted as part of a group

G1 – IRC Standards Review Committee

G2 – NPCC CP9 Reliability Standards Working Group (NPCC CP9)

G3 – Midwest Standards Collaboration Group

G4 – MRO Members

G5 – WECC Reliability Coordination Comments Work Group

Index to Questions, Comments, and Responses

1. The drafting team reduced the scope of this SAR to eliminate review of standards that are still under development, including IRO-007-1 through IRO-010-1, and ORG-027-1. Do you agree with this modification? If not, please explain in the comment area. 5
2. The drafting team modified the SAR to be more exacting in describing the scope of changes proposed for the set of standards. The revised SAR clarifies that the Standard Drafting Team will work with stakeholders to determine what to do with each of the existing requirements: 8
3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project? 12
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Consideration of Comments for SAR to Modify Reliability Coordinator Standards

1. The drafting team reduced the scope of this SAR to eliminate review of standards that are still under development, including IRO-007-1 through IRO-010-1, and ORG-027-1. Do you agree with this modification? If not, please explain in the comment area.

Summary Consideration: Most stakeholders agreed with the modifications made to reduce the scope of this SAR.

Question #1			
Commenter	Yes	No	Comment
Entergy		☒	We agree with the reduction of standards to be included in this body of work. However, we suggest PRC-001 should also be eliminated from this SAR. The title of the SAR is Reliability Coordination, but the purpose is to ensure requirements applicable to the Reliability Coordinator are clear, etc., etc. The second part of the Purpose is to ensure that "this set of requirements" is sufficient... , referring back to the first part of the sentence. PRC-001 does not apply to the Reliability Coordinators and is out of place in this SAR. PRC-001 should not be included in this SAR nor the resulting standard development work under this SAR. First, PRC-001 does not apply to Reliability Coordinators and there is already a significantly large amount of work related to Reliability Coordinators under this SAR. Second, the SDT's attention should not be redirected to system protection coordination among BAs, TOPs, and GOPs. We disagree if the intent of the Requestor is to make PRC-001 applicable to Reliability Coordinators under this SAR; If that is the intent we suggest it be done in a separate SAR activity.
Response: Requirement 2.2 in PRC-001 states: If a protective relay or equipment failure reduces system reliability, the Transmission Operator shall notify its Reliability Coordinator and affected Transmission Operators and Balancing Authorities. The Transmission Operator shall take corrective action as soon as possible. This is 'incomplete' because there is no requirement for the RC to use that information. The intent in including PRC-001 in this SAR was to 'complete' this requirement. As envisioned, the new requirement may go in one of the existing RC standards, or may go into a new standard – but because it is something for the RC to do, it seems appropriate to include the consideration of this requirement as part of the RC SAR.			
FirstEnergy		☒	While IRO-007-1 through IRO-010-1 are currently open for a 30-day comment period until 4/20/07, this standards work plan effort should leave no stone unturned in developing quality standards. Consequently, IRO-007-1 through IRO-010-1 may contain requirements that are valuable and easily consolidated with the standards under review

Consideration of Comments for SAR to Modify Reliability Coordinator Standards

Question #1			
Commenter	Yes	No	Comment
			by this SAR. In addition, they may also contain duplicative requirements that could be consolidated as part of the review process of this SAR.
Response: The Implementation Plan posted with IRO-007 through IRO-010 already calls for modification to some of the standards included in this SAR. However, the changes identified with the implementation plan for IRO-007 through IRO-011 are limited to those changes resulting from adoption of the proposed standards. If changes are needed to IRO-007 through IRO-010, they can be addressed with a new SAR.			
Constellation	☒		CECD feels that given the number of standards that IRO-007-1 and IRO-010-1 may impact [IRO-002-1 R2, IRO-002-1 R6, IRO-003-2, IRO-004-1 R4 and R5, IRO-005-2 R1, TOP-003-0 R1.2, TOP-005-1 R1] CECD disagrees with removing them from consideration. We do agree with the decision to exclude ORG-027-1.
Response: Please review the Implementation Plan posted with IRO-007 through IRO-010. The proposed changes to the list of standards you identified are limited to those changes resulting from adoption of the proposed standards. . If changes are needed to IRO-007 through IRO-010, they can be addressed with a new SAR.			
MRO	☒		We agree with excluding standards still under development.
Response: Thank you for your support – most commenters agreed with omitting all standards still under development.			
Ameren Services	☒		
ATC LLC	☒		
BPA	☒		
Hydro-Québec TransÉnergie	☒		
IESO	☒		
IRC SRC	☒		
ISO-NE	☒		
ITC Transco	☒		
KCPL	☒		
Manitoba Hydro	☒		
Midwest SCG	☒		
NPCC CP9 RSWG	☒		
NYISO	☒		

Consideration of Comments for SAR to Modify Reliability Coordinator Standards

Question #1			
Commenter	Yes	No	Comment
SRP	☒		
WECC RCCWG	☒		

Consideration of Comments for SAR to Modify Reliability Coordinator Standards

2. The drafting team modified the SAR to be more exacting in describing the scope of changes proposed for the set of standards. The revised SAR clarifies that the Standard Drafting Team will work with stakeholders to determine what to do with each of the existing requirements:
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 - Eliminate the requirement (either because it is redundant or because it doesn't support Bulk Electric System reliability).

Do you agree with this approach to reviewing the requirements? If not, please explain in the comment area.

Summary Consideration: Most stakeholders agreed with this approach to reviewing the requirements in the standards associated with this SAR.

Question #2			
Commenter	Yes	No	Comment
SRP		☒	The FERC NOPR and FERC Staff comments under Standard PRC-001-0, System Protection Coordination, do not apply to Reliability Coordination. In fact, the current Standard, PRC-001-1, does not apply to Reliability Coordinators. This Standard should be removed from the scope of this SAR.
Response: The FERC NOPR has now been replaced with FERC Order 693 and includes the following language regarding PRC-001-1: 1449. The Commission approves Reliability Standard PRC-001-1 as mandatory and enforceable. In addition, the Commission directs the ERO to develop modifications to PRC-001-1 through the Reliability Standards development process that: (1) correct the references for Requirements and (2) include a requirement that upon the detection of failures in relays or protection system elements on the Bulk-Power System that threaten reliable operation, relevant transmission operators must be informed promptly, but within a specified period of time that is developed in the Reliability Standards development process, whereas generator operators must also promptly inform their transmission operators and (3) clarifies that, after being informed of failures in relays or protection system elements that threaten reliability of the Bulk-Power System, transmission operators must carry out corrective control actions, i.e., return a system to a stable state that respects system requirements as soon as possible and no longer than 30 minutes after they receive notice of the failure. The existing PRC-001-1 Requirement 2.2 states: If a protective relay or equipment failure reduces system reliability, the Transmission Operator shall notify its Reliability Coordinator and affected Transmission Operators and Balancing Authorities. The Transmission Operator shall take corrective action as soon as possible.			

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Question #2			
Commenter	Yes	No	Comment
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Ameren Services Midwest SCG	☒	☒	We agree with improving the quality of the requirements, removing redundancies and those things that do not contribute to reliability. It isn't clear what stakeholders will be involved to improve these standards. Is it the ballot body as a whole or some other forum? Since there is no drafting team roster, we are not sure who is working on this project and who are the stakeholders suggesting the changes to requirements.
Response: The Reliability Standards Development Procedure will be used to collect stakeholder feedback. If the Standards Committee (SC) accepts this SAR, then the SC can either appoint the existing drafting team to work with stakeholders to make revisions to the standards, or the SC can have the standards staff send a notice to all members of the RBB as well as all entities who have indicated they want to receive email notices of standards actions to let everyone know that the SC is seeking volunteers to work on a new drafting team. In either case, the drafting team will 'propose' revisions and post those for comment. NERC's standards staff will send an email notice to all members of the RBB as well as all entities who have indicated they want to receive email notices of standards actions – the notice will tell people that some proposed revisions have been posted for comment and will seek feedback on the proposed revisions through a comment form – the same process as used to collect feedback on this SAR. The drafting team will use the responses to the questions on the comment form to determine which changes are supported by stakeholders, and will continue to make modifications until the drafting team feels that they have a set of proposed changes that meets the consensus of the stakeholders who participated in the comment periods. The drafting team that is working on the IROL standards submitted this Reliability Coordination SAR – the SC did not assign a separate drafting team to address the SAR comments. The roster for this team is posted on the related files page of the IROL standards. Here is a link to the roster: ftp://www.nerc.com/pub/sys/all_updl/standards/dt/GroupRoster_IROLSDT.pdf			
MRO	☒	☒	We agree with improving the quality of the requirements, removing redundancies and those things that do not contribute to reliability. We do not see a listing of the drafting team members and it is unclear what stakeholders will be involved to improve these standards.
Response: The Reliability Standards Development Procedure will be used to collect stakeholder feedback. If the Standards Committee (SC) accepts this SAR, then the SC can either appoint the existing drafting team to work with stakeholders to make revisions to the standards, or the SC can have the standards staff send a notice to all members of the RBB as well as all entities who have indicated they want to receive email notices of standards actions to let everyone know that the SC is seeking volunteers to work on a new drafting team. In either case, the drafting team will 'propose' revisions and post those			

Consideration of Comments for SAR to Modify Reliability Coordinator Standards

Question #2			
Commenter	Yes	No	Comment
for comment. NERC's standards staff will send an email notice to all members of the RBB as well as all entities who have indicated they want to receive email notices of standards actions – the notice will tell people that some proposed revisions have been posted for comment and will seek feedback on the proposed revisions through a comment form – the same process as used to collect feedback on this SAR. The drafting team will use the responses to the questions on the comment form to determine which changes are supported by stakeholders, and will continue to make modifications until the drafting team feels that they have a set of proposed changes that meets the consensus of the stakeholders who participated in the comment periods. The drafting team that is working on the IROL standards submitted this Reliability Coordination SAR – the SC did not assign a separate drafting team to address the SAR comments. The roster for this team is posted on the related files page of the IROL standards. Here is a link to the roster: ftp://www.nerc.com/pub/sys/all_updl/standards/dt/GroupRoster_IROLSDT.pdf			
FirstEnergy	☒		Rather than using the word quality to describe the outcome, the first bullet point above should say, "Modify the requirement to improve clarity and measureability while removing ambiguity." This way the drafting team could use a check list against each requirement to test whether it is clear, measureable, and unambiguous.
Response: The drafting team has adopted this suggestion and modified the SAR so that the revised bullet now says: - Modify the requirement to improve its clarity and measureability while removing ambiguity			
Manitoba Hydro	☒		However, this is a large scope (a large amount of work) for the standard drafting team. Wherever possible, it is recommended that the drafting team list and explain the criteria it is using so that it may be easier to achieve stakeholder consensus where many related changes are made. With such a large scope the drafting team should consider carefully how the changes are balloted so ballots don't fail because stakeholders object to a minor subset of issues in a particular ballot.
Response: Agreed.			
WECC RCCWG	☒		The WECC RCCWG agrees with the overall approach. That said, there is currently another SAR in process that addresses communications protocols and paths. The referenced SAR, "Operating Personnel Communications Protocols" is also meant to address FERC comments relative to communications protocols. Having two separate SARs that address the same comment seems redundant.
Response: There are a couple of standards that are in more than one 'project' in the Reliability Standards Work Plan 2007-2009. The coordinators working with the drafting teams for these projects are aware of this duplication and will 'hand off' requirements between one another to ensure that each requirement is addressed and that only one drafting team works on modifying each requirement.			
ATC LLC	☒		
BPA	☒		

Consideration of Comments for SAR to Modify Reliability Coordinator Standards

Question #2			
Commenter	Yes	No	Comment
Constellation	☒		
Entergy	☒		
Hydro-Québec TransÉnergie	☒		
IESO	☒		
IRC SRC	☒		
ISO-NE	☒		
ITC Transco	☒		
KCPL	☒		
NPCC CP9 RSWG	☒		
NYISO	☒		

Consideration of Comments for SAR to Modify Reliability Coordinator Standards

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

Summary Consideration: The drafting team made the following modifications to the SAR based on stakeholder suggestions for additional revisions:

- Replaced references to the FERC NOPR with references to the FERC Order 693
- Added a bullet to the detailed description that says, "Improve clarity of, improve measureability of, and remove ambiguity from the requirement"

Question #3			
Commenter	Yes	No	Comment
MRO	☒		The FERC NOPR should not be used to change the standards. Items in the final order should be considered. Several of V0 comments items are not clear. It would help if these fill comments were posted somewhere for reference. We disagree with the assignment of Violation Severity Levels (VSL). VSLs should not be skewed to inflate the sanctions associated with a requirement. The drafting team should assess the likely bounds of performance and the VSLs should be divided into four relatively equal portions. The proposed breakdown in the SAR is not part of the Sanctions Guidelines and has not be vetted in the industry.
Response: Agreed. The drafting team has modified the SAR to replace the references to the NOPR with references to FERC Order 693. The Version 0 comments are posted on the Approved Standards web page – here is the link to that set of comments: ftp://www.nerc.com/pub/sys/all_updl/standards/rs/Standards_V0_Industry_Comments_20060105.pdf The proposed breakdown in VSLs was not included in the Sanctions Guidelines – but it was supported by both the Standards Committee and the Compliance and Certification Committee on December 14, 2006. The Standards Committee supported having drafting teams use the breakdown that appears in the SAR – and that breakdown was included in the Reliability Standards Development Work Plan 2007-2009.			
Ameren Services Midwest SCG	☒		The FERC NOPR should not be used to change the standards. Items in the final order should be given due consideration. Several of V0 comments items are not clear. They are primarily bullet notes with no context. Is there additional information about these comments somewhere?
Response: Agreed. The drafting team has modified the SAR to replace the references to the NOPR with references to FERC Order 693.			

Consideration of Comments for SAR to Modify Reliability Coordinator Standards

Question #3			
Commenter	Yes	No	Comment
The Version 0 comments are posted on the Approved Standards web page – here is the link to that set of comments: ftp://www.nerc.com/pub/sys/all_updl/standards/rs/Standards_V0_Industry_Comments_20060105.pdf			
ATC LLC	☒		The SAR needs to be further refined to identify those specific requirements that will be: 1) Reviewed as being duplicative 2) Considered being relocated 3) Considered being eliminated
Response: As envisioned, the standard drafting team will work with stakeholders (using the comment process) to propose and obtain stakeholder feedback on whether each requirement should be retired, moved, enhanced, etc.			
FirstEnergy	☒		Under the detailed description in the second paragraph, the SAR should be modified to include a line item to include "Improve clarity of, improve measureability of, and remove ambiguity from the requirements."
Response: The drafting team adopted your suggestion and added the proposed bullet to the detailed description of the SAR.			
BPA	☒		No comments at this time. We will comment when the standards are up for comment.
Constellation	☒		
Entergy		☒	
Hydro-Québec TransÉnergie		☒	
IESO		☒	
IRC SRC		☒	
ISO-NE		☒	
ITC Transco		☒	
KCPL		☒	
Manitoba Hydro		☒	
NPCC CP9 RSWG		☒	
NYISO		☒	
SRP		☒	
WECC RCCWG		☒	

Consideration of Comments for SAR to Modify Reliability Coordinator Standards

4. Several stakeholders indicated that the drafting team should remove the language in the original SAR that would have allowed the standard drafting team to add requirements to the standards if those additions were supported by stakeholders. The drafting team modified the SAR in support of those comments. The SAR drafting team thinks that additional SARs can be developed in the future to address any gaps in this set of requirements. Any new SARs generated by this effort would follow the normal standards development process. Do you support this approach?

Summary Consideration: Stakeholders who responded to this question overwhelmingly indicated support for having firm boundaries on what could be changed with the associated standards by removing the open-ended language from the original SAR.

Question #4			
Commenter	Yes	No	Comment
BPA		☒	
FirstEnergy	☒		This effort should leave no stone unturned in developing quality standards within the expertise and domain of this effort. Therefore, every effort must be made to ensure this round of work plan related standard revisions is as complete and all encompassing as is humanly possible to ensure to the extent possible that this standards process reaches a point that these standards are complete, accurate and only minor revisions are required to maintain them going forward. Tying the hands of the drafting team as suggested by "Several stakeholders" will only prolong the industry's work to achieve good, high quality requirements and standards. In addition, we should be using our resources as efficiently as possible. Allowing some latitude to the drafting teams to find and fix issues with standards that are related to the standards within their area of expertise and charge is a good thing to do at this point in the standards evolution process and conducive to the efficient use of resources. As a practical matter this process may never end, but it should reach a point that is much more manageable sooner rather than later.
Response: Stakeholders overwhelmingly indicated support for having firm boundaries on what could be changed with the associated standards.			
ATC LLC	☒		The SAR identified standards IRO-014 and IRO-015 on its first page but does not address these standards in Attachment 1. The SAR needs to be updated to either acknowledge that these two standards will not be changed or identify what needs to be corrected. Attachment 1: COM-001-0 NERC has a current effort to address communication facilities in standard EOP-008. This

Consideration of Comments for SAR to Modify Reliability Coordinator Standards

Question #4			
Commenter	Yes	No	Comment
			group needs to be aware of that effort and should insure that any change to COM-001 does not counter that effort of EOP-008. How will this effort differ from the other NERC effort? COM-002-1 NERC has a current effort to address communication protocol in emergencies with "Operating Personnel Communications Protocols." Similar to our previous comment this group needs to be aware of that effort and should insure that any change to COM-002 does not counter that groups efforts. How will this effort differ from the other NERC effort? IRO-001-0 Please provide additional information on the following bullet point: "Reflect the process set forth in the NERC Rules of Procedures" What specific sections of NERC Rules of Procedure will be reflected in IRO-001-0? IRO-005-1 The first bullet point does not seem to fall within the goal of this SAR. "Propose that the ERO conduct a survey of IROL practices and experiences." This effort does not need to go through NERC Reliability Standards Development Process to be performed. NERC could take up this effort at any time and it will slow down this process if it is going to be included in this SAR. PER-004-0 NERC has another group that is looking into to these concerns. How will this effort differ from that effort?
Response: The two coordinate operations standards highlighted (IRO-014 and IRO-015), did not have any suggestions from FERC for improvements, and they were not part of Version 0 so there were no suggestions for improvements to these standards from the Version 0 process. COM-001 and COM-002 both contain requirements that are assigned to several different functions – and both include a mix of 'preparedness' requirements as well as some 'real-time' notification requirements as well as some requirements that may end up being converted into a new standard for 'communications protocols'. The intent in including the standards in multiple projects was to ensure that each requirement was fully addressed and ended up where it belonged. The coordinators			

Consideration of Comments for SAR to Modify Reliability Coordinator Standards

Question #4			
Commenter	Yes	No	Comment
supporting these projects are aware of this duplication and are working to ensure that there is a 'hand off' of requirements between teams to eliminate gaps and duplication. IRO-001 In Order 693, FERC explains what it meant by the bullet, 'Reflect the process set forth in the NERC Rules of Procedure': 896. In the NOPR, the Commission proposed to approve the Reliability Standard as mandatory and enforceable. In addition, as a separate action under section 215(d)(5), the NOPR proposed to direct the ERO to develop modifications to Requirement R1 to substitute "Regional Entity" for "regional reliability organization" and reflect NERC's Rules of Procedure for registering, certifying and verifying entities, including reliability coordinators. IRO-005-1 The bullet point you've highlighted may or may not be addressed by the drafting team. As envisioned, the results of a survey may prove useful in determining a need for additional modifications to the standards. Note that FERC Order 693 has replaced the NOPR and the SAR has been updated to reflect this. The survey is still identified in Order 693 – and FERC clarified that the intent of the survey is to determine if additional modifications to IRO-005 are necessary. PER-004 includes a mix of preparation and real-time requirements. The intent in placing the standard in more than one project is to ensure that each requirement is reviewed by an appropriate team, and that all requirements that are needed end up in an appropriate standard.			
Ameren Services	☒		
Constellation	☒		
Entergy	☒		
Hydro-Québec TransÉnergie	☒		
IESO	☒		
IRC SRC	☒		
ISO-NE	☒		
ITC Transco	☒		
KCPL	☒		
Manitoba Hydro	☒		

Consideration of Comments for SAR to Modify Reliability Coordinator Standards

Question #4			
Commenter	Yes	No	Comment
Midwest SCG	☒		
MRO	☒		
NPCC CP9 RSWG	☒		
NYISO	☒		
WECC RCCWG	☒		

Consideration of Comments for SAR to Modify Reliability Coordinator Standards

5. If you have any other comments on this SAR that you have not already submitted above, please provide them here.

Summary Consideration: The drafting team did not make any conforming changes to the SAR based on comments provided in response to question 5.

Question #5			
Commenter	Yes	No	Comment
Ameren Services			We disagree with the assignment of Violation Severity Levels (VSL). The drafting team should assess the likely bounds of performance and the VSLs should be divided into four relatively equal portions. Yes/No requirements should not arbitrarily be counted as Severe violations. The proposed VSL breakdown in the SAR is not part of the Sanctions Guidelines and the proposed process has not been vetted in the industry. To the extent that requirements are modified or moved, care should be taken to make sure that the two-way exchange of information between RC and TOP and RC and BA should be preserved.
Response: Violation Severity Levels identify how badly you missed the intent of a requirement – not all requirements lend themselves to 4 different VSLs. The guidelines for determining a VSL are just 'guidelines' – however these guidelines were endorsed by the SC and the CCC and the SDT would need a strong reason for not using these guidelines.			
Midwest SCG			We disagree with the assignment of Violation Severity Levels (VSL). The drafting team should assess the likely bounds of performance and the VSLs should be divided into four relatively equal portions. Yes/No requirements should not arbitrarily be counted as Severe violations. The proposed VSL breakdown in the SAR is not part of the Sanctions Guidelines and the proposed process has not been vetted in the industry.
Response: Violation Severity Levels identify how badly you missed the intent of a requirement – not all requirements lend themselves to 4 different VSLs. The guidelines for determining a VSL are just 'guidelines' – however these guidelines were endorsed by the SC and the CCC and the SDT would need a strong reason for not using these guidelines.			
BPA		☒	No comments at this time. We will comment when the standards are up for comment.
Response:			
WECC RCCWG			The WECC RCCWG believes that revision to each existing Standard, as a result of this SAR, should be individually balloted, instead of grouped together in one ballot on the entire group of changes.
Response: The SDT appointed to work on the standards will identify how to ballot the standards modified as part of this set of standards.			

Standard Authorization Request Form

Title of Proposed Standard	Reliability Coordination (Project 2006-06)
Request Date	December 18, 2006
Revised Date	May 1, 2007

SAR Requestor Information		SAR Type <i>(Check a box for each one that applies.)</i>	
Name	Ellis Rankin	☐	New Standard
Primary Contact	Ellis Rankin	☒	Revision to existing Standards – see list below COM-001 — Telecommunications COM-002 — Communications and Coordination IRO-001 — Reliability Coordination – Responsibilities and Authorities IRO-002 — Reliability Coordination – Facilities IRO-005 — Reliability Coordination – Current Day Operations IRO-014 — Procedures to Support Coordination between Reliability Coordinators IRO-015 — Notifications and Information Exchange Between Reliability Coordinators IRO-016 — Coordination of Real-time Activities between Reliability Coordinators PER-004 — Reliability Coordination – Staffing PRC-001 — System Protection Coordination
Telephone	214-743-6828	☒	Withdrawal of existing Standard Some requirements in the above standards
Fax	972-263-6710		
E-mail	erankin@txued.com	☐	Urgent Action

Purpose

To ensure that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique and enforceable; and to ensure that this set of requirements is sufficient to maintain reliability of the Bulk Electric System.

Brief Description

Most of the requirements in this set of standards were translated from Operating Policies as part of the Version 0 process. There have been suggestions for improving these requirements, and the drafting team will consider comments submitted by stakeholders, drafting teams and FERC in determining what changes should be proposed to stakeholders.

The drafting team will review all of the requirements in this set of standards and make a determination, with stakeholders, on whether to:

- Modify the requirement to improve its clarity and measureability while removing ambiguity
- Move the requirement (into another SAR or Standard or to the certification process or standards)
- Eliminate the requirement (either because it is redundant or because it doesn't support bulk power system reliability).

Detailed Description

The drafting team will review all of the requirements in the following set of standards:

COM-001 — Telecommunications
COM-002 — Communications and Coordination
IRO-001 — Reliability Coordination – Responsibilities and Authorities
IRO-002 — Reliability Coordination – Facilities
IRO-005 — Reliability Coordination – Current Day Operations
IRO-014 — Procedures to Support Coordination between Reliability Coordinators
IRO-015 — Notifications and Information Exchange Between Reliability Coordinators
IRO-016 — Coordination of Real-time Activities between Reliability Coordinators
PER-004 — Reliability Coordination – Staffing
PRC-001 — System Protection Coordination

For each existing requirement, the drafting team will work with stakeholders and:

- Eliminate redundancy in the requirements.
- Identify requirements that should be moved into other SARs
- Eliminate requirements that do not support bulk power system reliability
- Transfer requirements that need to be in place before an entity begins operation as an RC to certification.
- Improve clarity of, improve measureability of, and remove ambiguity from the requirement

The standard drafting team will also:

Coordinate with the drafting teams working on the SAR and standards for Transmission Operator and Balancing Authority standards (Project 2007-06).
Consider comments received during the initial development of this set of standards and other comments received from ERO regulatory authorities and stakeholders (Attachment 1)

Bring the standards into conformance with the latest version of the Reliability Standards Development Procedure and the ERO Rules of Procedure. (Attachment 2)

This review of the set of identified standards will satisfy the standards procedure requirement to review each approved standard at least once every five years.

Reliability Functions

The Standard will Apply to the Following Functions <i>(Check box for each one that applies.)</i>		
☒	Reliability Coordinator	Responsible for the real-time operating reliability of its Reliability Coordinator Area in coordination with its neighboring Reliability Coordinator's wide area view.
☒	Balancing Authority	Integrates resource plans ahead of time, and maintains load-interchange-resource balance within a Balancing Authority Area and supports system frequency in real time.
☒	Interchange Authority	Ensures communication of interchange transactions for reliability evaluation purposes and coordinates implementation of valid and balanced interchange schedules between Balancing Authority Areas.
☒	Planning Coordinator	Assesses the longer-term reliability of its Planning Coordinator Area.
☒	Resource Planner	Develops a >one year plan for the resource adequacy of its specific loads within a Planning Coordinator Area.
☒	Transmission Planner	Develops a >one year plan for the reliability of the interconnected Bulk Electric System within its portion of the Planning Coordinator area.
☒	Transmission Service Provider	Administers the transmission tariff and provides transmission services under applicable transmission service agreements (e.g., the pro forma tariff).
☒	Transmission Owner	Owns and maintains transmission facilities.
☒	Transmission Operator	Ensures the real-time operating reliability of the transmission assets within a Transmission Operator Area.
☒	Distribution Provider	Delivers electrical energy to the End-use customer.
☒	Generator Owner	Owns and maintains generation facilities.
☒	Generator Operator	Operates generation unit(s) to provide real and reactive power.
☐	Purchasing-Selling Entity	Purchases or sells energy, capacity, and necessary reliability-related services as required.
☐	Market Operator	Interface point for reliability functions with commercial functions.
☒	Load-Serving Entity	Secures energy and transmission service (and related reliability-related services) to serve the end-use customer.

Reliability and Market Interface Principles

Applicable Reliability Principles (Check box for all that apply.)	
☒	1. Interconnected bulk electric systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Standards.
☒	2. The frequency and voltage of interconnected bulk electric systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand.
☒	3. Information necessary for the planning and operation of interconnected bulk electric systems shall be made available to those entities responsible for planning and operating the systems reliably.
☒	4. Plans for emergency operation and system restoration of interconnected bulk electric systems shall be developed, coordinated, maintained and implemented.
☒	5. Facilities for communication, monitoring and control shall be provided, used and maintained for the reliability of interconnected bulk electric systems.
☒	6. Personnel responsible for planning and operating interconnected bulk electric systems shall be trained, qualified, and have the responsibility and authority to implement actions.
☒	7. The security of the interconnected bulk electric systems shall be assessed, monitored and maintained on a wide area basis.
Does the proposed Standard comply with all of the following Market Interface Principles? (Select 'yes' or 'no' from the drop-down box.)	
1. The planning and operation of bulk electric systems shall recognize that reliability is an essential requirement of a robust North American economy. Yes	
2. An Organization Standard shall not give any market participant an unfair competitive advantage. Yes	
3. An Organization Standard shall neither mandate nor prohibit any specific market structure. Yes	
4. An Organization Standard shall not preclude market solutions to achieving compliance with that Standard. Yes	
5. An Organization Standard shall not require the public disclosure of commercially sensitive information. All market participants shall have equal opportunity to access commercially non-sensitive information that is required for compliance with reliability standards. Yes	

Related Standards – Listed under description

Standard No.	Explanation

Related SARs

SAR ID	Explanation

Regional Differences

Region	Explanation
ERCOT	
FRCC	
MRO	
NPCC	
SERC	
RFC	
SPP	
WECC	

The drafting team will assist stakeholders in considering these comments in determining what changes to make to the standards:

COM-001-0 Telecommunications

FERC Order 693

- o Include generator operators and distribution provider as applicable entities and include requirements for their telecommunications
- o Include requirements for telecommunication facilities for use during normal and emergency conditions that reflect the roles of the applicable entities and their impact on reliable operation
- o Includes adequate flexibility for compliance with the reliability standard, adoption of new technologies and cost-effective solutions

V0 Industry Comments

- o Many players missing
- o Apply R1 to all but smallest entities

Violation Risk Factor Drafting Team Comments

- o R6 – administrative requirement

COM-002-1 Communications and Coordination

FERC Order 693

- o Include a Requirement for the reliability coordinator to assess and approve actions that have impacts beyond the area views of transmission operators or balancing authorities;
- o Include distribution providers as applicable entities; and
- o Require tightened communications protocols, especially for communications during alerts and emergencies.

V0 Industry Comments

- o Voice with generators not required
- o R1 – include reliability authority
- o R2 – include sabotage and security
- o R4 – clarify repeat back requirement with regard to emergency

IRO-001-0 Reliability Coordination – Responsibilities and Authorities

FERC Order 693

- o Reflect the process set forth in the NERC Rules of Procedures; and
- o Eliminate the regional reliability organization as an applicable entity.

Regional Fill-in-the-Blank Team Comments

- o Remove ", sub-region, or interregional coordinating group" from R1
- o Consider removing "Standards of conduct are necessary to ensure the Reliability Coordinator does not act in a manner that favors one market participant over another." from the Purpose section of the standard.

V0 Industry Comments

- o Inability to perform needs to be communicated
- o What is meant by 'interest of other entity'?

Violation Risk Factor Drafting Team Comments

- o R6 - Since the RC must be NERC certified, it stands to reason that anyone performing RC tasks should be certified. However, since the RC still retains the

accountability for actions, and requirement 4 handles the agreements, this requirement is a medium risk.

IRO-002-0 Reliability Coordination – Facilities

FERC Order 693

- o Require a minimum set of tools that should be made available to reliability coordinators.

V0 Industry Comments

- o R5 – define synchronized information system
- o R7 – define ‘adequate’ tools and ‘wide-area’
- o Words such as ‘easily understood’ and ‘particular emphasis’ need to be tightened

IRO-005-1 Reliability Coordination – Current Day Operations

FERC Order 693

- o Measures and Levels of Non-Compliance specific to IROL violations must be commensurate with the magnitude, duration, frequency and causes of the violations and whether these occur during normal or contingency conditions.
- o Conduct a survey on IROL practices and experiences; the Commission may propose further modifications to IRO-005-1 based on the survey results.

V0 Industry Comments

- o R10, 11 & 12 – RA not empowered to do this

IRO-016-1 Coordination of Real-Time Activities Between Reliability Coordinators

Violation Risk Factors Drafting Team Comments

- o R1.2.1 & R2 – ambiguous

PER-004-0 Reliability Coordination – Staffing

FERC Order 693

- o Include formal training requirements for reliability coordinators similar to those addressed under the personnel training Reliability Standard PER-002-0;
- o Include requirements pertaining to personnel credentials for reliability coordinators similar to those in PER-003-0
- o Consider the suggestions of FirstEnergy and Xcel:
1413. FirstEnergy seeks revisions to the terms “shall have a comprehensive understanding” and “shall have extensive knowledge.” It states that it will be difficult for entities to demonstrate compliance with these terms. In addition, FirstEnergy suggests that the reliability coordinator staffing requirements should be located in the IRO Reliability Standards.
1414. Xcel states that emergency training requirements should be expressed in hour increments rather than days to allow for flexibility in scheduling training and coordinating with rotating shift schedules.

V0 Industry Comments

- o Calendar year timing increment
- o Other training needs to be defined

PRC-001-0 System Protection Coordination

FERC Order 693

SAR for Project 2006-06 Reliability Coordination – Attachment 1

- o Correct the references for Requirements
- o Include a requirement that upon the detection of failures in relays or protection system elements on the Bulk-Power System that threaten reliable operation, relevant transmission operators must be informed promptly, but within a specified period of time whereas generator operators must also promptly inform their transmission operators
- o Clarify that, after being informed of failures in relays or protection system elements that threaten reliability of the Bulk-Power System, transmission operators must carry out corrective control actions, i.e., return the system to a stable state that respects system requirements as soon as possible and no longer than 30 minutes after they receive notice of the failure

V0 Industry Comments

- o Effects on reliability may not be known
- o Consistent terminology as to neighbor vs. affected
- o Not all criteria moved over from policies

The drafting team will reference these guidelines in determining what changes to make to the standards to bring them into conformance with the *Reliability Standards Development Procedure Manual, Version 6* and the *ERO Rules of Procedure*:

Standard Review Guidelines

Applicability

Does this reliability standard clearly identify the functional classes of entities responsible for complying with the reliability standard, with any specific additions or exceptions noted? Where multiple functional classes are identified is there a clear line of responsibility for each requirement identifying the functional class and entity to be held accountable for compliance? Does the requirement allow overlapping responsibilities between Registered Entities possibly creating confusion for who is ultimately accountable for compliance?

Does this reliability standard identify the geographic applicability of the standard, such as the entire North American bulk power system, an interconnection, or within a regional entity area? If no geographic limitations are identified, the default is that the standard applies throughout North America.

Does this reliability standard identify any limitations on the applicability of the standard based on electric facility characteristics, such as generators with a nameplate rating of 20 MW or greater, or transmission facilities energized at 200 kV or greater or some other criteria? If no functional entity limitations are identified, the default is that the standard applies to all identified functional entities.

Purpose

Does this reliability standard have a clear statement of purpose that describes how the standard contributes to the reliability of the bulk power system? Each purpose statement should include a value statement.

Performance Requirements

Does this reliability standard state one or more performance requirements, which if achieved by the applicable entities, will provide for a reliable bulk power system, consistent with good utility practices and the public interest?

Does each requirement identify who shall do what under what conditions and to what outcome?

Measurability

Is each performance requirement stated so as to be objectively measurable by a third party with knowledge or expertise in the area addressed by that requirement?

Does each performance requirement have one or more associated measures used to objectively evaluate compliance with the requirement?

If performance results can be practically measured quantitatively, are metrics provided within the requirement to indicate satisfactory performance?

Technical Basis in Engineering and Operations

Is this reliability standard based upon sound engineering and operating judgment, analysis, or experience, as determined by expert practitioners in that particular field?

Completeness

Is this reliability standard complete and self-contained? Does the standard depend on external information to determine the required level of performance?

Consequences for Noncompliance

In combination with guidelines for penalties and sanctions, as well as other ERO and regional entity compliance documents, are the consequences of violating a standard clearly known to the responsible entities?

Clear Language

Is the reliability standard stated using clear and unambiguous language? Can responsible entities, using reasonable judgment and in keeping with good utility practices, arrive at a consistent interpretation of the required performance?

Practicality

Does this reliability standard establish requirements that can be practically implemented by the assigned responsible entities within the specified effective date and thereafter?

Capability Requirements versus Performance Requirements

In general, requirements for entities to have ‘capabilities’ (this would include facilities for communication, agreements with other entities, etc.) should be located in the standards for certification. The certification requirements should indicate that entities have a responsibility to ‘maintain’ their capabilities.

Consistent Terminology

To the extent possible, does this reliability standard use a set of standard terms and definitions that are approved through the NERC reliability standards development process?

If the standard uses terms that are included in the NERC Glossary of Terms Used in Reliability Standards, then the term must be capitalized when it is used in the standard. New terms should not be added unless they have a ‘unique’ definition when used in a NERC reliability standard. Common terms that could be found in a college dictionary should not be defined and added to the NERC Glossary.

Are the verbs on the ‘verb list’ from the DT Guidelines? If not – do new verbs need to be added to the guidelines or could you use one of the verbs from the verb list?

Violation Risk Factors (Risk Factor)

High Risk Requirement

A requirement that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures;

or a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.

Medium Risk Requirement

A requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures;

or a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or

restore the bulk electric system. However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.

Lower Risk Requirement

A requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. A requirement that is administrative in nature;

or a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. A planning requirement that is administrative in nature.

Time Horizon

The drafting team should also indicate the time horizon available for mitigating a violation to the requirement using the following definitions:

- **Long-term Planning** — a planning horizon of one year or longer.
- **Operations Planning** — operating and resource plans from day-ahead up to and including seasonal.
- **Same-day Operations** — routine actions required within the timeframe of a day, but not real-time.
- **Real-time Operations** — actions required within one hour or less to preserve the reliability of the bulk electric system.
- **Operations Assessment** — follow-up evaluations and reporting of real time operations.

Violation Severity Levels

The drafting team should indicate a set of violation severity levels that can be applied for the requirements within a standard. ('Violation severity levels' replace existing 'levels of non-compliance.')

The violation severity levels must be applied for each requirement and may be combined to cover multiple requirements, as long as it is clear which requirements are included and that all requirements are included.

The violation severity levels should be based on the following definitions:

- **Lower: mostly compliant with minor exceptions** — The responsible entity is mostly compliant with and meets the intent of the requirement but is deficient with respect to one or more minor details. Equivalent score: 95% to 99% compliant.
- **Moderate: mostly compliant with significant exceptions** — The responsible entity is mostly compliant with and meets the intent of the requirement but is deficient with respect to one or more significant elements. Equivalent score: 85% to 94% compliant.
- **High: marginal performance or results** — The responsible entity has only partially achieved the reliability objective of the requirement and is missing one or more significant elements. Equivalent score: 70% to 84% compliant.
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Replace, ‘Regional Reliability Organization’ with ‘Regional Entity’

Fill-in-the-blank Requirements

Do not include any ‘fill-in-the-blank’ requirements. These are requirements that assign one entity responsibility for developing some performance measures without requiring that the performance measures be included in the body of a standard – then require another entity to comply with those requirements.

Every reliability objective can be met, at least at a threshold level, by a North American standard. If we need regions to develop regional standards, such as in under-frequency load shedding, we can always write a uniform North American standard for the applicable functional entities as a means of encouraging development of the regional standards.

Requirements for Regional Reliability Organization

Do not write any requirements for the Regional Reliability Organization. Any requirements currently assigned to the RRO should be re-assigned to the applicable functional entity.

Effective Dates

Must be 1st day of 1st quarter after entities are expected to be compliant – must include time to file with regulatory authorities and provide notice to responsible entities of the obligation to comply. If the standard is to be actively monitored, time for the Compliance Monitoring and Enforcement Program to develop reporting instructions and modify the Compliance Data Management System(s) both at NERC and Regional Entities must be provided in the implementation plan. The effective date should be linked to the NERC BOT adoption date.

Associated Documents

If there are standards that are referenced within a standard, list the full name and number of the standard under the section called, ‘Associated Documents’.

Functional Model Version 3

Review the requirements against the latest descriptions of the responsibilities and tasks assigned to functional entities as provided in pages 13 through 53 of the draft Functional Model Version 3.

Standard Authorization Request Form

Title of Proposed Standard	Reliability Coordination (Project 2006-06)
Request Date	December 18, 2006
Revised Date	May 1, 2007

SAR Requestor Information		SAR Type <i>(Check a box for each one that applies.)</i>	
Name	Ellis Rankin	☐	New Standard
Primary Contact	Ellis Rankin	☒	Revision to existing Standards – see list below COM-001 — Telecommunications COM-002 — Communications and Coordination IRO-001 — Reliability Coordination – Responsibilities and Authorities IRO-002 — Reliability Coordination – Facilities IRO-005 — Reliability Coordination – Current Day Operations IRO-014 — Procedures to Support Coordination between Reliability Coordinators IRO-015 — Notifications and Information Exchange Between Reliability Coordinators IRO-016 — Coordination of Real-time Activities between Reliability Coordinators PER-004 — Reliability Coordination – Staffing PRC-001 — System Protection Coordination
Telephone	214-743-6828	☒	Withdrawal of existing Standard Some requirements in the above standards
Fax	972-263-6710		
E-mail	erankin@txued.com	☐	Urgent Action

Standards Authorization Request Form

Purpose

To ensure that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique and enforceable; and to ensure that this set of requirements is sufficient to maintain reliability of the Bulk Electric System.

Brief Description

Most of the requirements in this set of standards were translated from Operating Policies as part of the Version 0 process. There have been suggestions for improving these requirements, and the drafting team will consider comments submitted by stakeholders, drafting teams and FERC in determining what changes should be proposed to stakeholders.

The drafting team will review all of the requirements in this set of standards and make a determination, with stakeholders, on whether to:

- Modify the requirement to improve its clarity and measureability while removing ambiguity
Move the requirement (into another SAR or Standard or to the certification process or standards)
- Eliminate the requirement (either because it is redundant or because it doesn't support bulk power system reliability).

Detailed Description

The drafting team will review all of the requirements in the following set of standards:

COM-001 — Telecommunications
COM-002 — Communications and Coordination
IRO-001 — Reliability Coordination – Responsibilities and Authorities
IRO-002 — Reliability Coordination – Facilities
IRO-005 — Reliability Coordination – Current Day Operations
IRO-014 — Procedures to Support Coordination between Reliability Coordinators
IRO-015 — Notifications and Information Exchange Between Reliability Coordinators
IRO-016 — Coordination of Real-time Activities between Reliability Coordinators
PER-004 — Reliability Coordination – Staffing
PRC-001 — System Protection Coordination

For each existing requirement, the drafting team will work with stakeholders and:

- Eliminate redundancy in the requirements.
- Identify requirements that should be moved into other SARs
- Eliminate requirements that do not support bulk power system reliability
- Transfer requirements that need to be in place before an entity begins operation as an RC to certification.
- Improve clarity of, improve measureability of, and remove ambiguity from the requirement

The standard drafting team will also:

Coordinate with the drafting teams working on the SAR and standards for Transmission Operator and Balancing Authority standards (Project 2007-06).
Consider comments received during the initial development of this set of standards and other comments received from ERO regulatory authorities and stakeholders (Attachment 1)

Bring the standards into conformance with the latest version of the Reliability Standards Development Procedure and the ERO Rules of Procedure. (Attachment 2)

This review of the set of identified standards will satisfy the standards procedure requirement to review each approved standard at least once every five years.

Reliability Functions

The Standard will Apply to the Following Functions <i>(Check box for each one that applies.)</i>		
☒	Reliability Coordinator	Responsible for the real-time operating reliability of its Reliability Coordinator Area in coordination with its neighboring Reliability Coordinator's wide area view.
☒	Balancing Authority	Integrates resource plans ahead of time, and maintains load-interchange-resource balance within a Balancing Authority Area and supports system frequency in real time.
☒	Interchange Authority	Ensures communication of interchange transactions for reliability evaluation purposes and coordinates implementation of valid and balanced interchange schedules between Balancing Authority Areas.
☒	Planning Coordinator	Assesses the longer-term reliability of its Planning Coordinator Area.
☒	Resource Planner	Develops a >one year plan for the resource adequacy of its specific loads within a Planning Coordinator Area.
☒	Transmission Planner	Develops a >one year plan for the reliability of the interconnected Bulk Electric System within its portion of the Planning Coordinator area.
☒	Transmission Service Provider	Administers the transmission tariff and provides transmission services under applicable transmission service agreements (e.g., the pro forma tariff).
☒	Transmission Owner	Owns and maintains transmission facilities.
☒	Transmission Operator	Ensures the real-time operating reliability of the transmission assets within a Transmission Operator Area.
☒	Distribution Provider	Delivers electrical energy to the End-use customer.
☒	Generator Owner	Owns and maintains generation facilities.
☒	Generator Operator	Operates generation unit(s) to provide real and reactive power.
☐	Purchasing-Selling Entity	Purchases or sells energy, capacity, and necessary reliability-related services as required.
☐	Market Operator	Interface point for reliability functions with commercial functions.
☒	Load-Serving Entity	Secures energy and transmission service (and related reliability-related services) to serve the end-use customer.

Reliability and Market Interface Principles

Applicable Reliability Principles (Check box for all that apply.)	
☒	1. Interconnected bulk electric systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Standards.
☒	2. The frequency and voltage of interconnected bulk electric systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand.
☒	3. Information necessary for the planning and operation of interconnected bulk electric systems shall be made available to those entities responsible for planning and operating the systems reliably.
☒	4. Plans for emergency operation and system restoration of interconnected bulk electric systems shall be developed, coordinated, maintained and implemented.
☒	5. Facilities for communication, monitoring and control shall be provided, used and maintained for the reliability of interconnected bulk electric systems.
☒	6. Personnel responsible for planning and operating interconnected bulk electric systems shall be trained, qualified, and have the responsibility and authority to implement actions.
☒	7. The security of the interconnected bulk electric systems shall be assessed, monitored and maintained on a wide area basis.
Does the proposed Standard comply with all of the following Market Interface Principles? (Select 'yes' or 'no' from the drop-down box.)	
1. The planning and operation of bulk electric systems shall recognize that reliability is an essential requirement of a robust North American economy. Yes	
2. An Organization Standard shall not give any market participant an unfair competitive advantage. Yes	
3. An Organization Standard shall neither mandate nor prohibit any specific market structure. Yes	
4. An Organization Standard shall not preclude market solutions to achieving compliance with that Standard. Yes	
5. An Organization Standard shall not require the public disclosure of commercially sensitive information. All market participants shall have equal opportunity to access commercially non-sensitive information that is required for compliance with reliability standards. Yes	

Related Standards – Listed under description

Standard No.	Explanation

Related SARs

SAR ID	Explanation

Regional Differences

Region	Explanation
ERCOT	
FRCC	
MRO	
NPCC	
SERC	
RFC	
SPP	
WECC	

The drafting team will assist stakeholders in considering these comments in determining what changes to make to the standards:

COM-001-0 Telecommunications

FERC Order 693

- o Include generator operators and distribution provider as applicable entities and include requirements for their telecommunications
- o Include requirements for telecommunication facilities for use during normal and emergency conditions that reflect the roles of the applicable entities and their impact on reliable operation
- o Includes adequate flexibility for compliance with the reliability standard, adoption of new technologies and cost-effective solutions

V0 Industry Comments

- o Many players missing
- o Apply R1 to all but smallest entities

Violation Risk Factor Drafting Team Comments

- o R6 – administrative requirement

COM-002-1 Communications and Coordination

FERC Order 693

- o Include a Requirement for the reliability coordinator to assess and approve actions that have impacts beyond the area views of transmission operators or balancing authorities;
- o Include distribution providers as applicable entities; and
- o Require tightened communications protocols, especially for communications during alerts and emergencies.

V0 Industry Comments

- o Voice with generators not required
- o R1 – include reliability authority
- o R2 – include sabotage and security
- o R4 – clarify repeat back requirement with regard to emergency

IRO-001-0 Reliability Coordination – Responsibilities and Authorities

FERC Order 693

- o Reflect the process set forth in the NERC Rules of Procedures; and
- o Eliminate the regional reliability organization as an applicable entity.

Regional Fill-in-the-Blank Team Comments

- o Remove ", sub-region, or interregional coordinating group" from R1
- o Consider removing "Standards of conduct are necessary to ensure the Reliability Coordinator does not act in a manner that favors one market participant over another." from the Purpose section of the standard.

V0 Industry Comments

- o Inability to perform needs to be communicated
- o What is meant by 'interest of other entity'?

Violation Risk Factor Drafting Team Comments

- o R6 - Since the RC must be NERC certified, it stands to reason that anyone performing RC tasks should be certified. However, since the RC still retains the

accountability for actions, and requirement 4 handles the agreements, this requirement is a medium risk.

IRO-002-0 Reliability Coordination – Facilities

FERC Order 693

- o Require a minimum set of tools that should be made available to reliability coordinators.

V0 Industry Comments

- o R5 – define synchronized information system
- o R7 – define ‘adequate’ tools and ‘wide-area’
- o Words such as ‘easily understood’ and ‘particular emphasis’ need to be tightened

IRO-005-1 Reliability Coordination – Current Day Operations

FERC Order 693

- o Measures and Levels of Non-Compliance specific to IROL violations must be commensurate with the magnitude, duration, frequency and causes of the violations and whether these occur during normal or contingency conditions.
- o Conduct a survey on IROL practices and experiences; the Commission may propose further modifications to IRO-005-1 based on the survey results.

V0 Industry Comments

- o R10, 11 & 12 – RA not empowered to do this

IRO-016-1 Coordination of Real-Time Activities Between Reliability Coordinators

Violation Risk Factors Drafting Team Comments

- o R1.2.1 & R2 – ambiguous

PER-004-0 Reliability Coordination – Staffing

FERC Order 693

- o Include formal training requirements for reliability coordinators similar to those addressed under the personnel training Reliability Standard PER-002-0;
- o Include requirements pertaining to personnel credentials for reliability coordinators similar to those in PER-003-0
- o Consider the suggestions of FirstEnergy and Xcel:
1413. FirstEnergy seeks revisions to the terms “shall have a comprehensive understanding” and “shall have extensive knowledge.” It states that it will be difficult for entities to demonstrate compliance with these terms. In addition, FirstEnergy suggests that the reliability coordinator staffing requirements should be located in the IRO Reliability Standards.
1414. Xcel states that emergency training requirements should be expressed in hour increments rather than days to allow for flexibility in scheduling training and coordinating with rotating shift schedules.

V0 Industry Comments

- o Calendar year timing increment
- o Other training needs to be defined

PRC-001-0 System Protection Coordination

FERC Order 693

SAR for Project 2006-06 Reliability Coordination – Attachment 1

- o Correct the references for Requirements
- o Include a requirement that upon the detection of failures in relays or protection system elements on the Bulk-Power System that threaten reliable operation, relevant transmission operators must be informed promptly, but within a specified period of time whereas generator operators must also promptly inform their transmission operators
- o Clarify that, after being informed of failures in relays or protection system elements that threaten reliability of the Bulk-Power System, transmission operators must carry out corrective control actions, i.e., return the system to a stable state that respects system requirements as soon as possible and no longer than 30 minutes after they receive notice of the failure

V0 Industry Comments

- o Effects on reliability may not be known
- o Consistent terminology as to neighbor vs. affected
- o Not all criteria moved over from policies

The drafting team will reference these guidelines in determining what changes to make to the standards to bring them into conformance with the *Reliability Standards Development Procedure Manual, Version 6* and the *ERO Rules of Procedure*:

Standard Review Guidelines

Applicability

Does this reliability standard clearly identify the functional classes of entities responsible for complying with the reliability standard, with any specific additions or exceptions noted? Where multiple functional classes are identified is there a clear line of responsibility for each requirement identifying the functional class and entity to be held accountable for compliance? Does the requirement allow overlapping responsibilities between Registered Entities possibly creating confusion for who is ultimately accountable for compliance?

Does this reliability standard identify the geographic applicability of the standard, such as the entire North American bulk power system, an interconnection, or within a regional entity area? If no geographic limitations are identified, the default is that the standard applies throughout North America.

Does this reliability standard identify any limitations on the applicability of the standard based on electric facility characteristics, such as generators with a nameplate rating of 20 MW or greater, or transmission facilities energized at 200 kV or greater or some other criteria? If no functional entity limitations are identified, the default is that the standard applies to all identified functional entities.

Purpose

Does this reliability standard have a clear statement of purpose that describes how the standard contributes to the reliability of the bulk power system? Each purpose statement should include a value statement.

Performance Requirements

Does this reliability standard state one or more performance requirements, which if achieved by the applicable entities, will provide for a reliable bulk power system, consistent with good utility practices and the public interest?

Does each requirement identify who shall do what under what conditions and to what outcome?

Measurability

Is each performance requirement stated so as to be objectively measurable by a third party with knowledge or expertise in the area addressed by that requirement?

Does each performance requirement have one or more associated measures used to objectively evaluate compliance with the requirement?

If performance results can be practically measured quantitatively, are metrics provided within the requirement to indicate satisfactory performance?

Technical Basis in Engineering and Operations

Is this reliability standard based upon sound engineering and operating judgment, analysis, or experience, as determined by expert practitioners in that particular field?

Completeness

Is this reliability standard complete and self-contained? Does the standard depend on external information to determine the required level of performance?

Consequences for Noncompliance

In combination with guidelines for penalties and sanctions, as well as other ERO and regional entity compliance documents, are the consequences of violating a standard clearly known to the responsible entities?

Clear Language

Is the reliability standard stated using clear and unambiguous language? Can responsible entities, using reasonable judgment and in keeping with good utility practices, arrive at a consistent interpretation of the required performance?

Practicality

Does this reliability standard establish requirements that can be practically implemented by the assigned responsible entities within the specified effective date and thereafter?

Capability Requirements versus Performance Requirements

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Standard Authorization Request Form

Title of Proposed Standard	Reliability Coordination (Project 2006-06)
Request Date	December 18, 2006
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SAR Requestor Information	SAR Type (Check a box for each one that applies.)
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Primary Contact Ellis Rankin	☒ Revision to existing Standards – see list below COM-001 — Telecommunications COM-002 — Communications and Coordination IRO-001 — Reliability Coordination – Responsibilities and Authorities IRO-002 — Reliability Coordination – Facilities IRO-005 — Reliability Coordination – Current Day Operations IRO-014 — Procedures to Support Coordination between Reliability Coordinators IRO-015 — Notifications and Information Exchange Between Reliability Coordinators IRO-016 — Coordination of Real-time Activities between Reliability Coordinators PER-004 — Reliability Coordination – Staffing PRC-001 — System Protection Coordination
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Reliability and Market Interface Principles

Applicable Reliability Principles (Check box for all that apply.)	
☒	1. Interconnected bulk electric systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Standards.
☒	2. The frequency and voltage of interconnected bulk electric systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand.
☒	3. Information necessary for the planning and operation of interconnected bulk electric systems shall be made available to those entities responsible for planning and operating the systems reliably.
☒	4. Plans for emergency operation and system restoration of interconnected bulk electric systems shall be developed, coordinated, maintained and implemented.
☒	5. Facilities for communication, monitoring and control shall be provided, used and maintained for the reliability of interconnected bulk electric systems.
☒	6. Personnel responsible for planning and operating interconnected bulk electric systems shall be trained, qualified, and have the responsibility and authority to implement actions.
☒	7. The security of the interconnected bulk electric systems shall be assessed, monitored and maintained on a wide area basis.
Does the proposed Standard comply with all of the following Market Interface Principles? (Select 'yes' or 'no' from the drop-down box.)	
1. The planning and operation of bulk electric systems shall recognize that reliability is an essential requirement of a robust North American economy. Yes	
2. An Organization Standard shall not give any market participant an unfair competitive advantage. Yes	
3. An Organization Standard shall neither mandate nor prohibit any specific market structure. Yes	
4. An Organization Standard shall not preclude market solutions to achieving compliance with that Standard. Yes	
5. An Organization Standard shall not require the public disclosure of commercially sensitive information. All market participants shall have equal opportunity to access commercially non-sensitive information that is required for compliance with reliability standards. Yes	

Related Standards – Listed under description

Standard No.	Explanation

Related SARs

SAR ID	Explanation

Regional Differences

Region	Explanation
ERCOT	
FRCC	
MRO	
NPCC	
SERC	
RFC	
SPP	
WECC	

The drafting team will assist stakeholders in considering these comments in determining what changes to make to the standards:

COM-001-0 Telecommunications

FERC Order 693

- o Include generator operators and distribution provider as applicable entities and ~~and include requirements for their telecommunications~~
- o Include requirements for telecommunication facilities for use during normal and emergency ~~conditions that reflect the roles of the applicable entities and their impact on reliable operation~~
- o Includes adequate flexibility for compliance with the reliability standard, adoption of new technologies and cost-effective solutions

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V0 Industry Comments

- o Many players missing
- o Apply R1 to all but smallest entities

Violation Risk Factor Drafting Team Comments

- o R6 – administrative requirement

COM-002-1 Communications and Coordination

FERC Order 693

- o Include a Requirement for the reliability coordinator to assess and approve actions that have impacts beyond the area views of transmission operators or balancing authorities;
- o Include distribution providers as applicable entities; and
- o Require tightened communications protocols, especially for communications during alerts and emergencies.

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V0 Industry Comments

- o Voice with generators not required
- o R1 – include reliability authority
- o R2 – include sabotage and security
- o R4 – clarify repeat back requirement with regard to emergency

IRO-001-0 Reliability Coordination – Responsibilities and Authorities

FERC Order 693

- o Reflect the process set forth in the NERC Rules of Procedures; and
- o Eliminate the regional reliability organization as an applicable entity.

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Regional Fill-in-the-Blank Team Comments

- o Remove ", sub-region, or interregional coordinating group" from R1
- o Consider removing "Standards of conduct are necessary to ensure the Reliability Coordinator does not act in a manner that favors one market participant over another." from the Purpose section of the standard.

V0 Industry Comments

- o Inability to perform needs to be communicated
- o What is meant by 'interest of other entity'?

Violation Risk Factor Drafting Team Comments

- o R6 - Since the RC must be NERC certified, it stands to reason that anyone performing RC tasks should be certified. However, since the RC still retains the

accountability for actions, and requirement 4 handles the agreements, this requirement is a medium risk.

IRO-002-0 Reliability Coordination – Facilities

FERC ~~Order 693~~

- o ~~Require a minimum set of tools that should be made available to~~ reliability coordinators.

V0 Industry Comments

- o R5 – define synchronized information system
- o R7 – define ‘adequate’ tools and ‘wide-area’
- o Words such as ‘easily understood’ and ‘particular emphasis’ need to be tightened

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IRO-005-1 Reliability Coordination – Current Day Operations

FERC ~~Order 693~~

- o ~~Measures and Levels of Non-Compliance specific to IROL violations must be commensurate with the magnitude, duration, frequency and causes of the violations and whether these occur during normal or contingency conditions.~~
- o ~~Conduct a survey on IROL practices and experiences; the Commission may propose further modifications to IRO-005-1 based on the survey results.~~

V0 Industry Comments

- o R10, 11 & 12 – RA not empowered to do this

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IRO-016-1 Coordination of Real-Time Activities Between Reliability Coordinators

Violation Risk Factors Drafting Team Comments

- o R1.2.1 & R2 – ambiguous

PER-004-0 Reliability Coordination – Staffing

FERC ~~Order 693~~

- o Include formal training requirements for reliability coordinators similar to those addressed under the personnel training Reliability Standard PER-002-0;
- o Include requirements pertaining to personnel credentials for reliability coordinators similar to those in PER-003-0.
- o ~~Consider the suggestions of FirstEnergy and Xcel:~~
1413. FirstEnergy seeks revisions to the terms “shall have a comprehensive understanding” and “shall have extensive knowledge.” It states that it will be difficult for entities to demonstrate compliance with these terms. In addition, FirstEnergy suggests that the reliability coordinator staffing requirements should be located in the IRO Reliability Standards.
1414. Xcel states that emergency training requirements should be expressed in hour increments rather than days to allow for flexibility in scheduling training and coordinating with rotating shift schedules.

V0 Industry Comments

- o Calendar year timing increment
- o Other training needs to be defined

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PRC-001-0 System Protection Coordination

FERC ~~Order 693~~

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SAR for Project 2006-06 Reliability Coordination – Attachment 1

- o **Correct the references for Requirements**
 - o Include a requirement that upon the detection of failures in relays or protection system elements on the Bulk-Power System that threaten reliable operation, relevant transmission operators must be informed promptly, but within a specified period of time whereas generator operators must also promptly inform their transmission operators
 - o Clarify that, after being informed of failures in relays or protection system elements that threaten reliability of the Bulk-Power System, transmission operators must carry out corrective control actions, i.e., return the system to a stable state that respects system requirements as soon as possible and no longer than 30 minutes after they receive notice of the failure
- ▼ V0 Industry Comments
- o Effects on reliability may not be known
 - o Consistent terminology as to neighbor vs. affected
 - o Not all criteria moved over from policies

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The drafting team will reference these guidelines in determining what changes to make to the standards to bring them into conformance with the *Reliability Standards Development Procedure Manual, Version 6* and the *ERO Rules of Procedure*:

Standard Review Guidelines

Applicability

Does this reliability standard clearly identify the functional classes of entities responsible for complying with the reliability standard, with any specific additions or exceptions noted? Where multiple functional classes are identified is there a clear line of responsibility for each requirement identifying the functional class and entity to be held accountable for compliance? Does the requirement allow overlapping responsibilities between Registered Entities possibly creating confusion for who is ultimately accountable for compliance?

Does this reliability standard identify the geographic applicability of the standard, such as the entire North American bulk power system, an interconnection, or within a regional entity area? If no geographic limitations are identified, the default is that the standard applies throughout North America.

Does this reliability standard identify any limitations on the applicability of the standard based on electric facility characteristics, such as generators with a nameplate rating of 20 MW or greater, or transmission facilities energized at 200 kV or greater or some other criteria? If no functional entity limitations are identified, the default is that the standard applies to all identified functional entities.

Purpose

Does this reliability standard have a clear statement of purpose that describes how the standard contributes to the reliability of the bulk power system? Each purpose statement should include a value statement.

Performance Requirements

Does this reliability standard state one or more performance requirements, which if achieved by the applicable entities, will provide for a reliable bulk power system, consistent with good utility practices and the public interest?

Does each requirement identify who shall do what under what conditions and to what outcome?

Measurability

Is each performance requirement stated so as to be objectively measurable by a third party with knowledge or expertise in the area addressed by that requirement?

Does each performance requirement have one or more associated measures used to objectively evaluate compliance with the requirement?

If performance results can be practically measured quantitatively, are metrics provided within the requirement to indicate satisfactory performance?

Technical Basis in Engineering and Operations

Is this reliability standard based upon sound engineering and operating judgment, analysis, or experience, as determined by expert practitioners in that particular field?

Completeness

Is this reliability standard complete and self-contained? Does the standard depend on external information to determine the required level of performance?

Consequences for Noncompliance

In combination with guidelines for penalties and sanctions, as well as other ERO and regional entity compliance documents, are the consequences of violating a standard clearly known to the responsible entities?

Clear Language

Is the reliability standard stated using clear and unambiguous language? Can responsible entities, using reasonable judgment and in keeping with good utility practices, arrive at a consistent interpretation of the required performance?

Practicality

Does this reliability standard establish requirements that can be practically implemented by the assigned responsible entities within the specified effective date and thereafter?

Capability Requirements versus Performance Requirements

In general, requirements for entities to have ‘capabilities’ (this would include facilities for communication, agreements with other entities, etc.) should be located in the standards for certification. The certification requirements should indicate that entities have a responsibility to ‘maintain’ their capabilities.

Consistent Terminology

To the extent possible, does this reliability standard use a set of standard terms and definitions that are approved through the NERC reliability standards development process?

If the standard uses terms that are included in the NERC Glossary of Terms Used in Reliability Standards, then the term must be capitalized when it is used in the standard. New terms should not be added unless they have a ‘unique’ definition when used in a NERC reliability standard. Common terms that could be found in a college dictionary should not be defined and added to the NERC Glossary.

Are the verbs on the ‘verb list’ from the DT Guidelines? If not – do new verbs need to be added to the guidelines or could you use one of the verbs from the verb list?

Violation Risk Factors (Risk Factor)

High Risk Requirement

A requirement that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures;

or a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.

Medium Risk Requirement

A requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures;

or a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or

restore the bulk electric system. However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.

Lower Risk Requirement

A requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. A requirement that is administrative in nature;

or a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. A planning requirement that is administrative in nature.

Time Horizon

The drafting team should also indicate the time horizon available for mitigating a violation to the requirement using the following definitions:

- **Long-term Planning** — a planning horizon of one year or longer.
- **Operations Planning** — operating and resource plans from day-ahead up to and including seasonal.
- **Same-day Operations** — routine actions required within the timeframe of a day, but not real-time.
- **Real-time Operations** — actions required within one hour or less to preserve the reliability of the bulk electric system.
- **Operations Assessment** — follow-up evaluations and reporting of real time operations.

Violation Severity Levels

The drafting team should indicate a set of violation severity levels that can be applied for the requirements within a standard. ('Violation severity levels' replace existing 'levels of non-compliance.')

The violation severity levels must be applied for each requirement and may be combined to cover multiple requirements, as long as it is clear which requirements are included and that all requirements are included.

The violation severity levels should be based on the following definitions:

- **Lower: mostly compliant with minor exceptions** — The responsible entity is mostly compliant with and meets the intent of the requirement but is deficient with respect to one or more minor details. Equivalent score: 95% to 99% compliant.
- **Moderate: mostly compliant with significant exceptions** — The responsible entity is mostly compliant with and meets the intent of the requirement but is deficient with respect to one or more significant elements. Equivalent score: 85% to 94% compliant.
- **High: marginal performance or results** — The responsible entity has only partially achieved the reliability objective of the requirement and is missing one or more significant elements. Equivalent score: 70% to 84% compliant.
- **Severe: poor performance or results** — The responsible entity has failed to meet the reliability objective of the requirement. Equivalent score: less than 70% compliant.

Compliance Monitor

Replace, 'Regional Reliability Organization' with 'Regional Entity'

Fill-in-the-blank Requirements

Do not include any 'fill-in-the-blank' requirements. These are requirements that assign one entity responsibility for developing some performance measures without requiring that the performance measures be included in the body of a standard – then require another entity to comply with those requirements.

Every reliability objective can be met, at least at a threshold level, by a North American standard. If we need regions to develop regional standards, such as in under-frequency load shedding, we can always write a uniform North American standard for the applicable functional entities as a means of encouraging development of the regional standards.

Requirements for Regional Reliability Organization

Do not write any requirements for the Regional Reliability Organization. Any requirements currently assigned to the RRO should be re-assigned to the applicable functional entity.

Effective Dates

Must be 1st day of 1st quarter after entities are expected to be compliant – must include time to file with regulatory authorities and provide notice to responsible entities of the obligation to comply. If the standard is to be actively monitored, time for the Compliance Monitoring and Enforcement Program to develop reporting instructions and modify the Compliance Data Management System(s) both at NERC and Regional Entities must be provided in the implementation plan. **The effective date should be linked to the NERC BOT adoption date.**

Associated Documents

If there are standards that are referenced within a standard, list the full name and number of the standard under the section called, 'Associated Documents'.

Functional Model Version 3

Review the requirements against the latest descriptions of the responsibilities and tasks assigned to functional entities as provided in pages 13 through 53 of the draft Functional Model Version 3.

May 11, 2007

TO: REGISTERED BALLOT BODY

Ladies and Gentlemen:

**Announcement
Nomination Periods Open for Two Drafting Teams**

The Standards Committee (SC) announces the following standards actions:

Nominations for Project 2006-06 Reliability Coordination Standard Drafting Team (May 14–25, 2007)

The Standards Committee authorized moving the [SAR for Reliability Coordination](#) forward to standard drafting and is seeking industry experts to serve on the Reliability Coordination Standard Drafting Team. This drafting team will work on modifications to the following standards:

- COM-001 — Telecommunications
- COM-002 — Communications and Coordination
- IRO-001 — Reliability Coordination – Responsibilities and Authorities
- IRO-002 — Reliability Coordination – Facilities
- IRO-005 — Reliability Coordination – Current Day Operations
- IRO-014 — Procedures to Support Coordination between Reliability Coordinators
- IRO-015 — Notifications and Information Exchange Between Reliability Coordinators
- IRO-016 — Coordination of Real-time Activities between Reliability Coordinators
- PER-004 — Reliability Coordination – Staffing
- PRC-001 — System Protection Coordination

If you are interested in serving on this standard drafting team, please complete this [nomination form](#) and return it to sarcomm@nerc.netnet by May 25, 2007 with “RC SDT Nomination” in the subject line.

Nominations for Project 2007-18 Reliability-based Control SAR Drafting Team (May 14–25, 2007)

The Standards Committee authorized posting the [SAR for Reliability-based Control](#) and is seeking industry experts to serve on the Reliability-based Control SAR Drafting Team. This SAR proposes to develop requirements to achieve the following objectives:

- To maintain Interconnection frequency within predefined frequency limits under all conditions (i.e., normal and abnormal), to prevent frequency-related instability; unplanned tripping of load or generation; or uncontrolled separation or Cascading outages that adversely impact the reliability of the Interconnection. (Work brought into this SAR from BAL-007 though BAL-011.)

REGISTERED BALLOT BODY

May 11, 2007

Page Two

- To support elimination of SOL/IROL violations caused by excessive (as determined by this standard) Area Control Error (“ACE”). (Could be a separate and individually balloted Standard.)
- To prevent Interconnection frequency excursions of short-duration attributed to the ramping of on and off-peak Interchange Transactions. (Could be a separate and individually balloted Standard.)
- To support timely transmission congestion relief by requiring corrective load/generation management within a defined timeframe when ACE is impacted by the curtailment of Interchange Transactions under transmission loading relief procedures. (Could be a separate and individually balloted Standard.)
- To address the directives of FERC Order 693.

If you are interested in serving on this SAR drafting team, please complete this [nomination form](#) and return it to sarcomm@nerc.net by May 25, 2007 with “RB Control SARDT Nomination” in the subject line.

Standards Development Process

The [Reliability Standards Development Procedure](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate. If you have any questions, please contact me at 813-468-5998 or maureen.long@nerc.net.

Sincerely,

Maureen E. Long

cc: Registered Ballot Body Registered Users
Standards Mailing List
NERC Roster

Nomination Form — Standard Drafting Team for Project 2006-06 — Reliability Coordination

Please return this form to sarcomm@nerc.net by **May 25, 2007** with “**RC SDT Nomination**” in the subject line. For questions, please contact Gerry Adamski at 609-452-8060 or gerry.adamski@nerc.net.

Name:	
Organization:	
Address:	
Office Telephone:	
E-mail:	
Please briefly describe your experience and qualifications to serve on the Reliability Coordination Standard Drafting Team, including operating or engineering experience involving reliability coordination for entities registered as Reliability Coordinators. Previous experience working on or applying NERC or IEEE standards is beneficial, but not a requirement.	
I represent the following NERC Reliability Region(s) (check all that apply):	I represent the following Industry Segment (check one):
☐ ERCOT	☐ 1 — Transmission Owners
☐ FRCC	☐ 2 — RTOs, ISOs
☐ MRO	☐ 3 — Load-serving Entities
☐ NPCC	☐ 4 — Transmission-dependent Utilities
☐ RFC	☐ 5 — Electric Generators
☐ SERC	☐ 6 — Electricity Brokers, Aggregators, and Marketers
☐ SPP	☐ 7 — Large Electricity End Users
☐ WECC	☐ 8 — Small Electricity End Users
☐ NA – Not Applicable	☐ 9 — Federal, State, and Provincial Regulatory or other Government Entities
	☐ 10 – Regional Reliability Organizations and Regional Entities

Nomination Form — Standard Drafting Team for Project 2006-06 — Reliability Coordination

Which of the following Function(s)¹ do you have expertise or responsibilities:

☐ Reliability Coordinator

☐ Balancing Authority

☐ Interchange Authority

☐ Planning Coordinator

☐ Transmission Operator

☐ Generator Operator

☐ Transmission Planner

☐ Transmission Service Provider

☐ Transmission Owner

☐ Load Serving Entity

☐ Distribution Provider

☐ Purchasing-selling Entity

☐ Generator Owner

☐ Resource Planner

☐ Market Operator

Provide the names and contact information for two references who could attest to your technical qualifications and your ability to work well in a group.

Name:

Office

Telephone:

Organization:

E-mail:

Name:

Office

Telephone:

Organization:

E-mail:

¹ These functions are defined in the Functional Model, which is downloadable from the following Web site:
<http://www.nerc.com/~filez/functionalmodel.html>

A. Introduction

1. **Title:** Coordination Among Reliability Coordinators
2. **Number:** IRO-014-2
3. **Purpose:** To ensure that each Reliability Coordinator's operations are coordinated such that they will not have an Adverse Reliability Impact on other Reliability Coordinator Areas and to preserve the reliability benefits of interconnected operations.
4. **Applicability:**
 - 4.1. Reliability Coordinators.
5. **Effective Date:** TBD

B. Requirements

- R1. The Reliability Coordinator shall have Operating Procedures, Processes, or Plans for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address, as a minimum, the following: *[Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning]*
 - R1.1. Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators.
 - R1.2. Energy and capacity shortages.
 - R1.3. Planned or unplanned outage information.
 - R1.4. Voltage control, including the coordination of reactive resources for voltage control.
 - R1.5. Coordination of information exchange to support reliability assessments.
 - R1.6. Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas.
- R2. Each Reliability Coordinator's Operating Procedure, Process, or Plan that requires one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) shall be: *[Violation Risk Factor: Lower] [Time Horizon: Real-time Operations and Operations Planning]*
 - R2.1. Agreed to by all the Reliability Coordinators required to take the indicated action(s).
 - R2.2. Distributed to all Reliability Coordinators that are required to take the indicated action(s).
- R3. The Reliability Coordinator shall make notifications and exchange reliability-related information with impacted Reliability Coordinators using its predefined Operating Procedures, Processes, or Plans for conditions that may impact other Reliability Coordinator Areas or other means to accomplish the notifications and exchange of

reliability-related information. *[Violation Risk Factor: Medium][Time Horizon: Real-time Operations and Operations Planning]*

- R4.** The Reliability Coordinator shall participate in agreed upon conference calls and other communication forums with impacted Reliability Coordinators. *[Violation Risk Factor: Lower][Time Horizon: Real-time Operations]*

R4.1. The frequency of these conference calls shall be agreed upon by all involved Reliability Coordinators and shall be at least weekly.

- R5.** When an expected or actual reliability issue is detected, the Reliability Coordinator shall confirm the existence of the issue with the impacted Reliability Coordinators. In the event that the issue cannot be confirmed, each Reliability Coordinator shall operate as though the problem exists. *[Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*

- R6.** When an expected or actual reliability issue exists and the impacted Reliability Coordinators cannot agree on a mitigation plan, all impacted Reliability Coordinators shall implement the mitigation plan developed by the Reliability Coordinator who has the reliability issue. *[Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*

C. Measures

- M1.** The Reliability Coordinator's System Operators shall have available for Real-time use, the latest approved version of Operating Procedures, Processes, or Plans that require notifications, information exchange or the coordination of actions among impacted Reliability Coordinators.

M1.1 These Operating Procedures, Processes, or Plans shall address:

M1.1.1 Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators.

M1.1.2 Energy and capacity shortages.

M1.1.3 Planned or unplanned outage information.

M1.1.4 Voltage control, including the coordination of reactive resources for voltage control.

M1.1.5 Coordination of information exchange to support reliability assessments.

M1.1.6 Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas.

- M2.** The Reliability Coordinator shall have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were:

- M2.1** Agreed to by all the Reliability Coordinators required to take the indicated action(s).
- M2.2** Distributed to all Reliability Coordinators that are required to take the indicated action(s).
- M3.** The Reliability Coordinator shall have evidence it made notifications and exchanged reliability-related information with impacted Reliability Coordinators using its predefined Operating Procedures, Processes, or Plans for conditions that may impact other Reliability Coordinator Areas or other means to accomplish the notifications and exchange of reliability-related information.
- M4.** The Reliability Coordinator shall have evidence it participated in agreed upon (at least weekly) conference calls and other communication forums with impacted Reliability Coordinators.
- M5.** The Reliability Coordinator shall have evidence that, in cases when an expected or actual reliability issue was detected, it has confirmed the existence of the issue with the impacted Reliability Coordinators.
- M6.** The affected Reliability Coordinators shall have evidence that, in cases when an expected or actual reliability issue existed and the impacted Reliability Coordinators could not agree on a mitigation plan, they implemented the mitigation plan developed by the Reliability Coordinator who has the reliability issue.

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

Regional Entity

1.2. Compliance Monitoring Period and Reset Time Frame

Not Applicable

1.3. Compliance Monitoring and Enforcement Processes:

Compliance Audits

Self-Certifications

Spot Checking

Compliance Violation Investigations

Self-Reporting

Complaints

1.4. Data Retention

The Reliability Coordinator shall keep documentation for the prior calendar year and the current calendar year or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation.

The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

1.5. Additional Compliance Information

None.

2. Violation Severity Levels

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	The Reliability Coordinator has Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address one or two of the subrequirements.	The Reliability Coordinator has Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address three or four of the subrequirements.	The Reliability Coordinator has Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address five of the subrequirements.	The Reliability Coordinator failed to have Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability.
R2	N/A	The Reliability Coordinator failed to have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications,	The Reliability Coordinator failed to have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions)	The Reliability Coordinator failed to have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions)

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
		exchange information, or coordinate actions) were distributed to all Reliability Coordinators that are required to take action.	were not agreed to by all Reliability Coordinators that are required to take action	were not agreed to by all Reliability Coordinators that are required to take action and were not distributed to all Reliability Coordinators that are required to take action
R3	N/A	N/A	The Reliability Coordinator failed to make notifications or exchange reliability–related information with impacted Reliability Coordinators.	The Reliability Coordinator failed to make notifications and exchange reliability–related information with impacted Reliability Coordinators.
R4	The Reliability Coordinator failed to participate in agreed upon (at least weekly) conference calls and other communication forums with impacted Reliability Coordinators.	N/A	N/A	N/A

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R5	The Reliability Coordinator that detected an expected or actual reliability issue contacted the other Reliability Coordinator(s) to confirm that there was a problem but could not confirm that the problem existed and failed to operate as though the problem existed.	N/A	N/A	The Reliability Coordinator that detected an expected or actual reliability issue failed to contact the other Reliability Coordinator(s) to confirm that there was a problem.
R6	The Reliability Coordinator did not agree on a mitigation plan and implemented a plan other than the one developed by the Reliability Coordinator who had the reliability issue.	N/A	N/A	The Reliability Coordinator did not agree on a mitigation plan and did not implement a mitigation plan.

E. Regional Differences

None identified.

F. Associated Documents

Version History

Version	Date	Action	Change Tracking
1	August 10, 2005	1. Changed incorrect use of certain hyphens (-) to “en dash (–).” 2. Hyphenated “30-day” when used as adjective. 3. Changed standard header to be consistent with standard “Title.” 4. Initial capped heading “Definitions of Terms Used in Standard.” 5. Added “periods” to items where appropriate. 6. Changed “Timeframe” to “Time Frame” in item D, 1.2. 7. Lower cased all words that are not “defined” terms — drafting team, self-certification. 8. Changed apostrophes to “smart” symbols. 9. Added comma in all word strings “Procedures, Processes, or Plans,” etc. 10. Added hyphens to “Reliability Coordinator-to-Reliability Coordinator” where used as adjective. 11. Removed comma in item 2.1.2. 12. Removed extra spaces between words where appropriate.	January 20, 2006
1	February 7, 2006	Approved by BOT	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New
2	TBD	Revised per SAR for Project 2006-6, RCSDT	Revised

A. Introduction

1. **Title:** ~~Procedures, Processes, or Plans to Support~~ Coordination
~~Between~~Among Reliability Coordinators
2. **Number:** IRO-014-~~1~~2
3. **Purpose:** To ensure that each Reliability Coordinator's operations are coordinated such that they will not have an Adverse Reliability Impact on other Reliability Coordinator Areas and to preserve the reliability benefits of interconnected operations.
4. **Applicability:**
 - 4.1. Reliability Coordinators.
5. **Effective Date:** ~~November 1, 2006~~TBD

B. Requirements

- ~~R1.~~—The Reliability Coordinator shall have Operating Procedures, Processes, or Plans ~~in place~~ for activities that require notification, exchange of information or coordination of actions with ~~one or more other~~impacted Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall ~~address Scenarios that affect other Reliability Coordinator Areas as well as those developed in coordination with other Reliability Coordinators.~~
- R1.** ~~These Operating Procedures, Processes, or Plans shall~~ collectively address, as a minimum, the following: [Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning]
- R1.1.** Communications and notifications, including the mutually agreed to conditions⁺ under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators.
 - R1.2.** Energy and capacity shortages.
 - R1.3.** Planned or unplanned outage information.
 - R1.4.** Voltage control, including the coordination of reactive resources for voltage control.
 - R1.5.** Coordination of information exchange to support reliability assessments.
 - R1.6.** Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas.

⁺ ~~Examples of conditions when one Reliability Coordinator may need to notify another Reliability Coordinator may include (but aren't limited to) sabotage events, Interconnection Reliability Operating Limit violations, voltage reductions, insufficient resources, arming of special protection systems, etc.~~

R2. Each Reliability Coordinator's Operating Procedure, Process, or Plan that requires one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) shall be: [Violation Risk Factor: Lower]
[Time Horizon: Real-time Operations and Operations Planning]

R2.1. Agreed to by all the Reliability Coordinators required to take the indicated action(s).

R2.2. Distributed to all Reliability Coordinators that are required to take the indicated action(s).

~~**R3.A** Reliability Coordinator's Operating Procedures, Processes, or Plans developed to support a Reliability Coordinator to Reliability Coordinator Operating Procedure, Process, or Plan shall include:~~

~~**R3.1.A** reference to the associated Reliability Coordinator to Reliability Coordinator Operating Procedure, Process, or Plan.~~

~~**R3.2.** The agreed-upon actions from the associated Reliability Coordinator to Reliability Coordinator Operating Procedure, Process, or Plan.~~

~~**R4.** Each of the Operating Procedures, Processes, and Plans addressed in Reliability Standard IRO-014 Requirement 1 and Requirement 3 shall:~~

~~**R4.1.** Include version control number or date.~~

~~**R4.2.** Include a distribution list.~~

~~**R4.3.** Be reviewed, at least once every three years, and updated if needed.~~

R3. The Reliability Coordinator shall make notifications and exchange reliability-related information with impacted Reliability Coordinators using its predefined Operating Procedures, Processes, or Plans for conditions that may impact other Reliability Coordinator Areas or other means to accomplish the notifications and exchange of reliability-related information. [Violation Risk Factor: Medium][Time Horizon: Real-time Operations and Operations Planning]

R4. The Reliability Coordinator shall participate in agreed upon conference calls and other communication forums with impacted Reliability Coordinators. [Violation Risk Factor: Lower][Time Horizon: Real-time Operations]

R4.1. The frequency of these conference calls shall be agreed upon by all involved Reliability Coordinators and shall be at least weekly.

R5. When an expected or actual reliability issue is detected, the Reliability Coordinator shall confirm the existence of the issue with the

The RC SDT proposes retiring R3 and R4 and their subrequirements. Requirements R3 and R4 are administrative in nature describing the contents of the plans and should not be in a standard. The RC SDT proposes converting R3 and R4 and their subrequirements into a guideline document for use in developing the operating procedures, processes or plans.

The RC SDT moved R3 and R4 from IRO-015-1 into this standard.

The RC SDT moved R5 and R6 from IRO-016-1 into this standard.

impacted Reliability Coordinators. In the event that the issue cannot be confirmed, each Reliability Coordinator shall operate as though the problem exists. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

- R6.** When an expected or actual reliability issue exists and the impacted Reliability Coordinators cannot agree on a mitigation plan, all impacted Reliability Coordinators shall implement the mitigation plan developed by the Reliability Coordinator who has the reliability issue. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

When the RC SDT moved IRO-016-1 R1.3 into IRO-014-2 R6, the RC SDT replaced the phrase, “most conservative solution” because it cannot be measured. The RC SDT is proposing to use the mitigation plan of the RC that is experiencing the issue in cases where an agreed to mitigation plan can not be developed.

C. Measures

- M1.** The Reliability Coordinator’s System Operators shall have available for Real-time use, the latest approved version of Operating Procedures, Processes, or Plans that require notifications, information exchange or the coordination of actions among impacted Reliability Coordinators.
- M1.1** These Operating Procedures, Processes, or Plans shall address:
- M1.1.1** Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators.
 - M1.1.2** Energy and capacity shortages.
 - M1.1.3** Planned or unplanned outage information.
 - M1.1.4** Voltage control, including the coordination of reactive resources for voltage control.
 - M1.1.5** Coordination of information exchange to support reliability assessments.
 - M1.1.6** Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas.
- M2.** The Reliability Coordinator shall have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were:
- M2.1** Agreed to by all the Reliability Coordinators required to take the indicated action(s).

M2.2 Distributed to all Reliability Coordinators that are required to take the indicated action(s).

~~**R5.** A Reliability Coordinator's Operating Procedures, Processes, or Plans developed to support a Reliability Coordinator to Reliability Coordinator Operating Procedure, Process, or Plan shall include:~~

~~**R5.1.** A reference to the associated Reliability Coordinator to Reliability Coordinator Operating Procedure, Process, or Plan.~~

~~**R5.2.** The agreed-upon actions from the associated Reliability Coordinator to Reliability Coordinator Operating Procedure, Process, or Plan.~~

~~**R6.** Each of the Operating Procedures, Processes, and Plans addressed in Reliability Standard IRO-014 Requirement 1 and Requirement 3 shall:~~

~~**R6.1.** Include version control number or date.~~

~~**R6.2.** Include a distribution list.~~

~~**R6.3.** Be reviewed, at least once every three years, and updated if needed.~~

~~C.~~ Measures

~~**M2.** The Reliability Coordinator's System Operators shall have available for Real-time use, the latest approved version of Operating Procedures, Processes, or Plans that require notifications, information exchange or the coordination of actions between Reliability Coordinators.~~

~~**M2.1** These Operating Procedures, Processes, or Plans shall address:~~

~~**M2.1.1** Communications and notifications, including the conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators.~~

~~**M1.1.2** ——— Energy and capacity shortages.~~

~~**M1.1.3** Planned or unplanned outage information.~~

~~**M1.1.4** Voltage control, including the coordination of reactive resources for voltage control.~~

~~**M1.1.5** Coordination of information exchange to support reliability assessments.~~

~~**M1.1.6** Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas.~~

~~**M3.** The Reliability Coordinator shall have evidence that these Operating Procedures, Processes, or Plans were:~~

~~**M3.1** Agreed to by all the Reliability Coordinators required to take the indicated action(s).~~

~~M3.2~~ Distributed to all Reliability Coordinators that are required to take the indicated action(s).

~~M4.~~ The Reliability Coordinator's Operating Procedures, Processes, or Plans developed (for its System Operators' internal use) to support a Reliability Coordinator to Reliability Coordinator Operating Procedure, Process, or Plan received from another Reliability Coordinator shall:

~~M4.1~~ Be available to the Reliability Coordinator's System Operators for Real-time use,

~~M4.2~~ Include a reference to the associated source document, and

~~M4.3~~ Support the agreed-upon actions from the source document.

~~M5.~~ The Reliability Coordinator's Operating Procedures, Processes, or Plans that addresses Reliability Coordinator to Reliability Coordinator coordination shall each include a version control number or date and a distribution list. The Reliability Coordinator shall have evidence that these Operating Procedures, Processes, or Plans were reviewed within the last three years.

~~M3.~~ The Reliability Coordinator shall have evidence it made notifications and exchanged reliability-related information with impacted Reliability Coordinators using its predefined Operating Procedures, Processes, or Plans for conditions that may impact other Reliability Coordinator Areas or other means to accomplish the notifications and exchange of reliability-related information.

~~M4.~~ The Reliability Coordinator shall have evidence it participated in agreed upon (at least weekly) conference calls and other communication forums with impacted Reliability Coordinators.

~~M5.~~ The Reliability Coordinator shall have evidence that, in cases when an expected or actual reliability issue was detected, it has confirmed the existence of the issue with the impacted Reliability Coordinators.

~~M6.~~ The affected Reliability Coordinators shall have evidence that, in cases when an expected or actual reliability issue existed and the impacted Reliability Coordinators could not agree on a mitigation plan, they implemented the mitigation plan developed by the Reliability Coordinator who has the reliability issue.

D. Compliance

1. Compliance Monitoring Process

~~1.1.~~ Compliance ~~Monitoring~~ Responsibility

1.1. Enforcement Authority

Regional ~~Reliability Organization~~Entity

1.2. Compliance Monitoring Period and Reset Time Frame

~~The Performance Reset Period shall be one calendar year.~~

Not Applicable

1.3. Compliance Monitoring and Enforcement Processes:

Compliance Audits

Self-Certifications

Spot Checking

Compliance Violation Investigations

Self-Reporting

Complaints

1.4. Data Retention

The Reliability Coordinator shall keep documentation for the prior calendar year and the current calendar year. ~~The Compliance Monitor shall keep or evidence to show compliance data~~as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a ~~minimum of three years or until the Reliability Coordinator has achieved full compliance, whichever is longer~~ period of time as part of an investigation.

The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

1.5. Additional Compliance Information

~~The Reliability Coordinator shall demonstrate compliance through self-certification submitted to its Compliance Monitor annually. The Compliance Monitor shall also use a scheduled on-site review at least once every three years and investigations upon complaint. The Compliance Monitor shall conduct an investigation upon a complaint within 30 days of the alleged infraction's discovery date. The Compliance Monitor shall complete the investigation within 45 days after the start of the investigation. As part of an audit or investigation, the Compliance Monitor shall interview other Reliability Coordinators to identify Operating Procedures, Processes or Plans that were distributed to the Reliability Coordinator being audited to verify that these documents are available for Real-time use by the receiving Reliability Coordinator's System Operators.~~

~~The Reliability Coordinator shall have the following documents available for inspection during an on-site audit or within five business days of a request as part of an investigation upon a complaint:~~

~~1.4.1 The latest version of its Operating Procedures, Processes, or Plans that require notification, exchange of information, or coordination of actions with one or more other Reliability Coordinators to support Interconnection reliability.~~

~~1.4.2 Evidence of distribution of Operating Procedures, Processes, or Plans.~~

~~2.~~ Levels of Non-Compliance

~~2.1. Level 1:~~ There shall be a level one non-compliance if either of the following conditions is present:

~~2.1.1~~ The latest versions of Operating Procedures, Processes, or Plans (identified through self-certification) that require notification, exchange of information, or coordination of actions with one or more other Reliability Coordinators to support Interconnection reliability do not include a version control number or date, and a distribution list.

~~2.1.2~~ The latest versions of Reliability Coordinator internal documents developed to support action(s) required as a result of other Reliability Coordinators do not include both a reference to the source Operating Procedure, Process, or Plan and the agreed-upon actions from the source Operating Procedure, Process, or Plan.

~~2.2. Level 2:~~ There shall be a level two non-compliance if any of the following conditions is present:

~~2.2.1~~ Documents required by this standard were not distributed to all entities on the distribution list.

~~2.2.2~~ Documents required by this standard were not available for System Operators' Real-time use.

~~2.2.3~~ Documents required by this standard do not address all required topics.

~~2.3. Level 3:~~ Documents required by this standard do not address any of the six required topics in Reliability Standard IRO-014 R1.

~~2.4. Level 4:~~ Not Applicable.

~~E. Regional Differences~~

~~None Identified.~~

None.

2. Violation Severity Levels

<u>R#</u>	<u>Lower VSL</u>	<u>Moderate VSL</u>	<u>High VSL</u>	<u>Severe VSL</u>

Standard IRO-014-1—~~Procedures, Processes, or Plans to Support~~2 — Coordination
~~Between~~Among Reliability Coordinators

R1	<u>The Reliability Coordinator has Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address one or two of the subrequirements.</u>	<u>The Reliability Coordinator has Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address three or four of the subrequirements.</u>	<u>The Reliability Coordinator has Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address five of the subrequirements.</u>	<u>The Reliability Coordinator failed to have Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability.</u>
R2	<u>N/A</u>	<u>The Reliability Coordinator failed to have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were distributed to all Reliability Coordinators that are required to take action.</u>	<u>The Reliability Coordinator failed to have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were not agreed to by all Reliability Coordinators that are required to take action</u>	<u>The Reliability Coordinator failed to have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were not agreed to by all Reliability Coordinators that are required to take action and were not distributed to all Reliability Coordinators that are required to take action</u>

Standard IRO-014-1 — ~~Procedures, Processes, or Plans to Support~~2 — Coordination
~~Between~~Among Reliability Coordinators

R3		<u>N/A</u>	<u>N/A</u>	<u>The Reliability Coordinator failed to make notifications or exchange reliability-related information with impacted Reliability Coordinators.</u>	<u>The Reliability Coordinator failed to make notifications and exchange reliability-related information with impacted Reliability Coordinators.</u>
R4		<u>The Reliability Coordinator failed to participate in agreed upon (at least weekly) conference calls and other communication forums with impacted Reliability Coordinators.</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
R5		<u>The Reliability Coordinator that detected an expected or actual reliability issue contacted the other Reliability Coordinator(s) to confirm that there was a problem but could not confirm that the problem existed and failed to operate as though the problem existed.</u>	<u>N/A</u>	<u>N/A</u>	<u>The Reliability Coordinator that detected an expected or actual reliability issue failed to contact the other Reliability Coordinator(s) to confirm that there was a problem.</u>

Standard IRO-014-~~1~~ — ~~Procedures, Processes, or Plans to Support~~2 — Coordination
~~Between~~Among Reliability Coordinators

R6	The Reliability Coordinator did not agree on a mitigation plan and implemented a plan other than the one developed by the Reliability Coordinator who had the reliability issue.	N/A	N/A	The Reliability Coordinator did not agree on a mitigation plan and did not implement a mitigation plan.

E. Regional Differences

None identified.

F. Associated Documents

Version History

Version	Date	Action	Change Tracking
~~Version~~ 1	~~08/August 10/, 2005~~	1. Changed incorrect use of certain hyphens (-) to “en dash (–).” 2. Hyphenated “30-day” when used as adjective. 3. Changed standard header to be consistent with standard “Title.” 4. Initial capped heading “Definitions of Terms Used in Standard.” 5. Added “periods” to items where appropriate. 6. Changed “Timeframe” to “Time Frame” in item D, 1.2. 7. Lower cased all words that are not “defined” terms — drafting team, self-certification. 8. Changed apostrophes to “smart” symbols. 9. Added comma in all word strings “Procedures, Processes, or Plans,” etc. 10. Added hyphens to “Reliability Coordinator-to-Reliability Coordinator” where used as adjective. 11. Removed comma in item 2.1.2. 12. Removed extra spaces between words where appropriate.	~~01/January 20/, 2006~~
<u>1</u>	<u>February 7, 2006</u>	<u>Approved by BOT</u>	<u>Revised</u>
<u>1</u>	<u>April 4, 2007</u>	<u>Regulatory Approval — Effective Date</u>	<u>New</u>
<u>2</u>	<u>TBD</u>	<u>Revised per SAR for Project 2006-6, RCSDT</u>	<u>Revised</u>

A. Introduction

1. **Title:** **Notifications and Information Exchange Between Reliability Coordinators**
2. **Number:** IRO-015-1
3. **Purpose:** To ensure that each Reliability Coordinator's operations are coordinated such that they will not have an Adverse Reliability Impact on other Reliability Coordinator Areas and to preserve the reliability benefits of interconnected operations.
4. **Applicability:**
 - 4.1. Reliability Coordinators.
5. **Effective Date:** To be determined

B. Requirements

C. Measures

D. Compliance

E. Regional Differences

F. Associated Documents

Version History

Version	Date	Action	Change Tracking
1	August 2, 2005	1. Changed incorrect use of certain hyphens (-) to "en dash (-)." 2. Hyphenated "30-day" and reliability-related when used as adjective. 3. Changed standard header to be consistent with standard "Title." 4. Added "periods" to items where appropriate. 5. Initial capped heading "Definitions of Terms Used in Standard." 6. Changed "Timeframe" to "Time Frame" in item D, 1.2. 7. Lower cased all words that are not "defined" terms — drafting team, and self-certification. 8. Changed apostrophes to "smart" symbols. 9. Added comma in all word strings "Procedures, Processes, or Plans," etc.	January 20, 2006

Standard IRO-015-1 — Notifications and Information Exchange Between Reliability Coordinators

		10. Added hyphens to “Reliability Coordinator-to-Reliability Coordinator” where used as adjective. 11. Removed comma in item 2.1.2. 12. Removed extra spaces between words where appropriate.	
1	February 7, 2006	Approved by BOT	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New
2	August 16, 2007	Revised per SAR for Project 2006-6	Revised

A. Introduction

1. **Title:** Notifications and Information Exchange Between Reliability Coordinators
2. **Number:** IRO-015-1
3. **Purpose:** To ensure that each Reliability Coordinator's operations are coordinated such that they will not have an Adverse Reliability Impact on other Reliability Coordinator Areas and to preserve the reliability benefits of interconnected operations.
4. **Applicability:**
 - 4.1. Reliability Coordinators.
5. **Effective Date:** ~~June 4, 2007~~ To be determined

B. Requirements

- ~~**R1.** The Reliability Coordinator shall follow its Operating Procedures, Processes, or Plans for making notifications and exchanging reliability-related information with other Reliability Coordinators. [Violation Risk Factor: Medium]~~
- ~~**R1.1.** The Reliability Coordinator shall make notifications to other Reliability Coordinators of conditions in its Reliability Coordinator Area that may impact other Reliability Coordinator Areas. [Violation Risk Factor: Medium]~~
- ~~**R2.** The Reliability Coordinator shall participate in agreed-upon conference calls and other communication forums with adjacent Reliability Coordinators. [Violation Risk Factor: Lower]~~
- ~~**R2.1.** The frequency of these conference calls shall be agreed upon by all involved Reliability Coordinators and shall be at least weekly. [Violation Risk Factor: Lower]~~
- ~~**R3.** The Reliability Coordinator shall provide reliability-related information as requested by other Reliability Coordinators. [Violation Risk Factor: Medium]~~

C. Measures

- ~~**M1.** The Reliability Coordinator shall have evidence (such as operator logs or other data sources) it has followed its Operating Procedures, Processes, or Plans for notifying other Reliability Coordinators of conditions in its Reliability Coordinator Area that may impact other Reliability Coordinator Areas.~~

The RC SDT recommends retiring Standard IRO-015 as a separate standard and moving all modified requirements to IRO-014-2.

IRO-015 R1 was modified and became IRO-014-2 Requirement R3.

IRO-015 R2 became IRO-014-2 Requirement R4.

IRO-015 R3 is not a "stand alone" activity and was retired. Reliability Coordinators already have several requirements aimed at providing data or information to other Reliability Coordinators in support of Reliability Coordinator responsibilities. For example, Reliability Coordinators provide reliability-related information to other Reliability Coordinators as part of IRO-010-1, R3 – they share information as they try to confirm the existence of operating issues as part of IRO-014-2 R5, etc.

~~M2.~~ The Reliability Coordinator shall have evidence (such as operator logs or other data sources) that it participated in agreed-upon (at least weekly) conference calls and other communication forums with adjacent Reliability Coordinators.

~~M3.~~ The Reliability Coordinator shall have evidence that it provided requested reliability-related information to other Reliability Coordinators.

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Monitoring Responsibility

Regional Reliability Organization

1.2. Compliance Monitoring Period and Reset Time Frame

The Performance Reset Period shall be one calendar year.

1.3. Data Retention

The Reliability Coordinator shall keep auditable documentation for a rolling 12 months. The Compliance Monitor shall keep compliance data for a minimum of three years or until the Reliability Coordinator has achieved full compliance—whichever is longer.

1.4. Additional Compliance Information

The Reliability Coordinator shall demonstrate compliance through self-certification submitted to its Compliance Monitor annually. The Compliance Monitor shall also use a scheduled on-site review at least once every three years and investigations upon complaint. The Compliance Monitor shall conduct an investigation upon a complaint within 30 days of the alleged infraction's discovery date. The Compliance Monitor shall complete the investigation within 45 days after the start of the investigation. As part of an audit or an investigation, the Compliance Monitor shall interview other Reliability Coordinators within the Interconnection and verify that the Reliability Coordinator being audited or investigated has been making notifications and exchanging reliability-related information according to agreed Operating Procedures, Processes, or Plans.

The Reliability Coordinator shall have the following available for its Compliance Monitor to inspect during a scheduled, on-site review or within five days of a request as part of an investigation upon complaint:

~~1.4.1~~ Evidence it has participated in agreed-upon conference calls or other communications forums.

~~1.4.2~~ Operating logs or other data sources that document notifications made to other Reliability Coordinators.

2. Levels of Non-Compliance

~~2.1. Level 1:~~ Did not participate in agreed-upon (at least weekly) conference calls and other communication forums with adjacent Reliability Coordinators.

- ~~2.2.Level 2: Did not notify other Reliability Coordinators as specified in its Operating Procedures, Processes, or Plans for making notifications but no Adverse Reliability Impacts resulted from the incident.~~
- ~~2.3.Level 3: Did not provide requested reliability-related information to other Reliability Coordinators.~~
- ~~2.4.Level 4: Did not notify other Reliability Coordinators as specified in its Operating Procedures, Processes, or Plans for making notifications and Adverse Reliability Impacts resulted from the incident.~~

E. Regional Differences

~~None identified.~~

F. Associated Documents

Version History

Version	Date	Action	Change Tracking
1	August 2, 2005	1. Changed incorrect use of certain hyphens (-) to “en dash (–).” 2. Hyphenated “30-day” and reliability-related when used as adjective. 3. Changed standard header to be consistent with standard “Title.” 4. Added “periods” to items where appropriate. 5. Initial capped heading “Definitions of Terms Used in Standard.” 6. Changed “Timeframe” to “Time Frame” in item D, 1.2. 7. Lower cased all words that are not “defined” terms — drafting team, and self-certification. 8. Changed apostrophes to “smart” symbols. 9. Added comma in all word strings “Procedures, Processes, or Plans,” etc. 10. Added hyphens to “Reliability Coordinator-to-Reliability Coordinator” where used as adjective. 11. Removed comma in item 2.1.2. 12. Removed extra spaces between words where appropriate.	January 20, 2006
1	February 7, 2006	Approved by BOT	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New
<u>2</u>	<u>August 16, 2007</u>	<u>Revised per SAR for Project 2006-6</u>	<u>Revised</u>

A. Introduction

1. **Title:** Coordination of Real-time Activities between Reliability Coordinators
2. **Number:** IRO-016-1
3. **Purpose:** To ensure that each Reliability Coordinator's operations are coordinated such that they will not have an Adverse Reliability Impact on other Reliability Coordinator Areas and to preserve the reliability benefits of interconnected operations.
4. **Applicability:**
 - 4.1. Reliability Coordinators.
5. **Effective Date:** TBD

B. Requirements

C. Measures

D. Compliance

1. **Compliance Monitoring Process**
 - 1.1. **Compliance Monitoring Responsibility**
 - 1.2. **Compliance Monitoring Period and Reset Time Frame**
 - 1.3. **Data Retention**
 - 1.4. **Additional Compliance Information**

E. Regional Differences

F. Associated Documents

Version	Date	Action	Change Tracking
1	August 10, 2005	1. Changed incorrect use of certain hyphens (-) to "en dash (-)." 2. Hyphenated "30-day" when used as adjective. 3. Changed standard header to be consistent with standard "Title." 4. Initial capped heading "Definitions of Terms Used in Standard." 5. Added "periods" to items where appropriate. 6. Changed "Timeframe" to "Time Frame" in item D, 1.2. 7. Lower cased all words that are not "defined" terms — drafting team, self-certification. 8. Changed apostrophes to "smart"	January 20, 2006

Standard IRO-016-1 — Coordination of Real-time Activities between Reliability Coordinators

Version	Date	Action	Change Tracking
		symbols. 9. Added comma in all word strings “Procedures, Processes, or Plans,” etc. 10. Added hyphens to “Reliability Coordinator-to-Reliability Coordinator” where used as adjective. 11. Removed comma in item 2.1.2. 12. Removed extra spaces between words where appropriate.	
1	February 7, 2006	Approved by BOT	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New
2	April 22, 2008	Revised per SAR for Project 2006-06	Retired

A. Introduction

1. **Title:** Coordination of Real-time Activities between Reliability Coordinators
2. **Number:** IRO-016-1
3. **Purpose:** To ensure that each Reliability Coordinator's operations are coordinated such that they will not have an Adverse Reliability Impact on other Reliability Coordinator Areas and to preserve the reliability benefits of interconnected operations.
4. **Applicability:**
 - 4.1. Reliability Coordinators.
5. **Effective Date:** TBD

The RC SDT proposes retiring this as a separate standard.

B. Requirements

~~**R1.**The Reliability Coordinator that identifies a potential, expected, or actual problem that requires the actions of one or more other Reliability Coordinators shall contact the other Reliability Coordinator(s) to confirm that there is a problem and then discuss options and decide upon a solution to prevent or resolve the identified problem. [Violation Risk Factor: Medium]~~

The RC SDT proposes moving Requirement R1 and its subrequirements into IRO-014.

~~**R1.1.**If the involved Reliability Coordinators agree on the problem and the actions to take to prevent or mitigate the system condition, each involved Reliability Coordinator shall implement the agreed-upon solution, and notify the involved Reliability Coordinators of the action(s) taken. [Violation Risk Factor: Medium]~~

~~**R1.2.**If the involved Reliability Coordinators cannot agree on the problem(s) each Reliability Coordinator shall re-evaluate the causes of the disagreement (bad data, status, study results, tools, etc.). [Violation Risk Factor: Medium]~~

~~**R1.2.1.**If time permits, this re-evaluation shall be done before taking corrective actions. [Violation Risk Factor: Medium]~~

~~**R1.2.2.**If time does not permit, then each Reliability Coordinator shall operate as though the problem(s) exist(s) until the conflicting system status is resolved. [Violation Risk Factor: Medium]~~

~~**R1.3.**If the involved Reliability Coordinators cannot agree on the solution, the more conservative solution shall be implemented. [Violation Risk Factor: Medium]~~

~~**R2.**The Reliability Coordinator shall document (via operator logs or other data sources) its actions taken for either the event or for the disagreement on the problem(s) or for both. [Violation Risk Factor: Lower]~~

The RC SDT proposes retiring Requirement R2 because it is a measure of performance of R1.

C. Measures

~~M1. For each event that requires Reliability Coordinator to Reliability Coordinator coordination, each involved Reliability Coordinator shall have evidence (operator logs or other data sources) of the actions taken for either the event or for the disagreement on the problem or for both.~~

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Monitoring Responsibility

~~Regional Reliability Organization~~

The measure M1 will be retired along with the requirement.

1.2. Compliance Monitoring Period and Reset Time Frame

~~The performance reset period shall be one calendar year.~~

1.3. Data Retention

~~The Reliability Coordinator shall keep auditable evidence for a rolling 12 months. In addition, entities found non-compliant shall keep information related to the non-compliance until it has been found compliant. The Compliance Monitor shall keep compliance data for a minimum of three years or until the Reliability Coordinator has achieved full compliance, whichever is longer.~~

1.4. Additional Compliance Information

~~The Reliability Coordinator shall demonstrate compliance through self-certification submitted to its Compliance Monitor annually. The Compliance Monitor shall use a scheduled on-site review at least once every three years. The Compliance Monitor shall conduct an investigation upon a complaint that is received within 30 days of an alleged infraction's discovery date. The Compliance Monitor shall complete the investigation and report back to all involved Reliability Coordinators (the Reliability Coordinator that complained as well as the Reliability Coordinator that was investigated) within 45 days after the start of the investigation. As part of an audit or investigation, the Compliance Monitor shall interview other Reliability Coordinators within the Interconnection and verify that the Reliability Coordinator being audited or investigated has been coordinating actions to prevent or resolve potential, expected, or actual problems that adversely impact the Interconnection.~~

~~The Reliability Coordinator shall have the following available for its Compliance Monitor to inspect during a scheduled, on-site review or within five working days of a request as part of an investigation upon complaint:~~

~~1.4.1 Evidence (operator log or other data source) to show coordination with other Reliability Coordinators.~~

2. Levels of Non-Compliance

~~2.1. Level 1: For potential, actual or expected events which required Reliability Coordinator to Reliability Coordinator coordination, the Reliability Coordinator did coordinate, but did not have evidence that it coordinated with other Reliability Coordinators.~~

~~2.2. Level 2: Not applicable.~~

~~2.3. Level 3: Not applicable.~~

~~2.4. Level 4: For potential, actual or expected events which required Reliability Coordinator to Reliability Coordinator coordination, the Reliability Coordinator did not coordinate with other Reliability Coordinators.~~

E. Regional Differences

~~None identified.~~

F. Associated Documents

Version	Date	Action	Change Tracking
1	August 10, 2005	1. Changed incorrect use of certain hyphens (-) to “en dash (–).” 2. Hyphenated “30-day” when used as adjective. 3. Changed standard header to be consistent with standard “Title.” 4. Initial capped heading “Definitions of Terms Used in Standard.” 5. Added “periods” to items where appropriate. 6. Changed “Timeframe” to “Time Frame” in item D, 1.2. 7. Lower cased all words that are not “defined” terms — drafting team, self-certification. 8. Changed apostrophes to “smart” symbols. 9. Added comma in all word strings “Procedures, Processes, or Plans,” etc. 10. Added hyphens to “Reliability Coordinator-to-Reliability Coordinator” where used as adjective. 11. Removed comma in item 2.1.2. 12. Removed extra spaces between words where appropriate.	January 20, 2006
1	February 7, 2006	Approved by BOT	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New
<u>2</u>	<u>April 22, 2008</u>	<u>Revised per SAR for project 2006-6</u>	<u>Retired</u>

Implementation Plan for IRO-014-2 Coordination Among Reliability Coordinators

Implementation Plan for IRO-014-2 — Coordination Among Reliability Coordinators

Prerequisite Approvals

- None required

Conforming Changes to Requirements in Already Approved Standards

- IRO-001-2 — Reliability Coordination – Responsibilities and Authorities
- IRO-015-1 — Notifications and Information Exchange Between Reliability Coordinators
- IRO-016-1 — Coordination of Real-time Activities between Reliability Coordinators

Revision Summary

- The Reliability Coordination SDT (RC SDT) revised the standard and is proposing retiring two requirements (R3 and R4). New requirements were brought into this standard from IRO-015-1 (R1-R2) and IRO-016-1 (R1 and its sub requirements). Changes were made to eliminate redundancies between standards (existing and proposed), eliminate administrative items, align with NERCs Rules of Procedure and to address issues in FERC Order 693.

Functions that Must Comply with the Requirements in the Standard:

- Reliability Coordinator

Effective Dates

To be determined.

Implementation Plan for IRO-014-2

Coordination Among Reliability Coordinators

Revisions or Retirements to Already Approved Standards

The following tables identify the sections of approved standards that shall be retired or revised when this standard is implemented. If the drafting team is recommending the retirement or revision of a requirement, that text is blue.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-2 R7. The Reliability Coordinator shall have clear, comprehensive coordination agreements with adjacent Reliability Coordinators to ensure that System Operating Limit or Interconnection Reliability Operating Limit violation mitigation requiring actions in adjacent Reliability Coordinator Areas are coordinated.	IRO-014-2 R1. The Reliability Coordinator shall have Operating Procedures, Processes, or Plans for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address, as a minimum, the following: <i>[Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning]</i> R1.1. Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators. R1.2. Energy and capacity shortages. R1.3. Planned or unplanned outage information. R1.4. Voltage control, including the coordination of reactive resources for voltage control. R1.5. Coordination of information exchange to support reliability assessments. R1.6. Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas.
Notes: The RCSDT proposes retiring R7 as it is redundant with IRO-014, R1.	

Implementation Plan for IRO-014-2
Coordination Among Reliability Coordinators

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-014-1 R1. The Reliability Coordinator shall have Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with one or more other Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall address Scenarios that affect other Reliability Coordinator Areas as well as those developed in coordination with other Reliability Coordinators. [Violation Risk Factor: Medium] R1.1 These Operating Procedures, Processes, or Plans shall collectively address, as a minimum, the following: [Violation Risk Factor: Lower] R1.1.1 Communications and notifications, including the conditions¹ under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators. [Violation Risk Factor: Medium] R1.1.2 Energy and capacity shortages. [Violation Risk Factor: Medium] R1.1.3 Planned or unplanned outage information. [Violation Risk Factor: Medium] R1.1.4 Voltage control, including the coordination of reactive resources for voltage control. [Violation Risk Factor: Medium] R1.1.5 Coordination of information exchange to support reliability assessments. [Violation Risk Factor: Lower] R1.1.6 Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas. [Violation Risk Factor: Lower]	IRO-14-2 R1. The Reliability Coordinator shall have Operating Procedures, Processes, or Plans in-place for activities that require notification, exchange of information or coordination of actions with impacted ~~with one or more other~~ Reliability Coordinators to support Interconnection reliability. ~~These Operating Procedures, Processes, or Plans shall address Scenarios that affect other Reliability Coordinator Areas as well as those developed in coordination with other Reliability Coordinators.~~ [Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning] R1.1 These Operating Procedures, Processes, or Plans shall collectively address, as a minimum, the following: ~~[Violation Risk Factor: Lower]~~ R1.1.1 Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators. ~~[Violation Risk Factor: Medium]~~ R1.1.2 Energy and capacity shortages. ~~[Violation Risk Factor: Medium]~~ R1.1.3 Planned or unplanned outage information. ~~[Violation Risk Factor: Medium]~~ R1.1.4 Voltage control, including the coordination of reactive resources for voltage control. ~~[Violation Risk Factor: Medium]~~ R1.1.5 Coordination of information exchange to support reliability assessments. ~~[Violation Risk Factor: Lower]~~ R1.1.6 Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas. ~~[Violation Risk Factor: Lower]~~
Notes: Revise R1 as shown and delete the footnote.	

¹ Examples of conditions when one Reliability Coordinator may need to notify another Reliability Coordinator may include (but aren't limited to) sabotage events, Interconnection Reliability Operating Limit violations, voltage reductions, insufficient resources, arming of special protection systems, etc.

Implementation Plan for IRO-014-2
Coordination Among Reliability Coordinators

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-014-1 R2. Each Reliability Coordinator's Operating Procedure, Process, or Plan that requires one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) shall be: R2.1. Agreed to by all the Reliability Coordinators required to take the indicated action(s). R2.2. Distributed to all Reliability Coordinators that are required to take the indicated action(s).	IRO-014-2 R2. Each Reliability Coordinator's Operating Procedure, Process, or Plan that requires one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) shall be: <i>[Violation Risk Factor: Lower] [Time Horizon: Real-time Operations and Operations Planning]</i> R2.1 Agreed to by all the Reliability Coordinators required to take the indicated action(s). <i>[Violation Risk Factor: Lower]</i> R2.2 Distributed to all Reliability Coordinators that are required to take the indicated action(s). <i>[Violation Risk Factor: Lower]</i>
Notes: The RC SDT added a Time Horizon to the requirement and eliminated the VRFs that were applied to the subrequirements.	

Implementation Plan for IRO-014-2
Coordination Among Reliability Coordinators

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-014-1 R3. A Reliability Coordinator's Operating Procedures, Processes, or Plans developed to support a Reliability Coordinator-to-Reliability Coordinator Operating Procedure, Process, or Plan shall include: R3.1. A reference to the associated Reliability Coordinator-to-Reliability Coordinator Operating Procedure, Process, or Plan. R3.2. The agreed-upon actions from the associated Reliability Coordinator-to-Reliability Coordinator Operating Procedure, Process, or Plan.	None – Retire the requirement
Notes: This requirement is administrative in nature describing the contents of the plans and should not be in a standard. The RC SDT proposes retiring R3 and its subrequirements and recommends converting these good utility practices into a guideline document for use in developing the operating procedures, processes or plans.	

Implementation Plan for IRO-014-2
Coordination Among Reliability Coordinators

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-014-1 R4. Each of the Operating Procedures, Processes, and Plans addressed in Reliability Standard IRO-014 Requirement 1 and Requirement 3 shall: R4.1. Include version control number or date. R4.2. Include a distribution list. R4.3. Be reviewed, at least once every three years, and updated if needed	None – retire the requirement.
Notes: This requirement is administrative in nature describing the contents of the plans and should not be in a standard. The RC SDT proposes retiring R4 and its subrequirements and recommends converting these good utility practices into a guideline document for use in developing the operating procedures, processes or plans.	

Implementation Plan for IRO-014-2
Coordination Among Reliability Coordinators

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-015-1 R1. The Reliability Coordinator shall follow its Operating Procedures, Processes, or Plans for making notifications and exchanging reliability-related information with other Reliability Coordinators. <i>[Violation Risk Factor: Medium]</i> R1.1 The Reliability Coordinator shall make notifications to other Reliability Coordinators of conditions in its Reliability Coordinator Area that may impact other Reliability Coordinator Areas. <i>[Violation Risk Factor: Medium]</i> R2. The Reliability Coordinator shall participate in agreed upon conference calls and other communication forums with adjacent Reliability Coordinators. <i>[Violation Risk Factor: Lower]</i> R2.1 The frequency of these conference calls shall be agreed upon by all involved Reliability Coordinators and shall be at least weekly. <i>[Violation Risk Factor: Lower]</i> R3. The Reliability Coordinator shall provide reliability-related information as requested by other Reliability Coordinators. <i>[Violation Risk Factor: Medium]</i>	IRO-014-2 R5. The Reliability Coordinator shall make notifications and exchange reliability-related information with impacted Reliability Coordinators using its predefined Operating Procedures, Processes, or Plans for conditions that may impact other Reliability Coordinator Areas or other means to accomplish the notifications and exchange of reliability-related information. <i>[Violation Risk Factor: Medium]</i> R6. The Reliability Coordinator shall participate in agreed upon conference calls and other communication forums with impacted adjacent Reliability Coordinators. <i>[Violation Risk Factor: Lower]</i> R6.1 The frequency of these conference calls shall be agreed upon by all involved Reliability Coordinators and shall be at least weekly. ~~<i>[Violation Risk Factor: Lower]</i>~~
The RC SDT recommends retiring Standard IRO-015 and moving Requirements R1 and R2 to IRO-014-2 and revising as shown. The RC SDT proposes retiring R3 (as shown in the left column) as it is redundant with proposed R5 above. Reliability Coordinators already have several requirements aimed at providing data or information to other Reliability Coordinators in support of Reliability Coordinator responsibilities. For example, Reliability Coordinators provide reliability-related information to other Reliability Coordinators as part of IRO-010-1, R3 – they share information as they try to confirm the existence of operating issues as part of IRO-014-2 R5, etc.	

Implementation Plan for IRO-014-2
Coordination Among Reliability Coordinators

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-016-1 R1. The Reliability Coordinator that identifies a potential, expected, or actual problem that requires the actions of one or more other Reliability Coordinators shall contact the other Reliability Coordinator(s) to confirm that there is a problem and then discuss options and decide upon a solution to prevent or resolve the identified problem. <i>[Violation Risk Factor: Medium]</i> R1.1 If the involved Reliability Coordinators agree on the problem and the actions to take to prevent or mitigate the system condition, each involved Reliability Coordinator shall implement the agreed-upon solution, and notify the involved Reliability Coordinators of the action(s) taken. <i>[Violation Risk Factor: Medium]</i> R1.2 If the involved Reliability Coordinators cannot agree on the problem(s) each Reliability Coordinator shall re-evaluate the causes of the disagreement (bad data, status, study results, tools, etc.). <i>[Violation Risk Factor: Medium]</i> R1.2.1 If time permits, this re-evaluation shall be done before taking corrective actions. <i>[Violation Risk Factor: Medium]</i> R1.2.2 If time does not permit, then each Reliability Coordinator shall operate as though the problem(s) exist(s) until the conflicting system status is resolved. <i>[Violation Risk Factor: Medium]</i> R1.3 If the involved Reliability Coordinators cannot agree on the solution, the more conservative solution shall be implemented. <i>[Violation Risk Factor: Medium]</i>	IRO-014-2 R5. When an expected or actual reliability issue is detected, the Reliability Coordinator shall confirm the existence of the issue with the impacted ~~other~~ Reliability Coordinators ~~that are involved~~. In the event that the issue cannot be confirmed, each RC shall operate as though the problem exists. <i>[Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i> R6. When an expected or actual reliability issue exists and the impacted ~~affected~~ Reliability Coordinators can not agree on a mitigation plan, all impacted ~~affected~~ Reliability Coordinators shall implement the mitigation plan developed by the Reliability Coordinator who has the reliability issue. <i>[Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i>
Notes: IRO-014-2 R5 and R6 are revised versions of IRO-016-1, R1 and its subrequirements which were moved to this standard. The RC SDT removed the wording relating to the “most conservative solution” because it can not be measured. We are proposing to use the mitigation plan of the RC who is experiencing the issue in cases where an agreed to mitigation plan can not be developed.	

Implementation Plan for IRO-015

Notifications and Information Exchange Between Reliability Coordinators

Implementation Plan for IRO-015 — Notifications and Information Exchange Between Reliability Coordinators

Prerequisite Approvals

- None required

Conforming Changes to Requirements in Already Approved Standards

- IRO-014-2 — Coordination Among Reliability Coordinators

Revision Summary

The Reliability Coordination SDT (RC SDT) recommends retiring Standard IRO-015-1 as a separate standard. The RC SDT recommends moving IRO-015-1 Requirements R1 and R2 into IRO-014-2 and retiring Requirement R3.

Functions that Must Comply with the Requirements in the Standards

None. The RC SDT proposes retiring this standard.

Effective Dates

To be determined.

Implementation Plan for IRO-015

Notifications and Information Exchange Between Reliability Coordinators

Revisions or Retirements to Already Approved Standards

The following table identifies the sections of the approved standard that shall be retired or revised when this standard is implemented. If the drafting team is recommending the retirement or revision of a requirement, that text is blue.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-015-1 R1. The Reliability Coordinator shall follow its Operating Procedures, Processes, or Plans for making notifications and exchanging reliability-related information with other Reliability Coordinators. <i>[Violation Risk Factor: Medium]</i> R1.1. The Reliability Coordinator shall make notifications to other Reliability Coordinators of conditions in its Reliability Coordinator Area that may impact other Reliability Coordinator Areas. <i>[Violation Risk Factor: Medium]</i> R2. The Reliability Coordinator shall participate in agreed upon conference calls and other communication forums with adjacent Reliability Coordinators. <i>[Violation Risk Factor: Lower]</i> R2.1. The frequency of these conference calls shall be agreed upon by all involved Reliability Coordinators and shall be at least weekly. <i>[Violation Risk Factor: Lower]</i> R3. The Reliability Coordinator shall provide reliability-related information as requested by other Reliability Coordinators. <i>[Violation Risk Factor: Medium]</i>	IRO-014-2 R3. The Reliability Coordinator shall make notifications and exchange reliability-related information with impacted Reliability Coordinators using its predefined ~~shall follow its~~ Operating Procedures, Processes, or Plans for conditions that may impact other Reliability Coordinator Areas or other means to accomplish the notifications and exchange of reliability-related information. <i>[Violation Risk Factor: Medium]</i> R4. The Reliability Coordinator shall participate in agreed upon conference calls and other communication forums with impacted adjacent Reliability Coordinators. <i>[Violation Risk Factor: Lower]</i> R4.1 The frequency of these conference calls shall be agreed upon by all involved Reliability Coordinators and shall be at least weekly. ~~<i>[Violation Risk Factor: Lower]</i>~~
Notes: The RC SDT recommends moving IRO-015-1 Requirements R1 and R2 into IRO-014-2 and revising as shown above. The RC SDT proposes retiring IRO-015-1 R3 as it is redundant with other requirements in standards. Reliability Coordinators already have several requirements aimed at providing data or information to other Reliability Coordinators in support of Reliability Coordinator responsibilities. For example, Reliability Coordinators provide reliability-related information to other Reliability Coordinators as part of IRO-010-1, R3 – they share information as they try to confirm the existence of operating issues as part of IRO-014-2 R5, etc.	

Implementation Plan for IRO-016
Coordination of Real-time Activities between Reliability Coordinators

Prerequisite Approvals

- None required

Conforming Changes to Requirements in Already Approved Standards

- IRO-014-2 — Coordination Among Reliability Coordinators

Revision Summary

The Reliability Coordination SDT (RC SDT) recommends retiring this as a separate standard. Requirement R1 and its sub-requirements were incorporated into IRO-014-2 as new requirements. The RC SDT recommends retiring R2 because it is a measure of performance of R1.

Functions that Must Comply with the Requirements in the Standards

None. The RC SDT proposes retiring this standard.

Effective Dates

To be determined.

Implementation Plan for IRO-016
Coordination of Real-time Activities between Reliability Coordinators

Revisions or Retirements to Already Approved Standards

The following tables identify the sections of approved standards that shall be retired or revised when this standard is implemented. If the drafting team is recommending the retirement or revision of a requirement, that text is blue.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-016-1 R1. The Reliability Coordinator that identifies a potential, expected, or actual problem that requires the actions of one or more other Reliability Coordinators shall contact the other Reliability Coordinator(s) to confirm that there is a problem and then discuss options and decide upon a solution to prevent or resolve the identified problem. <i>[Violation Risk Factor: Medium]</i> R1.1 If the involved Reliability Coordinators agree on the problem and the actions to take to prevent or mitigate the system condition, each involved Reliability Coordinator shall implement the agreed-upon solution, and notify the involved Reliability Coordinators of the action(s) taken. <i>[Violation Risk Factor: Medium]</i> R1.2 If the involved Reliability Coordinators cannot agree on the problem(s) each Reliability Coordinator shall re-evaluate the causes of the disagreement (bad data, status, study results, tools, etc.). <i>[Violation Risk Factor: Medium]</i> R1.2.1 If time permits, this re-evaluation shall be done before taking corrective actions. <i>[Violation Risk Factor: Medium]</i> R1.2.2 If time does not permit, then each Reliability Coordinator shall operate as though the problem(s) exist(s) until the conflicting system status is resolved. <i>[Violation Risk Factor: Medium]</i> R1.3 If the involved Reliability Coordinators cannot agree on the solution, the more conservative solution shall be implemented. <i>[Violation Risk Factor: Medium]</i>	IRO-014-2 R5. When an expected or actual reliability issue is detected, the Reliability Coordinator shall confirm the existence of the issue with the other Reliability Coordinators that are involved. In the event that the issue cannot be confirmed, each Reliability Coordinator shall operate as though the problem exists. <i>[Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i> R6. When an expected or actual reliability issue exists and the affected Reliability Coordinators can not agree on a mitigation plan, all affected Reliability Coordinators shall implement the mitigation plan developed by the Reliability Coordinator who has the reliability issue. <i>[Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i>
Notes: Proposed IRO-014-2 Requirements R5 and R6 are revised versions of IRO-016-1, R1 and its subrequirements which were moved to this standard. The RC SDT removed the wording relating to the “most conservative solution” because it can not be measured. The RC SDT is proposing to use the mitigation plan of the Reliability Coordinator who is experiencing the issue in cases where an agreed to mitigation plan can not be developed.	

Implementation Plan for IRO-016
Coordination of Real-time Activities between Reliability Coordinators

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-016-1 R2. The Reliability Coordinator shall document (via operator logs or other data sources) its actions taken for either the event or for the disagreement on the problem(s) or for both. <i>[Violation Risk Factor: Lower]</i>	None.
Notes: The RC SDT recommends retiring R2 because it is a measure of performance of R1.	

A. Introduction

1. **Title:** Reliability Coordination — Responsibilities and Authorities
2. **Number:** IRO-001-2
3. **Purpose:** To establish requirements for issuance of and complying with Reliability Coordinator directives or notification within the Reliability Coordinator Areas.
4. **Applicability**
 - 4.1. Reliability Coordinators.
 - 4.2. Transmission Operator.
 - 4.3. Balancing Authorities.
 - 4.4. Generator Operators.
 - 4.5. Transmission Service Providers.
 - 4.6. Load-Serving Entities.
 - 4.7. Distribution Providers.
 - 4.8. Purchasing-Selling Entities.
5. **(Proposed) Effective Date:** To be determined.

B. Requirements

- R1. The Reliability Coordinator shall act or direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations]*
- R2. Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers, and Purchasing-Selling Entities shall act without intentional delay to comply with Reliability Coordinator directives unless such actions would violate safety, equipment, or regulatory or statutory requirements. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations]*
- R3. The Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider or Purchasing-Selling Entity shall immediately confirm the ability to comply with the directive or inform the Reliability Coordinator upon recognition of the inability to perform the directive. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations]*
- R4. Each Reliability Coordinator that identifies an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area shall notify, without intentional delay, all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*
- R5. Each Reliability Coordinator who identifies an expected or actual threat with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify, without intentional delay, all impacted Transmission Operators and Balancing Authorities in its Reliability

Coordinator Area when the transmission problem has been mitigated. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

C. Measures

- M1.** Each Reliability Coordinator shall have evidence that it acted, or issued directives, to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts within its Reliability Coordinator Area.
- M2.** Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, or Purchasing-Selling Entity shall have evidence that it acted without delay to comply with the Reliability Coordinator's directives.
- M3.** Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, or Purchasing-Selling Entity shall have evidence that it confirmed its ability to comply with the Reliability Coordinator's directives, or if for safety, equipment, regulatory or statutory requirements it could not comply, informed the Reliability Coordinator upon recognition of the inability to comply.
- M4.** Each Reliability Coordinator shall have evidence that it notified, without intentional delay, all impacted Transmission Operators and balancing Authorities in its Reliability Coordinator Area when it identified a real or potential threat with Adverse Reliability Impacts, within its Reliability Coordinator Area.
- M5.** Each Reliability Coordinator shall have evidence that it notified, without intentional delay, all impacted Transmission Operators and balancing Authorities in its Reliability Coordinator Area when the real or potential threat with Adverse Reliability Impacts within its Reliability Coordinator Area has been mitigated.

D. Compliance

- 1. Compliance Monitoring Process**
 - 1.1. Compliance Enforcement Authority**

NERC shall be responsible for compliance monitoring of the Regional Entity.

Regional Entities shall be responsible for compliance monitoring of the Reliability Coordinators, Transmission Operators, Generator Operators, Distribution Providers, and Load Serving Entities.
 - 1.2. Compliance Monitoring Period and Reset Time Frame**

Not applicable.
 - 1.3. Compliance Monitoring and Enforcement Processes:**
 - Compliance Audits
 - Self-Certifications
 - Spot Checking
 - Compliance Violation Investigations
 - Self-Reporting
 - Complaints
 - 1.4. Data Retention**

Each applicable entity shall retain data and evidence for a rolling 12 months unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation.

The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent compliance records.

1.5. Additional Compliance Information

None.

2. Violation Severity Levels

Requirement	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	N/A	N/A	The Reliability Coordinator failed to act to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts.	The Reliability Coordinator failed to act and direct actions to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts
R2	N/A	The responsible entity followed the Reliability Coordinators directive with a delay not caused by equipment problems.	The responsible entity followed the majority of the Reliability Coordinators directive but did not fully follow the directive because it would violate safety, equipment, statutory or regulatory requirements.	The responsible entity did not follow the Reliability Coordinators directive.
R3	The responsible entity failed to immediately confirm the ability to comply with the directive issued by the Reliability Coordinator.	N/A	N/A	The responsible entity failed to inform the Reliability Coordinator upon recognition of the inability to perform the directive.
R4	N/A	N/A	N/A	The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to all impacted Transmission Operators

Requirement	Lower VSL	Moderate VSL	High VSL	Severe VSL
				and Balancing Authorities in its Reliability Coordinator Area.
R5	N/A	N/A	N/A	The Reliability Coordinator failed to notify all impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.

E. Regional Variances

None identified.

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
1	April 4, 2007	Approved by FERC — Effective Date	New
2	TBD	Revised per SAR for project 2006-6, reliability Coordination; added VRFs and VSLs as approved from VRF and VSL projects	Revised

A. Introduction

1. **Title:** Reliability Coordination — Responsibilities and Authorities
2. **Number:** IRO-001-~~12~~
3. ~~**Purpose:** Reliability Coordinators must have the authority, plans, and agreements in place to immediately direct reliability entities within their Reliability Coordinator Areas to re-dispatch generation, reconfigure transmission, or reduce load to mitigate critical conditions to return the system to a reliable state. If a Reliability Coordinator delegates tasks to others, the Reliability Coordinator retains its responsibilities for complying with NERC and regional standards. Standards of conduct are necessary to ensure the Reliability Coordinator does not act in a manner that favors one market participant over another.~~
3. **Purpose:** To establish requirements for issuance of and complying with Reliability Coordinator directives or notification within the Reliability Coordinator Areas.
4. **Applicability**
 - 4.1. Reliability Coordinators.
 - 4.2. ~~Regional Reliability Organizations.~~
 - 4.2. Transmission Operator.
 - 4.3. Balancing Authorities.
 - 4.4. Generator Operators.
 - 4.5. Transmission Service Providers.
 - 4.6. Load-Serving Entities.
 - 4.7. Distribution Providers.
 - 4.8. Purchasing-Selling Entities.
5. **(Proposed) Effective Date:** January 1, 2007 To be determined.

B. Requirements

- ~~R1. Each Regional Reliability Organization, subregion, or interregional coordinating group shall establish one or more Reliability Coordinators to continuously assess transmission reliability and coordinate emergency operations among the operating entities within the region and across the regional boundaries.~~
- R1. ~~The Reliability Coordinator shall comply with a regional reliability plan approved by the NERC Operating Committee.~~
- ~~R3.~~ The Reliability Coordinator shall ~~have clear decision-making authority to act and to or~~ direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability

The RC SDT proposes retiring R1 as it is redundant with the ERO's existing Organization Registration and Certification Process. See section 503, item 2.2 of the NERC Rules of Procedure.

The RC SDT proposes retiring R2 as the regional reliability plan is a "how" document that shows how an RC will comply with all other NERC Standards, making this requirement redundant.

Coordinator Area to ~~preserve the integrity and reliability~~ prevent or mitigate the magnitude or duration of the Bulk Electric System. These actions shall be taken without delay, but no longer than 30 minutes.

~~Reliability Coordinator~~ events that result in Adverse Reliability Impacts. [Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations]

The RC SDT proposes retiring R4 as it is redundant with NERC Rules of Procedure, Appendix 5, Section IV – Transitional Certification Procedures, item 16.

~~R4. delegate tasks to other entities shall have formal operating agreements with each entity to which tasks are delegated. The Reliability Coordinator shall verify that all delegated tasks are understood, communicated, and addressed within its Reliability Coordinator Area. All responsibilities for complying with NERC and regional standards applicable to Reliability Coordinators shall remain with the Reliability Coordinator.~~

The RC SDT proposes retiring R5 as the regional reliability plan is a “how” document that shows how an RC will comply with all other NERC Standards, making this requirement redundant.

~~R5. The Reliability Coordinator shall list within its reliability plan all entities to which the Reliability Coordinator has delegated required tasks.~~

~~R6. The Reliability Coordinator shall verify that all delegated tasks are carried out by NERC certified Reliability Coordinator operating personnel.~~

The RC SDT proposes retiring R6 as it is redundant with PER-003, R1.

~~R7. The Reliability Coordinator shall have clear, comprehensive coordination agreements with adjacent Reliability Coordinators to ensure that System Operating Limit or Interconnection Reliability Operating Limit violation mitigation requiring actions in adjacent Reliability Coordinator Areas are coordinated.~~

The RCSDT proposes retiring R7 as it is redundant with IRO-014, R1.

R2. Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers, and Purchasing-Selling Entities shall act without intentional delay to comply with Reliability Coordinator directives unless such actions would violate safety, equipment, or regulatory or statutory requirements. ~~Under these circumstances, the~~ [Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations]

R3. The Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider or Purchasing-Selling Entity shall immediately confirm the ability to comply with the directive or inform the Reliability Coordinator upon recognition of the inability to perform the directive ~~so that the Reliability Coordinator may implement alternate remedial actions.~~ [Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations]

~~R10. The Reliability Coordinator shall act in the interests of reliability for the overall Reliability Coordinator Area and the Interconnection before the interests of any other entity.~~

R4. Each Reliability Coordinator that identifies an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area shall notify, without intentional delay, all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.

[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]

R5. Each Reliability Coordinator who identifies an expected or actual threat with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify, without intentional delay, all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when the transmission problem has been mitigated. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]

The RC SDT proposes retiring R10. All Reliability Coordinator Standard Requirements are developed so that the Reliability Coordinator shall act in the interest of reliability for the RC Area and the Interconnection. Section 6 of the NERC Standard Development Procedure states that NERC develops and maintains Reliability Standards. Equity issues are covered under the Reliability Coordinator Standards of Conduct.

C. Measures

~~M1. Each Regional Reliability Organization shall have, and provide upon request, evidence that could include, but is not limited to signed agreements or other equivalent evidence that will be used to confirm that it established one or more Reliability Coordinators to continuously assess transmission reliability and coordinate emergency operations among the operating entities within the region and across the regional boundaries as described in Requirement 1.~~

~~M2. Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, job descriptions, signed agreements, an authority letter signed by an officer of the company, or other equivalent evidence that will be used to confirm that the Reliability Coordinator has the authority to act as described in Requirement 3.~~

~~M3. The Reliability Coordinator shall have and provide upon request current formal operating agreements with entities that have been delegated any Reliability Coordinator tasks (Requirement 4 Part 1).~~

~~M4. The Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, job descriptions, signed agreements, records of training sessions, monitoring procedures or other equivalent evidence that will be used to confirm that all delegated tasks are understood, communicated, and addressed within its Reliability Coordinator Area (Requirement 4 Part 2 and Requirement 5).~~

~~M5. The Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, records that show each operating person assigned to perform a Reliability Coordinator delegated task has a NERC Reliability Coordinator certification credential, or equivalent evidence confirming that delegated tasks were~~

~~carried out by NERC certified Reliability Coordinator operating personnel, as specified in Requirement 6.~~

- ~~M6. The Reliability Coordinator shall have and provide upon request as evidence, signed agreements with adjacent Reliability Coordinators that will be used to confirm that it will coordinate corrective actions in the event SOL and IROL mitigation actions within neighboring areas must be taken. (Requirement 7)~~
- M1. Each Reliability Coordinator shall have evidence that it acted, or issued directives, to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts within its Reliability Coordinator Area.
- M2. Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, or Purchasing-Selling Entity shall have evidence that it acted without delay to comply with the Reliability Coordinator's directives.
- M3. Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, or Purchasing-Selling Entity shall have ~~and provide upon request~~ evidence that ~~could include, but is not limited to, operator logs, voice recordings or transcripts of voice recordings, or other equivalent evidence that will be used to confirm that it did~~ comply with the Reliability Coordinator's directives, or if for safety, equipment, regulatory or statutory requirements it could not comply, ~~it~~ informed the Reliability Coordinator ~~immediately. (Requirement 8)~~ upon recognition of the inability to comply.
- M4. Each Reliability Coordinator shall have evidence that it notified, without intentional delay, all impacted Transmission Operators and balancing Authorities in its Reliability Coordinator Area when it identified a real or potential threat with Adverse Reliability Impacts, within its Reliability Coordinator Area.
- M5. Each Reliability Coordinator shall have evidence that it notified, without intentional delay, all impacted Transmission Operators and balancing Authorities in its Reliability Coordinator Area when the real or potential threat with Adverse Reliability Impacts within its Reliability Coordinator Area has been mitigated.

D. Compliance

1. Compliance Monitoring Process

~~1.1. Compliance Monitoring Responsibility~~

1.1. Compliance Enforcement Authority

NERC shall be responsible for compliance monitoring of the Regional ~~Reliability Organization~~ Entity.

Regional ~~Reliability Organizations~~ Entities shall be responsible for compliance monitoring of the Reliability Coordinators, Transmission Operators, Generator Operators, Distribution Providers, and Load Serving Entities.

1.2. Compliance Monitoring Period and Reset Time Frame

Not applicable.

~~One or more of the following methods will be used to assess compliance:~~

~~=Self certification (Conducted annually with submission according to schedule.)~~

~~=Spot Check Audits (Conducted anytime with up to 30 days notice given to prepare.)~~

~~=Periodic Audit (Conducted once every three years according to schedule.)~~

~~=Triggered Investigations (Notification of an investigation must be made within 60 days of an event or complaint of noncompliance. The entity will have up to 30 days to prepare for the investigation. An entity may request an extension of the preparation period and the extension will be considered by the Compliance Monitor on a case-by-case basis.)~~

~~The Performance Reset Period shall be 12 months from the last finding of non-compliance.~~

1.3. Compliance Monitoring and Enforcement Processes:

Compliance Audits

Self-Certifications

Spot Checking

Compliance Violation Investigations

Self-Reporting

Complaints

1.4. Data Retention

~~Each Regional Reliability Organization shall have its current, in-force document for Measure 1.~~

~~Each Reliability Coordinator shall have its current, in-force documents or the latest copy of a record as evidence of compliance to Measures 2 through 6.~~

~~Each Transmission Operator, Generator Operator, Distribution Provider, and Load Serving Entity shall keep 90 days of historical data (evidence) for Measure 7.~~

Each applicable entity shall retain data and evidence for a rolling 12 months unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation.

~~If an entity is found non-compliant the entity shall keep information related to the noncompliance until found compliant or for two years plus the current year, whichever is longer.~~

~~Evidence used as part of a triggered investigation shall be retained by the entity being investigated for one year from the date that the investigation is closed, as determined by the Compliance Monitor,~~

The Compliance ~~Monitor~~ Enforcement Authority shall keep the last ~~periodic~~ audit ~~report~~ records and all requested and submitted subsequent compliance records.

1.5. Additional Compliance Information

None.

2. ~~Levels of Non-Compliance: for a~~ Violation Severity Levels

<u>Requirement</u>	<u>Lower VSL</u>	<u>Moderate VSL</u>	<u>High VSL</u>	<u>Severe VSL</u>
<u>R1</u>	<u>N/A</u>	<u>N/A</u>	<u>The Reliability Coordinator failed to act to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts.</u>	<u>The Reliability Coordinator failed to act and direct actions to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts</u>
<u>R2</u>	<u>N/A</u>	<u>The responsible entity followed the Reliability Coordinators directive with a delay not caused by equipment problems.</u>	<u>The responsible entity followed the majority of the Reliability Coordinators directive but did not fully follow the directive because it would violate safety, equipment, statutory or regulatory requirements.</u>	<u>The responsible entity did not follow the Reliability Coordinators directive.</u>
<u>R3</u>	<u>The responsible entity failed to immediately confirm the ability to comply with the directive issued by the Reliability Coordinator.</u>	<u>N/A</u>	<u>N/A</u>	<u>The responsible entity failed to inform the Reliability Coordinator upon recognition of the inability to perform the directive.</u>
<u>R4</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.</u>
<u>R5</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>The Reliability Coordinator failed to notify all impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.</u>

E. Regional Reliability Organization: Variances

~~2.1. Level 1: Not applicable~~

~~2.2. Level 2: Not applicable~~

~~2.3. Level 3: Not applicable~~

~~2.4. Level 4: Does not have evidence it established one or more Reliability Coordinators to continuously assess transmission reliability and coordinate emergency operations among the operating entities within the region and across the regional boundaries as described in Requirement 1.~~

~~3. Levels of Non-Compliance for a Reliability Coordinator:~~

~~3.1. Level 1: Not applicable.~~

~~3.2. Level 2: Not applicable.~~

~~3.3. Level 3: Not applicable.~~

~~3.4. Level 4: There shall be a separate Level 4 non-compliance for every one of the following requirements that is in violation:~~

~~3.4.1 Does not have the authority to act as described in R3.~~

~~3.4.2 Does not have formal operating agreements with entities that have been delegated any Reliability Coordinator tasks, as specified in R4, Part 1.~~

~~3.4.3 Did not confirm that all delegated tasks are understood, communicated, and addressed within its Reliability Coordinator Area and that they are being performed in a manner that complies with NERC and regional standards for the delegated tasks as per R4, Part 2.~~

~~3.4.4 Did not verify that delegated tasks are being carried out by NERC Reliability Coordinator certified staff as specified in R6~~

~~3.4.5 Does not have agreements with adjacent Reliability Coordinators that confirm that they will coordinate corrective actions in the event SOL and IROL mitigation actions must be taken (R7).~~

~~4. Levels of Non-Compliance for a Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, or Purchasing-Selling Entity:~~

~~4.1. Level 1: Not applicable.~~

~~4.2. Level 2: Not applicable.~~

~~4.3. Level 3: Not applicable.~~

~~4.4. Level 4: There shall be a separate Level 4 non-compliance for every one of the following requirements that is in violation:~~

~~4.4.1 Did not comply with a Reliability Coordinator directive for reasons other than safety, equipment, or regulatory or statutory requirements. (R8)~~

~~4.4.2 — Did not inform the Reliability Coordinator immediately after it was determined that it could not follow a Reliability Coordinator directive. (R8)~~

~~F. Regional Differences~~

None identified.

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
<u>1</u>	<u>April 4, 2007</u>	<u>Approved by FERC — Effective Date</u>	<u>New</u>
<u>2</u>	<u>TBD</u>	<u>Revised per SAR for project 2006-6, reliability Coordination; added VRFs and VSLs as approved from VRF and VSL projects</u>	<u>Revised</u>

A. Introduction

1. **Title:** Reliability Coordination — Facilities
2. **Number:** IRO 002-2
3. **Purpose:** To establish requirements to ensure that Reliability Coordinators have the information necessary for the performance of their responsibilities and to ensure that they have control of the Reliability Coordinator analysis tools.
4. **Applicability**
 - 4.1. Reliability Coordinators.
5. **Effective Date:** To be determined.

B. Requirements

- R1. Each Reliability Coordinator shall determine the data requirements to support its reliability coordination tasks and shall request such data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities, or adjacent Reliability Coordinators. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*
- R2. Each Reliability Coordinator shall have the authority to veto planned outages to analysis tools, including final approvals for planned maintenance. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

C. Measures

- M1. Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a letter to Transmission Operators, Balancing Authorities, Transmission Owners, Generator Owners, Generator Operators, and Load-Serving Entities, or adjacent Reliability Coordinators, or other equivalent evidence that will be used to confirm that the Reliability Coordinator has requested the data required to support its reliability coordination tasks. (Requirement 1)
- M2. Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a documented procedure or equivalent evidence that will be used to confirm that the Reliability Coordinator has the authority to veto planned outages to analysis tools, including final approvals for planned maintenance as specified in Requirement 2.

D. Compliance

1. **Compliance Monitoring Process**
 - 1.1. **Compliance Enforcement Authority**

Regional Entity
 - 1.2. **Compliance Monitoring and Enforcement Processes:**

Compliance Audits

Self-Certifications

Spot Checking

Compliance Violation Investigations

Self-Reporting

Complaints

1.3. Data Retention

The Reliability Coordinator shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- The Reliability Coordinator shall have current in-force documents used to show compliance with the Measures.
- If a Reliability Coordinator is found non-compliant, it shall keep information related to the non-compliance until found compliant.
- The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

1.4. Additional Compliance Information

None.

2. Violation Severity Levels

Violation Severity Levels	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	The Reliability Coordinator demonstrated that it 1) determined its data requirements and requested that data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators with a material impact on the Bulk Electric System in its Reliability Coordination Area but did not request the data from Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators with minimal impact on the Bulk Electric System in its Reliability Coordination Area or	The Reliability Coordinator demonstrated that it determined the majority but not all of its data requirements necessary to support its reliability coordination functions and requested that data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators.	The Reliability Coordinator demonstrated that it determined 1) some but less than the majority of its data requirements necessary to support its reliability coordination functions and requested that data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators Or 2) all of its data requirements necessary to support its reliability coordination functions but failed to demonstrate that it requested data from two of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and	The Reliability Coordinator failed to demonstrate that it 1) determined its data requirements necessary to support its reliability coordination functions and requested that data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators Or 2) requested the data from three or more of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators.

Violation Severity Levels	Lower VSL	Moderate VSL	High VSL	Severe VSL
	2) determined its data requirements necessary to perform its reliability functions with the exceptions of data that may be needed for administrative purposes such as data reporting.		Load-Serving Entities or Adjacent Reliability Coordinators.	
R2	Reliability Coordinator has approval rights for planned outages of analysis tools but does not have approval rights for maintenance on analysis tools.	N/A	N/A	Reliability Coordinator approval is not required for planned maintenance or planned outages.

E. Regional Variances

None identified.

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New
2		Revised per RCSDT SAR, Project 2006-2	Revised

A. Introduction

1. **Title:** Reliability Coordination ~~—~~ Facilities
2. **Number:** IRO 002-~~12~~
3. **Purpose:** To establish requirements to ensure that Reliability Coordinators ~~need~~ have the information, ~~tools and other capabilities to perform necessary for the performance of~~ their responsibilities ~~and to ensure that they have control of the Reliability Coordinator analysis tools.~~
4. **Applicability**
 - 4.1. Reliability Coordinators.
5. **Effective Date:** ~~January 1, 2007~~ To be determined.

B. Requirements

~~R1. Each Reliability Coordinator shall have adequate communications facilities (voice and data links) to appropriate entities within its Reliability Coordinator Area. These communications facilities shall be staffed and available to act in addressing a real-time emergency condition.~~

The RC SDT proposes retiring R1. The first sentence of this requirement is a basic facility requirement that should be addressed in certification. The second sentence is redundant with PER-004, R1 which requires the RC to be staffed 24x7.

R1. Each Reliability Coordinator shall determine the data requirements to support its reliability coordination tasks and shall request such data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities, or adjacent Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]

The IROL SDT is addressing R2 (shown here as R1). They plan to retire R2 in IRO-002 as it is duplicated in Requirement R2 in a new standard - IRO-010-1. IRO-002-1 R2 will remain in place until IRO-010-1 is approved.

~~R3. Each Reliability Coordinator — or its Transmission Operators and Balancing Authorities — shall provide, or arrange provisions for, data exchange to other Reliability Coordinators or Transmission Operators and Balancing Authorities via a secure network.~~

The RC SDT proposes retiring R3. The TOP and BA portion of this requirement is redundant with TOP-005, R1. The RC to RC data exchange provisions are covered in IRO-014. The secure network is covered by the NERC Rules of Procedure, Section 1002. This requirement should be retired.

~~R4. Each Reliability Coordinator shall have multi-directional communications capabilities with its Transmission Operators and Balancing Authorities, and with neighboring Reliability Coordinators, for both voice and data exchange as required to meet reliability needs of the Interconnection.~~

The RC SDT proposes retiring R4 as it is a basic facility requirement that should be addressed in certification.

~~R5. Each Reliability Coordinator shall have detailed real-time monitoring capability of~~

The RC SDT proposes retiring R5 as it is a basic facility requirement that should be addressed in certification.

~~its Reliability Coordinator Area and sufficient monitoring capability of its surrounding Reliability Coordinator Areas to ensure that potential or actual System Operating Limit or Interconnection Reliability Operating Limit violations are identified. Each Reliability Coordinator shall have monitoring systems that provide information that can be easily understood and interpreted by the Reliability Coordinator's operating personnel, giving particular emphasis to alarm management and awareness systems, automated data transfers, and synchronized information systems, over a redundant and highly reliable infrastructure.~~

- R6.** ~~Each Reliability Coordinator shall monitor Bulk Electric System elements (generators, transmission lines, buses, transformers, breakers, etc.) that could result in SOL or IROL violations within its Reliability Coordinator Area. Each Reliability Coordinator shall monitor both real and reactive power system flows, and operating reserves, and the status of Bulk Electric System elements that are or could be critical to SOLs and IROLs and system restoration requirements within its Reliability Coordinator Area.~~

The RC SDT proposes retiring R6. Real-time monitoring is a supporting activity and is one of several processes used to support operation. It is not practical to measure real-time monitoring nor is this necessary. The real reliability objective is to operate within SOL and IROL, not to monitor.

- R7.** ~~Each Reliability Coordinator shall have adequate analysis tools such as state estimation, pre and post contingency analysis capabilities (thermal, stability, and voltage), and wide area overview displays.~~

The RC SDT proposes retiring R7 as it is a basic facility requirement that should be addressed in certification.

- R8.** ~~Each Reliability Coordinator shall continuously monitor its Reliability Coordinator Area. Each Reliability Coordinator shall have provisions for backup facilities that shall be exercised if the main monitoring system is unavailable. Each Reliability Coordinator shall ensure SOL and IROL monitoring and derivations continue if the main monitoring system is unavailable.~~

The RC SDT proposes retiring R8. Real-time monitoring is a supporting activity and is one of several processes used to support operation. It is not practical to measure real-time monitoring nor is this necessary. The real reliability objective is to operate within SOL and IROL, not to monitor. The second and third sentences are redundant with EOP-008, R1.

- R3.R2.** ~~Each Reliability Coordinator shall control its Reliability Coordinator have the authority to veto planned outages to~~ analysis tools, including final approvals for planned maintenance. ~~Each Reliability Coordinator shall have procedures in place to mitigate the effects of analysis tool outages.~~ *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

The RC SDT proposes retiring the second sentence of R9 as it is redundant with EOP-008, R1.

C. Measures

- M1.** ~~Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a document that lists its voice communications facilities with Transmission Operators, Balancing Authorities and Generator Operators within its Reliability Coordinator Area and with neighboring Reliability Coordinators, that will be used to confirm that it has communication facilities in accordance with Requirements 1 and 4.~~

- ~~M2. Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a data-link facility description document, computer print-out, training document, or other equivalent evidence that will be used to confirm that it has data links with entities within its Reliability Coordinator Area and with neighboring Reliability Coordinators, as specified in Requirements 1 and 4.~~
- M1. Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a letter to Transmission Operators, Balancing Authorities, Transmission Owners, Generator Owners, Generator Operators, and Load-Serving Entities, or adjacent Reliability Coordinators, or other equivalent evidence that will be used to confirm that the Reliability Coordinator has requested the data required to support its reliability coordination tasks. (Requirement 21)
- ~~M4. Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, Energy Management System description documents, computer printouts, SCADA data collection system communications performance or equivalent evidence to demonstrate that it has real-time monitoring capability of its Reliability Coordinator Area and monitoring capability of its surrounding Reliability Coordinator Areas to identify potential or actual System Operating Limit or Interconnection Reliability Operating Limit violations.~~
- ~~M5. Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, documentation from suppliers, operating and planning staff training documents, examples of studies, or other equivalent evidence to show that it has analysis tools in accordance with Requirement 7.~~
- ~~M6. Each Reliability Coordinator shall provide evidence such as equipment specifications, operating procedures, staff records of their involvement in training, or other equivalent evidence to show that it has a backup monitoring facility that can be used to identify and monitor SOLs and IROLs. (Requirement 8)~~
- ~~M7. Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a documented procedure or equivalent evidence that will be used to confirm that the Reliability Coordinator has the authority to veto planned outages to analysis tools, including final approvals for planned maintenance as specified in Requirement 9 Part 1.~~
- M2. ~~Each Reliability Coordinator shall have and provide upon request its current procedures used to mitigate the effects of analysis tool outages as specified in Requirement 9 Part 2.~~

D. Compliance

1. Compliance Monitoring Process

~~1.1. Compliance Monitoring Responsibility~~

1.1. Compliance Enforcement Authority

~~Regional Reliability Organizations shall be responsible for compliance. Monitoring Entity~~

1.2. Compliance Monitoring and ~~Reset Time Frame~~Enforcement Processes:

~~One or more of the following methods will be used to assess compliance:~~

~~— Self-certification (Conducted annually with submission according to schedule.)~~

~~Spot Check~~Compliance Audits ~~(Conducted anytime with up to 30 days notice given to prepare.)~~

~~— Periodic Audit (Conducted once every three years according to schedule.)~~

~~Triggered~~Self-Certifications

Spot Checking

Compliance Violation Investigations ~~(Notification of an investigation must be made within 60 days of an event or complaint of noncompliance. The entity will have up to 30 days to prepare for the investigation. An entity may request an extension of the preparation period and the extension will be considered by the Compliance Monitor on a case-by-case basis.)~~

~~The Performance Reset Period shall be 12 months from the last finding of non-compliance.~~ Self-Reporting

Complaints

1.3. Data Retention

~~Each~~The Reliability Coordinator shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- The Reliability Coordinator shall have current in-force documents used to show compliance with the Measures ~~1 through 8~~.

If ~~an entity~~a Reliability Coordinator is found non-compliant ~~the entity, it~~ shall keep information related to the non-compliance until found compliant ~~or for two years plus the current year, whichever is longer.~~

- ~~Evidence used as part of a triggered investigation shall be retained by the entity being investigated for one year from the date that the investigation is closed, as determined by the Compliance Monitor.~~
- The Compliance ~~Monitor~~Enforcement Authority shall keep the last ~~periodic~~ audit ~~report~~records and all requested and submitted subsequent ~~compliance~~audit records.

1.4. Additional Compliance Information

None.

~~2. — Levels of Non-Compliance for a Reliability Coordinator~~

~~2.1. — Level 1: Not applicable.~~

~~2.2. — Level 2: Did not confirm that the network used for data exchange to other Reliability Coordinators is secure as specified in R3.~~

~~2.3. — Level 3: There shall be a separate Level 3 non-compliance, for every one of the following requirements that is in violation:~~

- ~~2.3.1 — Has not requested the data required to support its reliability coordination tasks. (Requirement 2)~~
- ~~2.3.2 — Does not control its Reliability Coordinator analysis tools, including the exercising of final approvals for planned maintenance (R7) or does not have current procedures in place to mitigate the effects of analysis tool outages as specified in R9.~~
- ~~2.4. **Level 4:** There shall be a separate Level 4 non-compliance, for every one of the following requirements that is in violation:~~
 - ~~2.4.1 — Does not have or could not demonstrate the use of voice communication facilities (or show data links) to one or more Transmission Operators, Generator Operators or Balancing Authorities with authority over Bulk Electrical System equipment or with one or more neighboring Reliability Coordinators. (R1 and R4)~~
 - ~~2.4.2 — Does not have real-time monitoring capability of its Reliability Coordinator Area and surrounding Reliability Coordinator Areas as specified in R5.~~
 - ~~2.4.3 — Does not have a documented procedure for the use of its backup monitoring facilities. (R8)~~

Standard IRO-002-1 — Reliability Coordination — Facilities

<u>Violation Severity Levels</u> <u>R#</u>	<u>Lower VSL</u>	<u>Moderate VSL</u>	<u>High VSL</u>	<u>Severe VSL</u>
<u>R1</u>	<u>The Reliability Coordinator demonstrated that it</u> <u>1) determined its data requirements and requested that data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators with a material impact on the Bulk Electric System in its Reliability Coordination Area but did not request the data from Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators with minimal impact on the Bulk Electric System in its Reliability Coordination Area</u> <u>or</u> <u>2) determined its data</u>	<u>The Reliability Coordinator demonstrated that it</u> <u>determined the majority but not all of its data requirements necessary to support its reliability coordination functions and requested that data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators.</u>	<u>The Reliability Coordinator demonstrated that it determined</u> <u>1) some but less than the majority of its data requirements necessary to support its reliability coordination functions and requested that data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators</u> <u>Or</u> <u>2) all of its data requirements necessary to support its reliability coordination functions but failed to demonstrate that it requested data from two of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators.</u>	<u>The Reliability Coordinator failed to demonstrate that it</u> <u>1) determined its data requirements necessary to support its reliability coordination functions and requested that data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators</u> <u>Or</u> <u>2) requested the data from three or more of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators.</u>

Standard IRO-002-1 — Reliability Coordination — Facilities

	<u>requirements necessary to perform its reliability functions with the exceptions of data that may be needed for administrative purposes such as data reporting.</u>			
<u>R2</u>	<u>Reliability Coordinator has approval rights for planned outages of analysis tools but does not have approval rights for maintenance on analysis tools.</u>	<u>N/A</u>	<u>N/A</u>	<u>Reliability Coordinator approval is not required for planned maintenance or planned outages.</u>

E. Regional ~~Differences~~Variances

None identified.

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
<u>1</u>	<u>April 4, 2007</u>	<u>Regulatory Approval — Effective Date</u>	<u>New</u>
<u>2</u>		<u>Revised per RCSDT SAR, Project 2006-2</u>	<u>Revised</u>

A. Introduction

1. **Title:** Reliability Coordination — Current Day Operations
2. **Number:** IRO-005-1
3. **Purpose:** The Reliability Coordinator must be continuously aware of conditions within its Reliability Coordinator Area and include this information in its reliability assessments. The Reliability Coordinator must monitor Bulk Electric System parameters that may have significant impacts upon the Reliability Coordinator Area and neighboring Reliability Coordinator Areas.
4. **Applicability:**
 - 4.1. Reliability Coordinators.
 - 4.2. Balancing Authorities.
 - 4.3. Transmission Operators.
 - 4.4. Transmission Service Providers.
 - 4.5. Generator Operators.
 - 4.6. Load-Serving Entities.
 - 4.7. Purchasing-Selling Entities.
5. **Effective Date:** June 4, 2007

B. Requirements

C. Measures

Not specified.

D. Compliance

None.

E. Regional Differences

None identified.

F. Associated Documents

None.

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	August 28, 2006	Added three items that were inadvertently left out to “Applicability” section:	Errata

Standard IRO-005-1 — Reliability Coordination — Current Day Operations

		4.5 Generator Operators. 4.6 Load-Serving Entities. 4.7 Purchasing-Selling Entities.	
1	February 7, 2006	BOT Approval	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New

A. Introduction

1. **Title:** Reliability Coordination — Current Day Operations
2. **Number:** IRO-005-1
3. **Purpose:** The Reliability Coordinator must be continuously aware of conditions within its Reliability Coordinator Area and include this information in its reliability assessments. The Reliability Coordinator must monitor Bulk Electric System parameters that may have significant impacts upon the Reliability Coordinator Area and neighboring Reliability Coordinator Areas.
4. **Applicability:**
 - 4.1. Reliability Coordinators.
 - 4.2. Balancing Authorities.
 - 4.3. Transmission Operators.
 - 4.4. Transmission Service Providers.
 - 4.5. Generator Operators.
 - 4.6. Load-Serving Entities.
 - 4.7. Purchasing-Selling Entities.
5. **Effective Date:** June 4, 2007

The RCSDT is proposing to retire or move all requirements in this standard. This will result in retiring IRO-005-1.

B. Requirements

- ~~**R1.** Each Reliability Coordinator shall monitor its Reliability Coordinator Area parameters, including but not limited to the following: *[Violation Risk Factor: High]*~~
- ~~**R1.1.** Current status of Bulk Electric System elements (transmission or generation including critical auxiliaries such as Automatic Voltage Regulators and Special Protection Systems) and system loading. *[Violation Risk Factor: High]*~~
- ~~**R1.2.** Current pre-contingency element conditions (voltage, thermal, or stability), including any applicable mitigation plans to alleviate System Operating Limits (SOL) or Interconnection Reliability Operating Limits (IROL) violations, including the plan's viability and scope. *[Violation Risk Factor: High]*~~
- ~~**R1.3.** Current post-contingency element conditions (voltage, thermal, or stability), including any applicable mitigation plans to alleviate SOL or IROL violations, including the plan's viability and scope. *[Violation Risk Factor: High]*~~
- ~~**R1.4.** System real and reactive reserves (actual versus required). *[Violation Risk Factor: High]*~~

The RC SDT proposes retiring Requirement R1 and its subrequirements. Monitoring capability can be objectively measured and is essential to real-time operations – however real-time monitoring is a supporting activity and is only one of several processes used to support operation within defined parameters. Monitoring capability should be assessed during certification and should not be a requirement.

- ~~R1.5.~~ Capacity and energy adequacy conditions. *[Violation Risk Factor: High]*
- ~~R1.6.~~ Current Area Control Error (ACE) for all its Balancing Authorities. *[Violation Risk Factor: High]*
- ~~R1.7.~~ Current local or Transmission Loading Relief procedures in effect. *[Violation Risk Factor: High]*
- ~~R1.8.~~ Planned generation dispatches. *[Violation Risk Factor: High]*
- ~~R1.9.~~ Planned transmission or generation outages. *[Violation Risk Factor: High]*
- ~~R1.10.~~ Contingency events. *[Violation Risk Factor: High]*
- ~~R2.~~ Each Reliability Coordinator shall be aware of all Interchange Transactions that wheel through, source, or sink in its Reliability Coordinator Area, and make that Interchange Transaction information available to all Reliability Coordinators in the Interconnection. *[Violation Risk Factor: High]*
- ~~R3.~~ As portions of the transmission system approach or exceed SOLs or IROLs, the Reliability Coordinator shall work with its Transmission Operators and Balancing Authorities to evaluate and assess any additional Interchange Schedules that would violate those limits. If a potential or actual IROL violation cannot be avoided through proactive intervention, the Reliability Coordinator shall initiate control actions or emergency procedures to relieve the violation without delay, and no longer than 30 minutes. The Reliability Coordinator shall ensure all resources, including load shedding, are available to address a potential or actual IROL violation. *[Violation Risk Factor: High]*
- ~~R4.~~ Each Reliability Coordinator shall monitor its Balancing Authorities' parameters to ensure that the required amount of operating reserves is provided and available as required to meet the Control Performance Standard (CPS) and Disturbance Control Standard (DCS) requirements. If necessary, the Reliability Coordinator shall direct the Balancing Authorities in the Reliability Coordinator Area to arrange for assistance from neighboring Balancing Authorities. The Reliability Coordinator shall issue Energy Emergency Alerts as needed and at the request of its Balancing Authorities and Load-Serving Entities. *[Violation Risk Factor: High]*

This Requirement (R2) is not measurable (aware) and should be retired because it is redundant with INT-005, R1. The Interchange Authority is responsible for making interchange information available to all reliability entities including the Reliability Coordinator.

This Requirement (R3) is proposed to be retired based on work by the IROL Standards Drafting Team. The RC SDT concurs.

The RC SDT recommends retiring Requirement R4. The BA has its own requirements regarding compliance with CPS and DCS standards as well as requesting emergency assistance. We view these as vestiges of an earlier program that no longer applies given the current mandatory requirements with which the BA must comply.

R5. ~~Each Reliability Coordinator shall identify the cause of any potential or actual SOL or IROL violations. The Reliability Coordinator shall initiate the control action or emergency procedure to relieve the potential or actual IROL violation without delay, and no longer than 30 minutes. The Reliability Coordinator shall be able to utilize all resources, including load shedding, to address an IROL violation. [Violation Risk Factor: High]~~

This requirement (R5) is proposed to be retired based on work by the IROL Standards Drafting Team. The RC SDT concurs.

R6. ~~Each Reliability Coordinator shall ensure its Transmission Operators and Balancing Authorities are aware of Geo-Magnetic Disturbance (GMD) forecast information and assist as needed in the development of any required response plans. [Violation Risk Factor: High]~~

The RC SDT proposes retiring Requirement R6 as it is redundant with proposed IRO-001-2, R11. A GMD is one of the “expected or actual threats with Adverse Reliability Impacts”.

R7. ~~The Reliability Coordinator shall disseminate information within its Reliability Coordinator Area, as required. [Violation Risk Factor: High]~~

The RC SDT proposes retiring Requirement R7 as it is too vague and can not be measured.

R8. ~~Each Reliability Coordinator shall monitor system frequency and its Balancing Authorities’ performance and direct any necessary rebalancing to return to CPS and DCS compliance. The Transmission Operators and Balancing Authorities shall utilize all resources, including firm load shedding, as directed by its Reliability Coordinator to relieve the emergent condition. [Violation Risk Factor: High]~~

The RC SDT proposes retiring Requirement R8. The BA has its own requirements regarding compliance with CPS and DCS standards as well as requesting emergency assistance. We view these as vestiges of an earlier program that no longer applies given the current mandatory requirements with which the BA must comply. The second sentence is redundant with EOP-002, R4, R6, R7 and R9. This requirement should be retired.

R9. ~~The Reliability Coordinator shall coordinate with Transmission Operators, Balancing Authorities, and Generator Operators as needed to develop and implement action plans to mitigate potential or actual SOL, IROL, CPS, or DCS violations. The Reliability Coordinator shall coordinate pending generation and transmission maintenance outages with Transmission Operators, Balancing Authorities, and Generator Operators as needed in both the real time and next-day reliability analysis time frames. [Violation Risk Factor: High]~~

The RC SDT proposes retiring Requirement R9 as it is redundant with TOP-003 and IRO-004 (all requirements) for next day requirements. The RC has the authority to coordinate pending outages in real-time through IRO-001-2, R1 (proposed). The issue of CPS and DCS is covered in EOP-002-2, R6, R7 and R8.

R10. ~~As necessary, the Reliability Coordinator shall assist the Balancing Authorities in its Reliability~~

The RC SDT proposes retiring Requirement R10 as it is redundant with EOP-002, R7.2 and R8.

Coordinator Area in arranging for assistance from neighboring Reliability Coordinator Areas or Balancing Authorities. *[Violation Risk Factor: High]*

- ~~**R11.** The Reliability Coordinator shall identify sources of large Area Control Errors that may be contributing to Frequency Error, Time Error, or Inadvertent Interchange and shall discuss corrective actions with the appropriate Balancing Authority. The Reliability Coordinator shall direct its Balancing Authority to comply with CPS and DCS. *[Violation Risk Factor: High]*~~

The RC SDT proposes retiring Requirement R11 as it is redundant with proposed IRO-001-2 R1 and TOP-006-1, R7.

- ~~**R12.** Whenever a Special Protection System that may have an inter-Balancing Authority, or inter-Transmission Operator impact (e.g., could potentially affect transmission flows resulting in a SOL or IROL violation) is armed, the Reliability Coordinators shall be aware of the impact of the operation of that Special Protection System on inter-area flows. The Transmission Operator shall immediately inform the Reliability Coordinator of the status of the Special Protection System including any degradation or potential failure to operate as expected. *[Violation Risk Factor: High]*~~

The RC SDT proposes retiring Requirement R12 as it is redundant with proposed IRO-010. Also, the scope of project 2007-3 includes enhancing the SPS provisions of TOP-005. IRO-003, R1 indicates that the RC will monitor all items that will impact reliability and SPS's are a part of that.

- ~~**R13.** Each Reliability Coordinator shall ensure that all Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities operate to prevent the likelihood that a disturbance, action, or non-action in its Reliability Coordinator Area will result in a SOL or IROL violation in another area of the Interconnection. In instances where there is a difference in derived limits, the Reliability Coordinator and its Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities shall always operate the Bulk Electric System to the most limiting parameter. *[Violation Risk Factor: High]*~~

The IROL SDT has proposed retiring the first sentence of Requirement R13 as it is redundant with the proposed IRO-009-1. The RC SDT recommends retiring the remaining portion of Requirement R13 as it is a facet of the SOL / IROL methodology required in FAC-010-1, FAC-011-1 and FAC-014-1.

- ~~**R14.** Each Reliability Coordinator shall make known to Transmission Service Providers within its Reliability Coordinator Area, SOLs or IROLs within its wide-area view. The Transmission Service Providers shall respect these SOLs or IROLs in accordance with filed tariffs and regional Total Transfer Calculation and Available Transfer Calculation processes. *[Violation Risk Factor: High]*~~

Per the IROL SDT, Requirement R14 is redundant with FAC-014, R5.1 and should be retired. The RC SDT concurs.

~~**R15.** Each Reliability Coordinator who foresees a transmission problem (such as an SOL or IROL violation, loss of reactive reserves, etc.) within its Reliability Coordinator Area shall issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area without delay. The receiving Reliability Coordinator shall disseminate this information to its impacted Transmission Operators and Balancing Authorities. The Reliability Coordinator shall notify all impacted Transmission Operators, Balancing Authorities, when the transmission problem has been mitigated. *[Violation Risk Factor: High]*~~

Requirement R15 was moved to the proposed IRO-01-2 and revised. It will be retired from IRO-005.

~~**R16.** Each Reliability Coordinator shall confirm reliability assessment results and determine the effects within its own and adjacent Reliability Coordinator Areas. The Reliability Coordinator shall discuss options to mitigate potential or actual SOL or IROL violations and take actions as necessary to always act in the best interests of the Interconnection at all times. *[Violation Risk Factor: High]*~~

Requirement R16 is proposed to be retired based on work by the IROL Standards Drafting Team. The RC SDT concurs.

~~**R17.** When an IROL or SOL is exceeded, the Reliability Coordinator shall evaluate the local and wide-area impacts, both real-time and post-contingency, and determine if the actions being taken are appropriate and sufficient to return the system to within IROL in thirty minutes. If the actions being taken are not appropriate or sufficient, the Reliability Coordinator shall direct the Transmission Operator, Balancing Authority, Generator Operator, or Load-Serving Entity to return the system to within IROL or SOL. *[Violation Risk Factor: High]*~~

Requirement R17 is proposed to be retired based on work by the IROL Standards Drafting Team. The RC SDT concurs.

C. Measures

Not specified.

D. Compliance

None.

E. Regional Differences

None identified.

F. Associated Documents

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata

Standard IRO-005-1 — Reliability Coordination — Current Day Operations

1	August 28, 2006	Added three items that were inadvertently left out to “Applicability” section: 4.5 Generator Operators. 4.6 Load-Serving Entities. 4.7 Purchasing-Selling Entities.	Errata
1	February 7, 2006	BOT Approval	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New

Revisions to Defined Terms in the NERC Glossary

The RC SDT proposes modifying the following approved definition:

Adverse Reliability Impact – The impact of an event that results in frequency-related instability; ~~unplanned tripping of load or generation~~; or uncontrolled separation or cascading outages that affects a widespread area of the Interconnection.

Prerequisite Approvals

- None

Conforming Changes to Requirements in Already Approved Standards

- IRO-005, R15 is being incorporated into IRO-001-2.

Revision Summary

- The RC SDT revised the standard and is proposing retiring several requirements (R1, R2, R4, R5, R6, R7 and R10). Changes were made to eliminate redundancies between standards (existing and proposed), to align with NERCs Rules of Procedure and to address issues in FERC Order 693.

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Revisions or Retirements to Already Approved Standards

The following tables identify the sections of approved standards that shall be retired or revised when this standard is implemented. If the drafting team is recommending the retirement or revision of a requirement, that text is blue.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R1. Each Regional Reliability Organization, subregion, or interregional coordinating group shall establish one or more Reliability Coordinators to continuously assess transmission reliability and coordinate emergency operations among the operating entities within the region and across the regional boundaries. <i>[Violation Risk Factor: High]</i>	None – The RC SDT proposes retiring this requirement.
Notes: The RC SDT proposes that original IRO-001-1, R1 should be retired from the standard and addressed in NERC Rules of Procedure, Section 503, item 2.2: “Regional entities shall verify that all balancing authorities and transmission operators are under the responsibility of a reliability coordinator”.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R2. The Reliability Coordinator shall comply with a regional reliability plan approved by the NERC Operating Committee. <i>[Violation Risk Factor: High]</i> R5. The Reliability Coordinator shall list within its reliability plan all entities to which the Reliability Coordinator has delegated required tasks. <i>[Violation Risk Factor: Lower]</i>	None – The RC SDT proposes retiring this requirement
Notes: The RC SDT proposes retiring R2 and R5 as the regional reliability plan is a “how” document that shows how an RC will comply with all other NERC Standards, making this requirement redundant.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R3. The Reliability Coordinator shall have clear decision-making authority to act and direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities and Purchasing-Selling Entities within its Reliability Coordinator Area to preserve the integrity and reliability of the Bulk Electric System. These actions shall be taken without delay, but no longer than 30 minutes. <i>[Violation Risk Factor: High]</i>	IRO-001-2 R1. The Reliability Coordinator shall act or direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations and Same Day Operations]</i>
Notes: • The RC SDT is proposing to remove the blue text in the first sentence. • The RC SDT is proposing that the last sentence of R3 be retired. The timing of RC response to events varies based on system conditions. The specific timing criteria for responses to IROLs are contained in other standards (e.g., TOP-007, R2). ▪ The Distribution Provider was added as an applicable entity per FERC Order 693.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R4. Reliability Coordinators that delegate tasks to other entities shall have formal operating agreements with each entity to which tasks are delegated. The Reliability Coordinator shall verify that all delegated tasks are understood, communicated, and addressed within its Reliability Coordinator Area. All responsibilities for complying with NERC and regional standards applicable to Reliability Coordinators shall remain with the Reliability Coordinator. <i>[Violation Risk Factor: Medium]</i>	None – retire the requirement RC SDT proposes that original IRO-001-1, R4 is redundant with NERC Rules of Procedure, section 500 and should be retired from the standard. Section 501 states: “The purpose of the compliance registry will be to clearly identify those entities that are responsible for compliance with reliability standards. Organizations listed on the registry will be responsible for knowing the content of and for complying with the NERC reliability standards.” Also, section 507, item 2 addresses written agreements; Joint registration pursuant to written agreement. “Where a JRO and any of its members or related entities agree, in writing, upon a division of compliance responsibility among them for one or more reliability standard(s) applicable to a particular function, and/or for one or more requirements within particular reliability standard(s), both the JRO and such member(s) or related entit(ies) shall register as an organization responsible for that function. The JRO and its member(s) or related entit(ies) must have a written agreement that clearly specifies their respective responsibilities, which shall be submitted as part of the joint registration. Neither NERC nor the regional entity shall be parties to any such agreement between a JRO and its member or related entit(ies), nor shall NERC or the regional entity have responsibility for reviewing or approving any such agreement, other than to verify that the agreement provides for an allocation or assignment of responsibilities consistent with the joint registration.”
Notes: The RC SDT recommends the retirement of IRO-001-1 R4.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R6. The Reliability Coordinator shall verify that all delegated tasks are carried out by NERC-certified Reliability Coordinator operating personnel. <i>[Violation Risk Factor: Medium]</i>	None – retire requirement because it is redundant with: PER-003-0 R1. Each Transmission Operator, Balancing Authority, and Reliability Coordinator shall staff all operating positions that meet both of the following criteria with personnel that are NERC certified for the applicable functions: R1.1. Positions that have the primary responsibility, either directly or through communications with others, for the real-time operation of the interconnected Bulk Electric System. R1.2. Positions directly responsible for complying with NERC standards.
Notes: The RC SDT recommends retiring IRO-001-1 R6 as it is redundant with PER-003-0 R1.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R7. The Reliability Coordinator shall have clear, comprehensive coordination agreements with adjacent Reliability Coordinators to ensure that System Operating Limit (SOL) or Interconnection Reliability Operating Limit (IROL) violation mitigation requiring actions in adjacent Reliability Coordinator Areas are coordinated. <i>[Violation Risk Factor: High]</i>	None – requirement should be retired because it is redundant with: IRO-014-1 R1. The Reliability Coordinator shall have Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with one or more other Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall address Scenarios that affect other Reliability Coordinator Areas as well as those developed in coordination with other Reliability Coordinators.
Notes: The RC SDT recommends the retirement of IRO-001-1 R7 as this is redundant with IRO-014-1 R1.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R8: Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities shall comply with Reliability Coordinator directives unless such actions would violate safety, equipment, or regulatory or statutory requirements. Under these circumstances, the Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, or Purchasing-Selling Entity shall immediately inform the Reliability Coordinator of the inability to perform the directive so that the Reliability Coordinator may implement alternate remedial actions. <i>[Violation Risk Factor: High]</i>	IRO-001-2 R2. Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Provider, and Purchasing-Selling Entities shall act without intentional delay to comply with Reliability Coordinator directives unless such actions would violate safety, equipment, or regulatory or statutory requirements. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations]</i> R3. The Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider or Purchasing-Selling Entity shall immediately confirm the ability to comply with the directive or inform the Reliability Coordinator upon recognition of the inability to perform the directive. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations]</i> R4. Each Reliability Coordinator that identifies an expected or actual threat with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify, without intentional delay, all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i>
Notes: The RC SDT added the Distribution Provider per FERC Order 693 and added the blue text shown in the requirements above. The RC SDT proposes the replacement of IRO-001-1, R8 with three requirements IRO-001-2, R2, R3, and R4. This will add clarity and measurability to the standard. The last part of the second sentence should be removed as it is implicit in R1, which states that the Reliability Coordination will act or direct actions to mitigate issues Relating to First Energy's comment in FERC Order 693, the requirements address both personnel safety and equipment. There is no reference to a chain of command in the requirements. The standard is written such that decision-making authority rests with the Reliability Coordinator. No further revisions to the standard are required.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R9. The Reliability Coordinator shall act in the interests of reliability for the overall Reliability Coordinator Area and the Interconnection before the interests of any other entity. <i>[Violation Risk Factor: High]</i>	None – retire the requirement as redundant.
Notes: The RC SDT proposes retiring this requirement. All Reliability Coordinator Standard Requirements are developed so that the Reliability Coordinator shall act in the interest of reliability for the RC Area and the Interconnection. Section 6 of the NERC Standard Development Procedure states that NERC develops and maintains Reliability Standards. Equity issues are covered under the Reliability Coordinator Standards of Conduct.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 (this requirement was incorporated from IRO-005-2) R15. Each Reliability Coordinator who foresees a transmission problem (such as an SOL or IROL violation, loss of reactive reserves, etc.) within its Reliability Coordinator Area shall issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area without delay. The receiving Reliability Coordinator shall disseminate this information to its impacted Transmission Operators and Balancing Authorities. The Reliability Coordinator shall notify all impacted Transmission Operators, Balancing Authorities, when the transmission problem has been mitigated. <i>[Violation Risk Factor: High]</i>	IRO-001-2 R5. Each Reliability Coordinator who identifies a real or potential threat with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations]</i>
Notes: This requirement was moved from IRO-005 into IRO-001-2, R5.	

Implementation Plan for IRO-001-2**Reliability Coordination — Responsibilities and Authorities**

Functions that Must Comply with the Requirements in the Standards

Standard	Functions that Must Comply With the Requirements							
	Reliability Coordinator	Balancing Authority	Distribution Provider	Transmission Operator	Transmission Service Provider	Purchasing Selling Entity	Generator Operator	Load Serving Entity
IRO-001-2	X	X	X	X	X	X	X	X

Effective Dates

To be determined.

Implementation Plan for IRO-002-2 Reliability Coordination – Facilities

Prerequisite Approvals

- Adoption of IRO-001-2, IRO-010-0, COM-001-2

Conforming Changes to Requirements in Already Approved Standards

- None

Coordination with revisions proposed in other standards projects

- The IROL SDT proposes retiring the following requirements when IRO-010 is approved:
 - IRO-002-2 Requirement R2

Revision Summary

The RC SDT revised the standard and is proposing retiring several requirements (R1, R3, R4, R5, R6, R7 and R8). Changes were made to eliminate redundancies between standards (existing and proposed), align with NERCs Rules of Procedure and to address issues in FERC Order 693.

FERC Order 693 directive for IRO-002:

In addition we direct the ERO to develop a modification to IRO-002-1 through the Reliability Standards development process that requires a minimum set of tools that should be made available to reliability coordinators.

RC SDT response: The development of a minimum set of tools should be addressed through the work of the Real-Time Tools Best Practices Task Force. Their charge was to develop a list of tools required to perform real time operations functions and submit SARs based on their work. As requirements for these tools are developed, appropriate standards projects will be initiated to incorporate the tools within the NERC Organization Registration and Certification Process, and the applicable reliability standards. The RC SDT submits that this directive be addressed in that effort. This action is accommodated by the Standards Development Work Plan.

Functions that Must Comply with the Requirements in the Standards

- The requirements in IRO-002-3 are applicable to the Reliability Coordinator.

Effective Dates

To be determined.

Implementation Plan for IRO-002-2

Reliability Coordination – Facilities

Revisions or Retirements to Already Approved Standards

The following tables identify the sections of approved standards that shall be retired or revised when this standard is implemented. If the drafting team is recommending the retirement or revision of a requirement, that text is blue.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-002-1 R1. Each Reliability Coordinator shall have adequate communications facilities (voice and data links) to appropriate entities within its Reliability Coordinator Area. These communications facilities shall be staffed and available to act in addressing a real-time emergency condition. [Violation Risk Factor: High]	None The first sentence of this requirement should be retired because it is a basic facility issue that should be addressed in certification. The second sentence is redundant with PER-004, R1 which requires the RC to be staffed 24x7. PER-004-1 R1. Each Reliability Coordinator shall be staffed with adequately trained and NERC-certified Reliability Coordinator operators, 24 hours per day, seven days per week.
Notes: The RC SDT recommends retiring this requirement.	

Implementation Plan for IRO-002-2
Reliability Coordination – Facilities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-002-1 R2. Each Reliability Coordinator shall determine the data requirements to support its reliability coordination tasks and shall request such data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities, or adjacent Reliability Coordinators. <i>[Violation Risk Factor: Medium]</i>	None – this requirement should be retired as it is redundant with: IRO-010-1 R1. The Reliability Coordinator shall have a documented data specification for data and information to build and maintain models to support Real-Time Monitoring, Operational Planning Analyses, and Real-Time Assessments. The specification shall include the following: (Violation Risk Factor: Low) (Time Horizon: Operations Planning)
Notes: The RC SDT recommends retirement of this requirement upon implementation of IRO-010-1, R1.	

Implementation Plan for IRO-002-2
Reliability Coordination – Facilities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-002-1 R3. Each Reliability Coordinator — or its Transmission Operators and Balancing Authorities — shall provide, or arrange provisions for, data exchange to other Reliability Coordinators or Transmission Operators and Balancing Authorities via a secure network. <i>[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]</i>	None – retire requirement as it is redundant with: TOP-005-1 R1. Each Transmission Operator and Balancing Authority shall provide its Reliability Coordinator with the operating data that the Reliability Coordinator requires to perform operational reliability assessments and to coordinate reliable operations within the Reliability Coordinator Area. (This requirement will be retired upon the implementation of IRO-010-1) IRO-014-1 R1. The Reliability Coordinator shall have Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with one or more other Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall address Scenarios that affect other Reliability Coordinator Areas as well as those developed in coordination with other Reliability Coordinators. R1.1. These Operating Procedures, Processes, or Plans shall collectively address, as a minimum, the following: R1.1.1. Communications and notifications, including the conditions¹ under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators. R1.1.2. Energy and capacity shortages. R1.1.3. Planned or unplanned outage information. R1.1.4. Voltage control, including the coordination of reactive resources for voltage control. R1.1.5. Coordination of information exchange to support reliability assessments. R1.1.6. Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas.

Implementation Plan for IRO-002-2

Reliability Coordination – Facilities

Notes:

▪ The “secure network” provisions of R3 are covered under the NERC Rules of Procedure, Section 1002 which states: NERC will provide tools and other support services for the benefit of reliability coordinators and other system operators, including the Area Control Error (ACE) and Frequency Monitoring System, NERC Hotline, Real-time Flows, System Data Exchange (SDX), Reliability Coordinator Information System (RCIS), Transmission Services Information Network (TSIN), Interchange Distribution Calculator (IDC), Interregional Security Network (ISN), and Central Repository for Security Events (CRC). To accomplish this goal, NERC will:

1. Maintain the reliability and effectiveness of all mission-critical operating reliability support systems and services;
2. Continue to support maintenance of a transmission provider curtailment report on the CRC site in response to Federal Energy Regulatory Commission Order 605;
3. Investigate and analyze the use of high-speed real-time system measurements, including phasors, in predicting the behavior and performance of the Eastern Interconnection; and
4. Facilitate real-time voice and data exchange services among reliability coordinators (e.g., Hotline, Interregional Security Network, NERCnet, System Data Exchange, etc.).

Implementation Plan for IRO-002-2
Reliability Coordination – Facilities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-002-1 R4. Each Reliability Coordinator shall have multi-directional communications capabilities with its Transmission Operators and Balancing Authorities, and with neighboring Reliability Coordinators, for both voice and data exchange as required to meet reliability needs of the Interconnection. <i>[Violation Risk Factor: Medium]</i>	None – Retire this requirement. R4 is a basic facility requirement that should be addressed in certification
Notes: The RC SDT recommends retiring IRO-002-1 R4.	

Implementation Plan for IRO-002-2
Reliability Coordination – Facilities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-002-1 R5. Each Reliability Coordinator shall have detailed real-time monitoring capability of its Reliability Coordinator Area and sufficient monitoring capability of its surrounding Reliability Coordinator Areas to ensure that potential or actual System Operating Limit or Interconnection Reliability Operating Limit violations are identified. Each Reliability Coordinator shall have monitoring systems that provide information that can be easily understood and interpreted by the Reliability Coordinator's operating personnel, giving particular emphasis to alarm management and awareness systems, automated data transfers, and synchronized information systems, over a redundant and highly reliable infrastructure. <i>[Violation Risk Factor: High]</i> R6. Each Reliability Coordinator shall monitor Bulk Electric System elements (generators, transmission lines, buses, transformers, breakers, etc.) that could result in SOL or IROL violations within its Reliability Coordinator Area. Each Reliability Coordinator shall monitor both real and reactive power system flows, and operating reserves, and the status of Bulk Electric System elements that are or could be critical to SOLs and IROLs and system restoration requirements within its Reliability Coordinator Area. <i>[Violation Risk Factor: High]</i>	None – Both should be retired based on the notes below.
Notes: R5 is a basic facility requirement that should be addressed in certification. R6: Real-time monitoring is a supporting activity and is only one of several processes used to support operation within SOLs or IROLs. It is not practical to measure real-time monitoring, nor is this necessary. The real reliability objective is to operate within identified parameters, not to monitor.	

Implementation Plan for IRO-002-2
Reliability Coordination – Facilities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-002-1 R7. Each Reliability Coordinator shall have adequate analysis tools such as state estimation, pre- and post-contingency analysis capabilities (thermal, stability, and voltage), and wide-area overview displays. <i>[Violation Risk Factor: High]</i>	None – Retire this requirement.
Notes: The RC SDT recommends retiring IRO-002-1 Requirement R7 as it is a basic facility requirement that should be addressed in certification.	

Implementation Plan for IRO-002-2
Reliability Coordination – Facilities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-002-1 R8. Each Reliability Coordinator shall continuously monitor its Reliability Coordinator Area. Each Reliability Coordinator shall have provisions for backup facilities that shall be exercised if the main monitoring system is unavailable. Each Reliability Coordinator shall ensure SOL and IROL monitoring and derivations continue if the main monitoring system is unavailable. <i>[Violation Risk Factor: High]</i>	None – This requirement should be retired because it is redundant with: EOP-008-0 R1. Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have a plan to continue reliability operations in the event its control center becomes inoperable. The contingency plan must meet the following requirements: The contingency plan shall not rely on data or voice communication from the primary control facility to be viable. R1.2. The plan shall include procedures and responsibilities for providing basic tie line control and procedures and for maintaining the status of all inter-area schedules, such that there is an hourly accounting of all schedules. R1.3. The contingency plan must address monitoring and control of critical transmission facilities, generation control, voltage control, time and frequency control, control of critical substation devices, and logging of significant power system events. The plan shall list the critical facilities. R1.4. The plan shall include procedures and responsibilities for maintaining basic voice communication capabilities with other areas. R1.5. The plan shall include procedures and responsibilities for conducting periodic tests, at least annually, to ensure viability of the plan. R1.6. The plan shall include procedures and responsibilities for providing annual training to ensure that operating personnel are able to implement the contingency plans. R1.7. The plan shall be reviewed and updated annually. R1.8. Interim provisions must be included if it is expected to take more than one hour to implement the contingency plan for loss of primary control facility.
Notes: Real-time monitoring is a supporting activity and is only one of several processes used to support operation within SOLs or IROLs. It is not practical to measure real-time monitoring, nor is this necessary. The real reliability objective is to operate within SOLs and IROLs, not to monitor. The proposed revisions to EOP-008 require the RC to have specific backup capabilities sufficient to, among other things, provide visualization capabilities that ensure that operating personnel have situational awareness of the BES.	

Implementation Plan for IRO-002-2
Reliability Coordination – Facilities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-002-1 R9. Each Reliability Coordinator shall control its Reliability Coordinator analysis tools, including approvals for planned maintenance. <i>Each Reliability Coordinator shall have procedures in place to mitigate the effects of analysis tool outages.</i> [Violation Risk Factor: Medium]	IRO-002-2 R2. Each Reliability Coordinator shall have a procedure to coordinate maintenance of its Reliability Coordinator analysis tools. ~~Each Reliability Coordinator shall have procedures in place to mitigate the effects of analysis tool outages.~~ [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]
Notes: The RC SDT proposes retiring the second sentence of R9 as it is redundant with EOP-008, R1 (see above).	

Implementation Plan for IRO-005

Reliability Coordination — Current-Day Operations

Prerequisite Approvals

- IRO-001-2 — Reliability Coordination — Responsibilities and Authorities
- IRO-008-1 — Reliability Coordinator Operational Analyses and Real-time Assessments
- IRO-009-1 — Reliability Coordinator Actions to Operate Within Interconnection Reliability Operating Limits
- IRO-010-1 — Reliability Coordinator Data Specification and Collection

Conforming Changes to Requirements in Already Approved Standards

- IRO-001-2 with respect to R6 and R15

Revision Summary

- Many of the requirements in this standard will be retired under the IROL SDT work plan. The RC SDT proposes retiring other requirements and moving R6 and R15 to IRO-001-2. This will retire or move all requirements in this standard. The RC SDT proposes retiring the standard.

Functions that Must Comply with the Requirements in the Standards

Not applicable – all requirements are recommended for retirement or movement to other standards.

Effective Dates

To be determined.

Implementation Plan for IRO-005
Reliability Coordination — Current-Day Operations

Revisions or Retirements to Already Approved Standards

The following tables identify the sections of approved standards that shall be retired or revised when this standard is implemented. If the drafting team is recommending the retirement or revision of a requirement, that text is blue.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R1. Each Reliability Coordinator shall monitor its Reliability Coordinator Area parameters, including but not limited to the following: <i>[Violation Risk Factor: High]</i> (and all R1 sub-requirements)	Retire R1 and its subrequirements – Monitoring capability can be objectively measured and is essential to real-time operations – however real-time monitoring is a supporting activity and is only one of several processes used to support operation within defined parameters. Monitoring capability should be assessed during certification and not as a requirement.
Notes: The RC SDT recommends retiring IRO-005-2 Requirement R1 and its subrequirements.	

Implementation Plan for IRO-005
Reliability Coordination — Current-Day Operations

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R2. Each Reliability Coordinator shall be aware of all Interchange Transactions that wheel through, source, or sink in its Reliability Coordinator Area, and make that Interchange Transaction information available to all Reliability Coordinators in the Interconnection. <i>[Violation Risk Factor: High]</i>	None – Requirement should be retired as it is redundant with: INT-005-1 R1. Prior to the expiration of the time period defined in the Timing Table, Column A, the Interchange Authority shall distribute the Arranged Interchange information for reliability assessment to all reliability entities involved in the interchange. R1.1. When a Balancing Authority or Reliability Coordinator initiates a Curtailment to Confirmed or Implemented Interchange for reliability, the Interchange Authority shall distribute the Arranged Interchange information for reliability assessment only to the Source Balancing Authority and the Sink Balancing Authority.
Notes: ▪ The requirement is not measurable (shall be aware) and should be retired because it is redundant with INT-005-1, R1. ▪ The IA is responsible for making interchange information available to all reliability entities including the Reliability Coordinator. ▪ When IRO-010-1 becomes effective, IRO-005-2 R2 should be retired. The e-tag system replaced the need for this requirement. In addition, if the Reliability Coordinator needs this information, the Reliability Coordinator can add this item to the list of data and information on its data specification under IRO-010 R1	

Implementation Plan for IRO-005
Reliability Coordination — Current-Day Operations

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R3. As portions of the transmission system approach or exceed SOLs or IROLs, the Reliability Coordinator shall work with its Transmission Operators and Balancing Authorities to evaluate and assess any additional Interchange Schedules that would violate those limits. If a potential or actual IROL violation cannot be avoided through proactive intervention, the Reliability Coordinator shall initiate control actions or emergency procedures to relieve the violation without delay, and no longer than 30 minutes. The Reliability Coordinator shall ensure all resources, including load shedding, are available to address a potential or actual IROL violation. <i>[Violation Risk Factor: High]</i>	None – This requirement is to be retired per the IROL team's implementation plan.
Notes: ▪ The IROL Implementation Plan proposes retiring IRO-005-2 R3 when IRO-009-1 becomes effective. IRO-005 R3 can lead the Reliability Coordinator to believe it has up to 30 minutes to relieve an IROL violation – but some IROLs have a T_v that is much shorter than 30 minutes.	

Implementation Plan for IRO-005
Reliability Coordination — Current-Day Operations

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R4. Each Reliability Coordinator shall monitor its Balancing Authorities' parameters to ensure that the required amount of operating reserves is provided and available as required to meet the Control Performance Standard (CPS) and Disturbance Control Standard (DCS) requirements. If necessary, the Reliability Coordinator shall direct the Balancing Authorities in the Reliability Coordinator Area to arrange for assistance from neighboring Balancing Authorities. The Reliability Coordinator shall issue Energy Emergency Alerts as needed and at the request of its Balancing Authorities and Load-Serving Entities. <i>[Violation Risk Factor: High]</i>	None – The RC SDT proposes that this requirement be retired. The BA has its own requirements regarding compliance with CPS and DCS standards as well as requesting emergency assistance. We view these as vestiges of an earlier program that no longer apply given the current mandatory requirements with which the BA must comply. This requirement should be retired. The requirement is also redundant with existing EOP-002-2.
Note: The RC SDT proposes that IRO-005-2 Requirement R4 be retired.	

Implementation Plan for IRO-005

Reliability Coordination — Current-Day Operations

Notes: EOP-002-2

R1. Each Balancing Authority and Reliability Coordinator shall have the responsibility and clear decision-making authority to take whatever actions are needed to ensure the reliability of its respective area and shall exercise specific authority to alleviate capacity and energy emergencies.

R2. Each Balancing Authority shall implement its capacity and energy emergency plan, when required and as appropriate, to reduce risks to the interconnected system.

R3. A Balancing Authority that is experiencing an operating capacity or energy emergency shall communicate its current and future system conditions to its Reliability Coordinator and neighboring Balancing Authorities.

R4. A Balancing Authority anticipating an operating capacity or energy emergency shall perform all actions necessary including bringing on all available generation, postponing equipment maintenance, scheduling interchange purchases in advance, and being prepared to reduce firm load.

R5. A deficient Balancing Authority shall only use the assistance provided by the Interconnection's frequency bias for the time needed to implement corrective actions. The Balancing Authority shall not unilaterally adjust generation in an attempt to return Interconnection frequency to normal beyond that supplied through frequency bias action and Interchange Schedule changes. Such unilateral adjustment may overload transmission facilities.

R6. If the Balancing Authority cannot comply with the Control Performance and Disturbance Control Standards, then it shall immediately implement remedies to do so. These remedies include, but are not limited to:

R6.1. Loading all available generating capacity.

R6.2. Deploying all available operating reserve.

R6.3. Interrupting interruptible load and exports.

R6.4. Requesting emergency assistance from other Balancing Authorities.

R6.5. Declaring an Energy Emergency through its Reliability Coordinator; and

R6.6. Reducing load, through procedures such as public appeals, voltage reductions, curtailing interruptible loads and firm loads.

R7. Once the Balancing Authority has exhausted the steps listed in Requirement 6, or if these steps cannot be completed in sufficient time to resolve the emergency condition, the Balancing Authority shall:

R7.1. Manually shed firm load without delay to return its ACE to zero; and

R7.2. Request the Reliability Coordinator to declare an Energy Emergency Alert in accordance with Attachment 1-EOP-002-0 "Energy Emergency Alert Levels."

R8. A Reliability Coordinator that has any Balancing Authority within its Reliability Coordinator area experiencing a potential or actual Energy Emergency shall initiate an Energy Emergency Alert as detailed in Attachment 1-EOP-002-0 "Energy Emergency Alert Levels." The Reliability Coordinator shall act to mitigate the emergency condition, including a request for emergency assistance if required.

Implementation Plan for IRO-005
Reliability Coordination — Current-Day Operations

R9. When a Transmission Service Provider expects to elevate the transmission service priority of an Interchange Transaction from Priority 6 (Network Integration Transmission Service from Non-designated Resources) to Priority 7 (Network Integration Transmission Service from designated Network Resources) as permitted in its transmission tariff (See Attachment 1-IRO-006-0 “Transmission Loading Relief Procedure” for explanation of Transmission Service Priorities):

R9.1. The deficient Load-Serving Entity shall request its Reliability Coordinator to initiate an Energy Emergency Alert in accordance with Attachment 1-EOP-002-0.

R9.2. The Reliability Coordinator shall submit the report to NERC for posting on the NERC Website, noting the expected total MW that may have its transmission service priority changed.

R9.3. The Reliability Coordinator shall use EEA 1 to forecast the change of the priority of transmission service of an Interchange Transaction on the system from Priority 6 to Priority 7.

R9.4. The Reliability Coordinator shall use EEA 2 to announce the change of the priority of transmission service of an Interchange Transaction on the system from Priority 6 to Priority 7.

Implementation Plan for IRO-005
Reliability Coordination — Current-Day Operations

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R5. Each Reliability Coordinator shall identify the cause of any potential or actual SOL or IROL violations. The Reliability Coordinator shall initiate the control action or emergency procedure to relieve the potential or actual IROL violation without delay, and no longer than 30 minutes. The Reliability Coordinator shall be able to utilize all resources, including load shedding, to address an IROL violation. <i>[Violation Risk Factor: High]</i>	None – This requirement is to be retired per the IROL team's implementation plan.
Notes: ▪ The IROL Implementation Plan proposes retiring IRO-005-2 R5 when IRO-009-1 becomes effective. IRO-005 R5 can lead the Compliance Enforcement Authority to believe that the Reliability Coordinator has information to see all SOLs, and this is not always true. Every facility in the Transmission Operator's area has a System Operating Limit, but the Reliability Coordinator isn't required to see all these limits and may not have information to determine the cause of instances of exceeding these limits.	

Implementation Plan for IRO-005
Reliability Coordination — Current-Day Operations

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R6. Each Reliability Coordinator shall ensure its Transmission Operators and Balancing Authorities are aware of Geo-Magnetic Disturbance (GMD) forecast information and assist as needed in the development of any required response plans.	The RC SDT proposes retiring this requirement as it is redundant with proposed IRO-001-2, R11. A GMD is one of the “expected or actual threats with Adverse Reliability Impacts”. IRO-002-2 (proposed) R1. Each Reliability Coordinator who identifies an expected or actual threat with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify, without intentional delay, all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i>
Notes: The RC SDT proposes retiring IRO-005-2 Requirement R6 as it is redundant with the proposed IRO-002-2 R1.	

Implementation Plan for IRO-005
Reliability Coordination — Current-Day Operations

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R7. The Reliability Coordinator shall disseminate information within its Reliability Coordinator Area, as required.	None
Notes: The RC SDT proposes that IRO-005-2 Requirement R7 is too vague and ambiguous to measure. We recommend retiring this requirement. This is a supporting activity associated with other higher-level performance requirements such as the requirement in IRO-008 for the RC to share the results of its analyses under specified conditions.	

Implementation Plan for IRO-005
Reliability Coordination — Current-Day Operations

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R8. Each Reliability Coordinator shall monitor system frequency and its Balancing Authorities' performance and direct any necessary rebalancing to return to CPS and DCS compliance. The Transmission Operators and Balancing Authorities shall utilize all resources, including firm load shedding, as directed by its Reliability Coordinator to relieve the emergent condition.	IRO-005-2 The RCSDT recommends retiring this requirement as it is redundant with: TOP-006-1, R7 Each Reliability Coordinator, Transmission Operator and Balancing Authority shall monitor system frequency. EOP-002-2 R4. A Balancing Authority anticipating an operating capacity or energy emergency shall perform all actions necessary including bringing on all available generation, postponing equipment maintenance, scheduling interchange purchases in advance, and being prepared to reduce firm load. R6. If the Balancing Authority cannot comply with the Control Performance and Disturbance Control Standards, then it shall immediately implement remedies to do so. These remedies include, but are not limited to: R6.1. Loading all available generating capacity. R6.2. Deploying all available operating reserve. R6.3. Interrupting interruptible load and exports. R6.4. Requesting emergency assistance from other Balancing Authorities. R6.5. Declaring an Energy Emergency through its Reliability Coordinator; and R6.6. Reducing load, through procedures such as public appeals, voltage reductions, curtailing interruptible loads and firm loads. R7. Once the Balancing Authority has exhausted the steps listed in Requirement 6, or if these steps cannot be completed in sufficient time to resolve the emergency condition, the Balancing Authority shall: R7.1. Manually shed firm load without delay to return its ACE to zero; and R7.2. Request the Reliability Coordinator to declare an Energy Emergency Alert in accordance with Attachment 1-EOP-002-0 "Energy Emergency Alert Levels."
Notes: The RC SDT recommends retiring IRO-005-2 R8. The BA has its own requirements regarding compliance with CPS and DCS standards as well as requesting emergency assistance. RCSDT views these as vestiges of an earlier program that no longer apply given the current mandatory requirements with which the BA must comply. The second sentence is redundant with EOP-002, R4, R6, R7, and R9. This requirement should be retired.	

Implementation Plan for IRO-005
Reliability Coordination — Current-Day Operations

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R9. The Reliability Coordinator shall coordinate with Transmission Operators, Balancing Authorities, and Generator Operators as needed to develop and implement action plans to mitigate potential or actual SOL, IROL, CPS or DCS violations. The Reliability Coordinator shall coordinate pending generation and transmission maintenance outages with Transmission Operators, Balancing Authorities, and Generator Operators as needed in both the real time and next-day reliability analysis timeframes.	The RCSDT proposes to retire this requirement from IRO-005. The RCSDT proposes retiring this requirement as it is redundant with TOP-003 and IRO-004 (all requirements) for next day requirements. The RC has the authority to coordinate pending outages in real-time through IRO-001-2, R1 (proposed). The issue of CPS and DCS is covered in EOP-002-2, R6, R7 and R8 (see above).
Notes: TOP-003-0 R1. Generator Operators and Transmission Operators shall provide planned outage information. R1.1. Each Generator Operator shall provide outage information daily to its Transmission Operator for scheduled generator outages planned for the next day (any foreseen outage of a generator greater than 50 MW). The Transmission Operator shall establish the outage reporting requirements. R1.2. Each Transmission Operator shall provide outage information daily to its Reliability Coordinator, and to affected Balancing Authorities and Transmission Operators for scheduled generator and bulk transmission outages planned for the next day (any foreseen outage of a transmission line or transformer greater than 100 kV or generator greater than 50 MW) that may collectively cause or contribute to an SOL or IROL violation or a regional operating area limitation. The Reliability Coordinator shall establish the outage reporting requirements. R1.3. Such information shall be available by 1200 Central Standard Time for the Eastern Interconnection and 1200 Pacific Standard Time for the Western Interconnection. R2. Each Transmission Operator, Balancing Authority, and Generator Operator shall plan and coordinate scheduled outages of system voltage regulating equipment, such as automatic voltage regulators on generators, supplementary excitation control, synchronous condensers, shunt and series capacitors, reactors, etc., among affected Balancing Authorities and Transmission Operators as required. R3. Each Transmission Operator, Balancing Authority, and Generator Operator shall plan and coordinate scheduled outages of telemetering and control equipment and associated communication channels between the affected areas. R4. Each Reliability Coordinator shall resolve any scheduling of potential reliability conflicts.	

Implementation Plan for IRO-005

Reliability Coordination — Current-Day Operations

IRO-004-1

- R1.** Each Reliability Coordinator shall conduct next-day reliability analyses for its Reliability Coordinator Area to ensure that the Bulk Electric System can be operated reliably in anticipated normal and Contingency event conditions. The Reliability Coordinator shall conduct Contingency analysis studies to identify potential interface and other SOL and IROL violations, including overloaded transmission lines and transformers, voltage and stability limits, etc.
- R2.** Each Reliability Coordinator shall pay particular attention to parallel flows to ensure one Reliability Coordinator Area does not place an unacceptable or undue Burden on an adjacent Reliability Coordinator Area.
- R3.** Each Reliability Coordinator shall, in conjunction with its Transmission Operators and Balancing Authorities, develop action plans that may be required, including reconfiguration of the transmission system, re-dispatching of generation, reduction or curtailment of Interchange Transactions, or reducing load to return transmission loading to within acceptable SOLs or IROLs.
- R4.** Each Transmission Operator, Balancing Authority, Transmission Owner, Generator Owner, Generator Operator, and Load-Serving Entity in the Reliability Coordinator Area shall provide information required for system studies, such as critical facility status, Load, generation, operating reserve projections, and known Interchange Transactions. This information shall be available by 1200 Central Standard Time for the Eastern Interconnection and 1200 Pacific Standard Time for the Western Interconnection.
- R5.** Each Reliability Coordinator shall share the results of its system studies, when conditions warrant or upon request, with other Reliability Coordinators and with Transmission Operators, Balancing Authorities, and Transmission Service Providers within its Reliability Coordinator Area. The Reliability Coordinator shall make study results available no later than 1500 Central Standard Time for the Eastern Interconnection and 1500 Pacific Standard Time for the Western Interconnection, unless circumstances warrant otherwise.
- R6.** If the results of these studies indicate potential SOL or IROL violations, the Reliability Coordinator shall direct its Transmission Operators, Balancing Authorities and Transmission Service Providers to take any necessary action the Reliability Coordinator deems appropriate to address the potential SOL or IROL violation.
- R7.** Each Transmission Operator, Balancing Authority, and Transmission Service Provider shall comply with the directives of its Reliability Coordinator based on the next day assessments in the same manner in which it would comply during real time operating events.

IRO-001-2, R1 (proposed)

- R1.** The Reliability Coordinator shall act or direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts.
[Violation Risk Factor: High][Time Horizon: Real-time Operations and Same Day Operations]

Implementation Plan for IRO-005
Reliability Coordination — Current-Day Operations

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R10. As necessary, the Reliability Coordinator shall assist the Balancing Authorities in its Reliability Coordinator Area in arranging for assistance from neighboring Reliability Coordinator Areas or Balancing Authorities. <i>[Violation Risk Factor: High]</i>	None EOP-002-2 R7.2. Request the Reliability Coordinator to declare an Energy Emergency Alert in accordance with Attachment 1-EOP-002-0 "Energy Emergency Alert Levels." R8. A Reliability Coordinator that has any Balancing Authority within its Reliability Coordinator area experiencing a potential or actual Energy Emergency shall initiate an Energy Emergency Alert as detailed in Attachment 1-EOP-002-0 "Energy Emergency Alert Levels." The Reliability Coordinator shall act to mitigate the emergency condition, including a request for emergency assistance if required.
Notes: The RCSDT proposes to retire this requirement as it is redundant with EOP-002-2	

Implementation Plan for IRO-005
Reliability Coordination — Current-Day Operations

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R11. The Reliability Coordinator shall identify sources of large Area Control Errors that may be contributing to Frequency Error, Time Error, or Inadvertent Interchange and shall discuss corrective actions with the appropriate Balancing Authority. The Reliability Coordinator shall direct its Balancing Authority to comply with CPS and DCS.	None IRO-001-2 (proposed) R1. Reliability Coordinator shall act or direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts. [Violation Risk Factor: High][Time Horizon: Real-time Operations and Same Day Operations] TOP-006-1, R7 (existing) R7. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall monitor system frequency.
Notes: The RCS DT proposes retiring IRO-005-2 as it is redundant with the proposed IRO-001-2 R1 and approved TOP-006-1 R7.	

Implementation Plan for IRO-005
Reliability Coordination — Current-Day Operations

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R12. Whenever a Special Protection System that may have an inter-Balancing Authority, or inter-Transmission Operator impact (e.g., could potentially affect transmission flows resulting in a SOL or IROL violation) is armed, the Reliability Coordinators shall be aware of the impact of the operation of that Special Protection System on inter-area flows. The Transmission Operator shall immediately inform the Reliability Coordinator of the status of the Special Protection System including any degradation or potential failure to operate as expected.	None - The RCS DT recommends retiring this requirement as it is redundant with proposed IRO-010: R1. The Reliability Coordinator shall have a documented data specification for data and information to build and maintain models to support Real-Time monitoring, Operational Planning Analyses, and Real-time Assessments. The specification shall include the following: (<i>Violation Risk Factor: Low</i>) (<i>Time Horizon: Operations Planning</i>) R1.1. List of required data and information. R1.2. Mutually agreeable format. R1.3. Timeframe and periodicity for providing data and information (based on its hardware and software requirements, and the time needed to do its Operational Planning Analyses). R1.4. Process for data provision when automated Real-Time system operating data is unavailable. R2. The Reliability Coordinator shall distribute its data specification to entities that have Facilities monitored by the Reliability Coordinator and to entities that provide Facility status to the Reliability Coordinator. (<i>Violation Risk Factor: Low</i>) (<i>Time Horizon: Operations Planning</i>) R3. Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. The data and information is limited to data needed by the Reliability Coordinator to support Real-Time Monitoring, Operational Planning Analyses, and Real-Time Assessments. (<i>Violation Risk Factor: Medium</i>) (<i>Time Horizon: Operations Planning; Same-day Operations; Real-time Operations</i>)
Notes: The RC SDT recommends retiring this requirement as it is redundant with proposed IRO-010, R1 and R3. Also, the scope of project 2007-3 includes enhancing the SPS provisions of TOP-005. IRO-003, R1 indicates the RC will monitor all items that will impact reliability, and SPSs are a part of that.	

Implementation Plan for IRO-005
Reliability Coordination — Current-Day Operations

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R13. Each Reliability Coordinator shall ensure that all Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities operate to prevent the likelihood that a disturbance, action, or non-action in its Reliability Coordinator Area will result in a SOL or IROL violation in another area of the Interconnection. In instances where there is a difference in derived limits, the Reliability Coordinator and its Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities shall always operate the Bulk Electric System to the most limiting parameter.	None
Notes: The IROL SDT has proposed retiring the first sentence of this requirement as it is redundant with the proposed IRO-009-1. The RC SDT recommends retiring the remaining portion of this requirement as it is a facet of the SOL / IROL methodology required in FAC-010-1, FAC-011-1 and FAC-014-1.	

Implementation Plan for IRO-005
Reliability Coordination — Current-Day Operations

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R14. Each Reliability Coordinator shall make known to Transmission Service Providers within its Reliability Coordinator Area, SOLs or IROLs within its wide-area view. The Transmission Service Providers shall respect these SOLs or IROLs in accordance with filed tariffs and regional Total Transfer Calculation and Available Transfer Calculation processes.	None
Notes: Per the IROL SDT implementation plan, the first sentence of this requirement should be retired upon the implementation of IRO-009-1. The RC SDT proposes retiring the second sentence of this requirement. The concept of this requirement is more appropriately addressed in the proposed MOD standards under project 2006-7. As written, this requirement is not measureable and unenforceable as a TSP's tariff may supersede the requirement.	
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R15. Each Reliability Coordinator who foresees a transmission problem (such as an SOL or IROL violation, loss of reactive reserves, etc.) within its Reliability Coordinator Area shall issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area without delay. The receiving Reliability Coordinator shall disseminate this information to its impacted Transmission Operators and Balancing Authorities. The Reliability Coordinator shall notify all impacted Transmission Operators, Balancing Authorities, when the transmission problem has been mitigated.	None
Notes: The RC SDT moved this requirement to IRO-001-2.	

Implementation Plan for IRO-005
Reliability Coordination — Current-Day Operations

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R16. Each Reliability Coordinator shall confirm reliability assessment results and determine the effects within its own and adjacent Reliability Coordinator Areas. The Reliability Coordinator shall discuss options to mitigate potential or actual SOL or IROL violations and take actions as necessary to always act in the best interests of the Interconnection at all times. <i>[Violation Risk Factor: High]</i> R17. When an IROL or SOL is exceeded, the Reliability Coordinator shall evaluate the local and wide-area impacts, both real-time and post-contingency, and determine if the actions being taken are appropriate and sufficient to return the system to within IROL in thirty minutes. If the actions being taken are not appropriate or sufficient, the Reliability Coordinator shall direct the Transmission Operator, Balancing Authority, Generator Operator, or Load-Serving Entity to return the system to within IROL or SOL. <i>[Violation Risk Factor: High]</i>	IRO-005-2 None – The IROL SDT's Implementation plan proposes retirement of R16 and R17.
Notes: IRO-005 R16 is a mix of requirements and the Missing Measures and Compliance Elements drafting team determined that, as written, R16 is too vague to be measured. The intent of this requirement is duplicated more clearly in IRO-008 and IRO-009. ▪ IRO-005 R17 can lead the Reliability Coordinator to believe it has up to 30 minutes to relieve an IROL violation – but some IROLs have a T_v that is much shorter than 30 minutes. Note that the RC does not see all SOLs.	

Project 2006-06, Reliability Coordination

Scope of Work Assigned to the Reliability Coordination Standard Drafting Team

Purpose

To ensure that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique and enforceable; and to ensure that this set of requirements is sufficient to maintain reliability of the Bulk Electric System.

Brief Description

Most of the requirements in this set of standards were translated from Operating Policies as part of the Version 0 process. There have been suggestions for improving these requirements, and the drafting team will consider comments submitted by stakeholders, drafting teams and FERC in determining what changes should be proposed to stakeholders.

The drafting team will review all of the requirements in this set of standards and make a determination, with stakeholders, on whether to:

- Modify the requirement to improve its clarity and measurability while removing ambiguity
- Move the requirement (into another SAR or Standard or to the certification process or standards)
- Eliminate the requirement (either because it is redundant or because it doesn't support bulk power system reliability).
-

Detailed Description

The drafting team will review all of the requirements in the following set of standards:

COM-001 — Telecommunications

COM-002 — Communications and Coordination

IRO-001 — Reliability Coordination – Responsibilities and Authorities

IRO-002 — Reliability Coordination – Facilities

IRO-005 — Reliability Coordination – Current Day Operations

IRO-014 — Procedures to Support Coordination between Reliability Coordinators

IRO-015 — Notifications and Information Exchange Between Reliability Coordinators

IRO-016 — Coordination of Real-time Activities between Reliability Coordinators

PER-004 — Reliability Coordination – Staffing

PRC-001 — System Protection Coordination

For each existing requirement, the drafting team will work with stakeholders and:

- Eliminate redundancy in the requirements.
- Identify requirements that should be moved into other SARs
- Eliminate requirements that do not support bulk power system reliability
- Transfer requirements that need to be in place before an entity begins operation as an RC to certification.
- Improve clarity of, improve measurability of, and remove ambiguity from the requirement

The standard drafting team will also:

- Coordinate with the drafting teams working on the SAR and standards for Transmission Operator and Balancing Authority standards (Project 2007-06).
- Consider comments received during the initial development of this set of standards and other comments received from ERO regulatory authorities and stakeholders (Attachment 1)
- Bring the standards into conformance with the latest version of the Reliability Standards Development Procedure and the ERO Rules of Procedure. (Attachment 2)

This review of the set of identified standards will satisfy the standards procedure requirement to review each approved standard at least once every five years.

Attachment 1

The drafting team will assist stakeholders in considering these comments in determining what changes to make to the standards:

COM-001-0 Telecommunications

FERC Order 693

- o Include generator operators and distribution provider as applicable entities and include requirements for their telecommunications. **GOP and DP were added to Applicability and a new requirement was added to the standard.**

- o Include requirements for telecommunication facilities for use during normal and emergency conditions that reflect the roles of the applicable entities and their impact on reliable operation. **The RC SDT contends that telecommunications facility requirements are low level facilitating requirements that are more appropriately and inherently monitored under various higher level performance-based reliability requirements for each entity throughout the body of standards. (please see Implementation Plan for COM-001 for examples).**

- o Includes adequate flexibility for compliance with the reliability standard, adoption of new technologies and cost-effective solutions. **The RC SDT contends that telecommunications facility requirements are low level facilitating requirements that are more appropriately and inherently monitored under various higher level performance-based reliability requirements for each entity throughout the body of standards. (please see Implementation Plan for COM-001 for examples).**

V0 Industry Comments

- o Many players missing. **The RC SDT has added the GOP and DP to the standard.**

- o Apply R1 to all but smallest entities. **The RC SDT proposes retiring R1.**

Violation Risk Factor Drafting Team Comments

- o R6 – administrative requirement **The RC SDT proposes retiring this requirement as it is administrative in nature.**

COM-002-1 Communications and Coordination

FERC Order 693

- o Include a Requirement for the reliability coordinator to assess and approve actions that have impacts beyond the area views of transmission operators or balancing authorities;

- This requirement is covered in proposed IRO-014-2, R1.**

- o Include distribution providers as applicable entities; **The proposed revisions do not include the DP entity because they are not applicable.**

- o Require tightened communications protocols, especially for communications during alerts and emergencies. **This is to be covered in new COM-003 standard.**

IRO-001-0 Reliability Coordination – Responsibilities and Authorities

FERC Order 693

- o Reflect the process set forth in the NERC Rules of Procedures; and
- o Eliminate the regional reliability organization as an applicable entity. **Done**

Regional Fill-in-the-Blank Team Comments

- o Remove ", sub-region, or interregional coordinating group" from R1. **Proposing to retire the requirement.**
- o Consider removing "Standards of conduct are necessary to ensure the Reliability Coordinator does not act in a manner that favors one market participant over another." from the Purpose section of the standard. **Done**

V0 Industry Comments

- o Inability to perform needs to be communicated **Included in redline R9**
- o What is meant by 'interest of other entity'? **Proposing to retire the requirement.**

Violation Risk Factor Drafting Team Comments

- o R6 - Since the RC must be NERC certified, it stands to reason that anyone performing RC tasks should be certified. However, since the RC still retains the accountability for actions, and requirement 4 handles the agreements, this requirement is a medium risk. **Proposing to retire the requirement.**

IRO-002-0 Reliability Coordination – Facilities

FERC Order 693

- o Require a minimum set of tools that should be made available to reliability coordinators. **The development of a minimum set of tools should be addressed through the work of the Real-Time Tools Best Practices Task Force. Their charge was to develop a list of tools required to perform real time operations functions and submit SARs based on their work. As requirements for these tools are developed, appropriate standards projects will be initiated to incorporate the tools within the NERC Organization Registration and Certification Process, and the applicable reliability standards. The RC SDT submits that this directive be addressed in that effort. This action is accommodated by the Standards Development Work Plan.**

V0 Industry Comments **Proposing to retire these requirements.**

- o R5 – define synchronized information system
- o R7 – define 'adequate' tools and 'wide-area'
- o Words such as 'easily understood' and 'particular emphasis' need to be tightened

IRO-005-1 Reliability Coordination – Current Day Operations

FERC Order 693

- o Measures and Levels of Non-Compliance specific to IROL violations must be commensurate with the magnitude, duration, frequency and causes of the violations and whether these occur during normal or contingency conditions. IROLs are being handled in new IRO standards IOR-008 thru 010.
- o Conduct a survey on IROL practices and experiences; the Commission may propose further modifications to IRO-005-1 based on the survey results. The RC SDT is unaware whether any survey activities are being performed a this time.

V0 Industry Comments

- o R10, 11 & 12 – RA not empowered to do this. Proposing to retire these as they are redundant with other requirements (see Implementation plan)

IRO-014-1 and IRO-015-1

There were no directives from FERC Order 693 nor were there any comments from V0.

IRO-016-1 Coordination of Real-Time Activities Between Reliability Coordinators

Violation Risk Factors Drafting Team Comments

- o R1.2.1 & R2 – ambiguous All of R1 has been moved into IRO-014 and rewritten for clarity

PER-004-0 Reliability Coordination – Staffing This standard is being revised in another SAR

FERC Order 693

- o Include formal training requirements for reliability coordinators similar to those addressed under the personnel training Reliability Standard PER-002-0;
- o Include requirements pertaining to personnel credentials for reliability coordinators similar to those in PER-003-0
- o Consider the suggestions of FirstEnergy and Xcel:
1413. FirstEnergy seeks revisions to the terms “shall have a comprehensive understanding” and “shall have extensive knowledge.” It states that it will be difficult for entities to demonstrate compliance with these terms. In addition, FirstEnergy suggests that the reliability coordinator staffing requirements should be located in the IRO Reliability Standards.
1414. Xcel states that emergency training requirements should be expressed in hour increments rather than days to allow for flexibility in scheduling training and coordinating with rotating shift schedules.

V0 Industry Comments

- o Calendar year timing increment
- o Other training needs to be defined

PRC-001-0 System Protection Coordination This standard is being revised in another SAR

FERC Order 693

- o Correct the references for Requirements
- o Include a requirement that upon the detection of failures in relays or protection system elements on the Bulk-Power System that threaten reliable operation, relevant transmission operators must be informed promptly, but within a specified period of time whereas generator operators must also promptly inform their transmission operators
- o Clarify that, after being informed of failures in relays or protection system elements that threaten reliability of the Bulk-Power System, transmission operators must carry out corrective control actions, i.e., return the system to a stable state that respects system requirements as soon as possible and no longer than 30 minutes after they receive notice of the failure

V0 Industry Comments

- o Effects on reliability may not be known
- o Consistent terminology as to neighbor vs. affected
- o Not all criteria moved over from policies

Comment Background and Questions for Reliability Coordination — Project 2006-06

Comments must be submitted by **September 16, 2008**. If you have questions please contact Stephen Crutchfield at stephen.crutchfield@nerc.net or by telephone at 609-651-9455.

Background Information:

The Reliability Coordination Standards Drafting Team was tasked with ensuring that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique and enforceable; and to ensure that this set of requirements is sufficient to maintain reliability of the Bulk Electric System. The SAR also called for revisions to the group of Standards based on FERC Order 693.

During the course of the project, the NERC Standard Staff revised the Reliability Standards Work Plan and noted several areas of overlapping scope between certain projects. The original SAR for Project 2006-6 called for revisions to PER-004 (Reliability Coordination – Staffing) and PRC-001 (System Protection Coordination). Based on the scope overlap of the teams involved, it was determined that PER-004 would best be served by moving all of the proposed scope to Project 2006-1, System Personnel Training. Similarly, it was determined that PER-004 would best be served by moving all of the proposed scope to Project 2007-6, System Protection.

The RC SDT has Standards that are impacted by the work of the IROL Standards Drafting Team and the standards that they have developed and the modifications they've proposed to some of the IRO standards. The RC SDT is recommending further revisions to the IRO standards and coordinated these changes with the IROL SDT. We have noted revisions made to the standards by the IROL SDT in our documents.

A summary of the proposed revisions to the Standards remaining in Project 2006-06 is:

COM-001-2

The RC SDT revised the standard and is proposing retiring three requirements (R1, R5 and R6). Changes were made to eliminate redundancies between standards (existing and proposed), align with NERC's Rules of Procedure and to address issues in FERC Order 693.

COM-002-3

The RC SDT proposes retiring this standard. The RC SDT contends that COM-002-2, R1 and its subrequirements are low level facilitating requirements that are more appropriately and inherently monitored under various higher level performance-based reliability requirements for each entity throughout the body of standards. The Operations Communications Protocols SDT is addressing R2. They plan to modify the requirement and place the modified requirement in a new standard, COM-003-1. Requirement 2 will remain in place until COM-003-1 is approved.

IRO-001-2

The RC SDT revised the standard and is proposing retiring several requirements (R1, R2, R4, R5, R6, R7 and R10). Changes were made to eliminate redundancies between standards (existing and proposed), align with NERC's Rules of Procedure and to address issues in FERC Order 693.

IRO-002-2

The RC SDT revised the standard and is proposing retiring several requirements (R1, R3, R4, R5, R6, R7 and R8). Changes were made to eliminate redundancies between standards (existing and proposed), to align with NERC's Rules of Procedure and to address issues in FERC Order 693.

IRO-005-2

Many of the requirements in this standard will be retired under the IROL SDT work plan. The RC SDT proposes retiring other requirements and moving R6 and R15 to IRO-001-2. This will retire or move all requirements in this standard. The RC SDT proposes retiring the standard.

IRO-014-2

The RC SDT revised the standard and is proposing retiring two requirements (R3 and R4). New requirements were brought into this standard from IRO-015-1 (R1-R3) and IRO-016-1 (R1 and its sub requirements). Changes were made to eliminate redundancies between standards (existing and proposed), eliminate administrative items, align with NERC's Rules of Procedure and to address issues in FERC Order 693.

IRO-015-2

The RC SDT recommends retiring Standard IRO-015 and moving all requirements to IRO-014-2.

IRO-016-2

The RC SDT recommends retiring this Standard. The requirements listed in R1 and its sub-requirements were incorporated into IRO-014-2 as new requirements. The RC SDT recommends retiring R2 because it is a measure of performance of R1.

The Reliability Coordination Drafting Team would like to receive industry comments on the Requirements, Measures and Violation Severity Levels of this group of standards. Accordingly, we request that you submit your comments electronically by **September 16, 2008**.

1. Do you agree with the revisions to the Requirements in COM-001-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

☐ Yes

☐ No

Comments:

2. Do you agree with the revisions to the Measures in COM-001-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

☐ Yes

☐ No

Comments:

3. Do you agree with the Violation Severity Levels proposed in COM-001-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

☐ Yes

☐ No

Comments:

4. Do you agree with the revisions to the Requirements in COM-002-3 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

☐ Yes

☐ No

Comments:

5. Do you agree with the revisions to the Measures in COM-002-3 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

☐ Yes

☐ No

Comments:

6. Do you agree with the Violation Severity Levels proposed in COM-002-3 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

☐ Yes

☐ No

Comments:

7. Do you agree with the revisions to the Requirements in IRO-001-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

☐ Yes

☐ No

Comments:

8. Do you agree with the revisions to the Measures in IRO-001-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

☐ Yes

Comment Form — Reliability Coordination Project 2006-06

☐ No

Comments:

9. Do you agree with the Violation Severity Levels proposed in IRO-001-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

☐ Yes

☐ No

Comments:

10. Do you agree with the revisions to the Requirements in IRO-002-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

☐ Yes

☐ No

Comments:

11. Do you agree with the revisions to the Measures in IRO-002-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

☐ Yes

☐ No

Comments:

12. Do you agree with the Violation Severity Levels proposed in IRO-002-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

☐ Yes

☐ No

Comments:

13. Do you agree with the revisions to IRO-005-1 as shown in the posted Standard and Implementation Plan? The RC SDT is recommending retiring or moving all of the requirements and retiring this standard. If not, please explain in the comment area.

☐ Yes

☐ No

Comments:

14. Do you agree with the revisions to the Requirements in IRO-014-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

☐ Yes

☐ No

Comments:

15. Do you agree with the revisions to the Measures in IRO-014-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

☐ Yes

☐ No

Comments:

Comment Form — Reliability Coordination Project 2006-06

16. Do you agree with the Violation Severity Levels proposed in IRO-014-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

☐ Yes

☐ No

Comments:

17. Do you agree with the RC SDT recommendation to retire IRO-015-2 and move the requirements into IRO-014-2? If not, please explain in the comment area.

☐ Yes

☐ No

Comments:

18. Do you agree with the revisions to IRO-016-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

☐ Yes

☐ No

Comments:

19. If you have any other comments, not expressed in questions above, on this set of revisions, please provide your comments here.

Comments:

Individual or group. (29 Responses)
 Name (17 Responses)
 Organization (17 Responses)
 Group Name (12 Responses)
 Lead Contact (12 Responses)
 Contact Organization (12 Responses)
 Question 1 (25 Responses)
 Question 1 Comments (29 Responses)
 Question 2 (25 Responses)
 Question 2 Comments (29 Responses)
 Question 3 (21 Responses)
 Question 3 Comments (29 Responses)
 Question 4 (22 Responses)
 Question 4 Comments (29 Responses)
 Question 5 (21 Responses)
 Question 5 Comments (29 Responses)
 Question 6 (20 Responses)
 Question 6 Comments (29 Responses)
 Question 7 (23 Responses)
 Question 7 Comments (29 Responses)
 Question 8 (21 Responses)
 Question 8 Comments (29 Responses)
 Question 9 (21 Responses)
 Question 9 Comments (29 Responses)
 Question 10 (20 Responses)
 Question 10 Comments (29 Responses)
 Question 11 (19 Responses)
 Question 11 Comments (29 Responses)
 Question 12 (19 Responses)
 Question 12 Comments (29 Responses)
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Individual
Kris Manchur
Manitoba Hydro
Yes
Yes
Yes

Yes
Group
NPCC
Guy Zito
NPCC
No
There is inconsistency between R3 and M3. In R3, there is a provision for agreement between entities (RC, TOP, BA, GOP, DP) to use a language other than English in their communications. In M3, that option is not presented. M3 should reflect what is written in R3.
No
There is inconsistency between R3 and M3. In R3, there is a provision for agreement between entities (RC, TOP, BA, GOP, DP) to use a language other than English in their communications. In M3, that option is not presented. M3 should reflect what is written in R3.
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Individual
Jeffrey V Hackman
Ameren
Yes

Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes and No
While we agree that most of the requirements are redundancies that properly belong elsewhere, we are concerned that Requirement 4 and Requirement 8 are not properly represented elsewhere and should not be retired until they re-surface in another standard explicitly. We believe it is still very important for an RC to monitor their respective BAs reserves and CPS performance. Likewise in R8, while the frequency monitoring is a BA function, we think that it is important enough to also be included as an RC function explicitly.
Yes
Yes
Yes
Yes
Yes
Individual
Dan Rochester
Independent Electricity System Operator - Ontario
Yes
No
M3: The evidence to show that concurrence is in place to allow communication using a language other than English is missing. The Measure as written merely asks for evidence that communication in a different language has occurred.
No
(i) R1: Suggest to revise the conditions for all levels to read "...failed to operationally test the alternative communication facilities within the last..... (ii) R2: The second part under Severe is not needed since failing to notify any impacted entities would imply no communication to the affected entities anyway. If verification of the functionality of the alternate means of telecommunications is also critical even without communicating to the affected entities, then the second condition should be an "OR". (iii) R3: Failure to having concurrence to use a language other than English for communications between and among operating personnel responsible for real-time

operations by itself does not constitute a violation of any requirements; it is the absence of such a concurrence AND having used a language other than English that would constitute a violation. Suggest to revise this condition.
Yes
Yes
Yes
No
(i) R2: the phrase "act without intentional delay" is not necessary since the urgency of taking any actions as directed by the RC's are generally understood to be conveyed in the RC's directives. (ii) R3: Given R2 requires the responsible entities to comply with the RC directives, the part that says "immediately confirm the ability to comply with the directive or" is not needed. R3 should simply require the responsible entities to notify the RC upon recognition of the inability to perform the directive. (iii) The VRF for R5 should not be High. Failure to notify others when potential threats to system reliability have been mitigated does not constitute a high risk to the interconnected system. We suggest it be reduced to a Medium (i.e., that it affects control of the BES).
No
Wording in some of the Measures needs to be revised to reflect changes to R2 and/or R3, if our proposed changes are accepted. Also, we suggest the Requirement numbers be referenced in the Measures.
No
(i) R1: There should not be any distinction made between an RC acting and an RC directing others to act. Failure to mitigate adverse reliability impacts a severe violation of the requirement. We therefore suggest to revise the High and Severe levels as: High if the RC did not act or direct actions to prevent an Adverse Reliability Impact; Severe if the RC did not act or direct actions to mitigate the magnitude or duration of an existing Adverse Reliability Impact. (ii) R2: The High VSL seems contradictory to the requirement, which already has provision of not fully complying with the RC directives due to safety, equipment, or regulatory or statutory requirements. (iii) R3: We have proposed some wording change to R3, which if adopted, would precipitate a need to revise the VSLs for R3 accordingly. (iv) R4 and R5: The VSLs for these two requirements could be graded by assessing the number and/or timing of notifying the affected entities.
No
(i) R1: There is a duplicating requirement in TOP-005 R1.1. Suggest to eliminate one of the two. (ii) We do not agree with eliminating all of R5 to R8. There is a fundamental need for RCs to monitor its area, and even some portion of its adjacent areas to be aware of situations that require preventive and mitigating actions. While arguments can be made that requiring RCs to prevent and mitigate adverse reliability impacts would imply monitoring, the latter is a fundamental duty of any RCs to ensure system reliability. If monitoring is not explicitly stated as a requirement, then the same argument may be extended to training and operational facilities. We do not agree with the drafting team's conclusion that it is not practical to measure real-time monitoring. Measuring can be illustrated, for example, by a compliance audit to review system logs and assess the extent to which an RC follows and assesses system conditions.
No
(i) M1: We suggest to change the word "letter" to "documented request" (ii) If our recommendations to retain some of R5 to R9, some measures will need to be provided.
No
(i) R1: The wording for Low VSL is contradictory (e.g. it determined and requested in the first part but did not request in the second part). Suggest to revise it. (ii) R1: We suggest to grade the VSLs according to the extent to which the percentage of data specification and/or the number of entities not requested. (iii) R2: The RC either has the right or it doesn't, and hence it's a binary requirement. The VSL should be developed accordingly. Further, the wording for the Severe VSL does not correspond to the requirement and measure. The condition should simply be that the Reliability Coordinator failed to demonstrate that it had the authority to veto planned outages to analysis tools, including final approvals for planned maintenance.
No
(i) R1: We do not agree with removing this requirement for the same reason given for the proposal to remove R5 to R8 from IRO-002 (see comments on 10 (ii), above). (ii) R8: We do not agree with completely removing this requirement, especially that part that requires an RC to monitor system frequency. While DCS and CPS are largely a BA's responsibility, the RC is the last line of defence for abnormal system performance and needs to monitor its BAs' performance including their ability to address large frequency deviations, and direct or take corrective actions as needed including requesting emergency assistance on the BAs' behalf and directing load shedding. (iii) R9: The second part of this requirement needs to be retained. IRO-004 covers operational planning, not current day operations. Coordinating pending generator and transmission facility outages is an essential and necessary task by the RC to ensure reliability. (iv) R11: The RC needs to monitor ACE, detect and identify the cause of any abnormal

ACE, and direct its BAs to take necessary actions to return ACE to within a normal range. (v) R13: We do not agree with removing the latter part of R13. The FAC standards cover the methodology used in calculating SOLs and IROLs. Regardless of how these limits are calculated, in practice there always exists the possibility that different entities come up with SOLs/IROLs, especially of the inter-ties, that could be different. Operating to the lowest SOLs/IROLs when more than one set exists is a necessary requirement for reliable operation.
No
We suggest to replace the word "impacted" with "other" since there is a preconception that the concerned RC makes an assessment of which other RCs are impacted by the coordinated actions, which may not be the perspective of the other RCs who may in fact be impacted by any coordinated actions among other RCs.
No
Measure 1 actually contains a number of subrequirements that should be stipulated in R1, not M1. If indeed these are required, they should be stipulated in the Requirement section, not the Measures Section.
No
(i) R2: the High and Severe VSLs contradict with the requirement. We believe all of the "nots" should be removed. (ii) R6: The Low VSL should be a High since not agreeing to a plan but implementing one that has not been agreed to is a high violation of the requirement. (iii) The VSLs for R1 may need to be revised if our comments on M1 are adopted.
Yes
Yes
Group
Reliability Coordinator Comment Working Group
Linda Perez
WECC
Yes
No
on Measure 3 need to remove the word "all" in reference to voice logs. Measure needs to include evidence of concurrence for using a language other than English
Yes
Yes
Yes
Yes
Yes
No
measures do not align with VSL's (see question 9)
No
R1 talks about "shall act or direct actions to be taken". High VSL - failure to act. Severe VSL - failure to act and direct. Does "act" mean any action taken short of issuing a directive? Change Severe VSL to failure to act or direct and eliminate the High VSL all together. R2 delay in issuing a directive due to equipment problems should be included in the moderate VSL and the body of the requirement and in the measure. The High VSL should be removed because not following the directive for equipment failure is allowed per R2. R5 - Severe VSL should be changed to moderate VSL since the problem has been mitigated and the system is stable and it does not adversely impact reliability. M3 talks about the ability of reliability entities to meet a directive. What constitutes evidence that confirms you are able to immediately comply with the directive? If the entity agrees to the directive and then is unable to comply due to events outside of their control, such as a CT not starting, do they meet the measure? If the entity, based on the circumstances at the time of the directive, agrees to comply in good faith are they compliant? The Lower VSL should be made N/A because it is not practical for an entity to immediately confirm they are able to meet the directive in all cases.
No

for R1, this should be 2 separate requirements and measures. R1 should have a methodology for determining what data is needed and then a R2 should be a requirement to request this data from the reliability entities.

Yes

add measures for R1 & R2 see question 10

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Individual

Fred Young

Northern California Power Agency

No

R3 should include in the last sentence that the Generator Operator and Distribution Provider may use alternate language for internal operations.

No

M3 should include Generator Operator and Distribution Provider in the applicability.

Yes

Yes and No

Remove Generator Operator from the Purpose Statement. The re-written standard no longer applies to GOP.

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes
Yes
Yes
Individual
Denise Roeder
ElectriCities of North Carolina, Inc.
No
We are a joint action agency registered on behalf of our member municipalities, who are all TDUs, neither own nor operate any Bulk Electric System facilities, and perform no real-time operations or operations planning for the BES. There are currently other standards that already apply to us that require us to have processes and means to communicate with our RC, BA, TOP, etc. The proposed modifications to this standard would now make our members subject to this standard as well, based on the DP registration designation. Given that, we believe there needs to be additional clarification of specifically what type of "telecommunications facilities" are required to be considered compliant with this standard. Maybe in the past when this standard applied to TOPs, BAs, and RCs, it was intuitive what type of telecommunications facilities they needed to communicate with each other. However, when you bring in small DPs, it doesn't seem so clear. Obviously we already communicate with our TOP and BA, and have done so for years. As written, the standard is ambiguous in terms of what more, if anything, we would have to put in place to satisfy this standard.
No
See comments on Question 1
No
Depends of what is meant by "telecommunications facilities"
Individual
Karl Bryan
US Army Corps of Engineers, Northwestern Division
No
R3 needs to have the last sentence revised to allow the Generator Operator and Distribution Provider to use an alternate language for internal operations.
No
M3 needs to include the GO and DP in its requirement for interutility communications in English.

[illegible]

[illegible]

disregard of the requirement. The measure and VSLs do not consider the exceptions for not following the RC objective. The drafting team should consider combining requirements R2 and R3. Thus, one VSL would become failure to notify the RC of the inability to comply. The drafting team could consider applying the numerical category of VSLs for some directives such as an order to redispach. Obviously, it would not work well if the directive was to reconfigure the system. SDT Proposed Lower VSL N/A CEDRP Proposed VSL No Comment SDT Proposed Moderate VSL The responsible entity followed the Reliability Coordinators directive with a delay not caused by equipment problems. CEDRP Proposed VSL The team does not agree that this is a valid VSL. SDT Proposed High VSL The responsible entity followed the majority of the Reliability Coordinators directive but did not fully follow the directive because it would violate safety, equipment, statutory or regulatory requirements. CEDRP Proposed VSL The team does not agree that this is a valid VSL. The word majority implies some ability to numerically measure the response to the directive. Thus, the drafting team should consider applying the numerical category of the VSL guidelines. SDT Proposed Severe VSL The responsible entity did not follow the Reliability Coordinators directive. CEDRP Proposed VSL The responsible entity did not follow the Reliability Coordinators directive, the directive would not have violated safety, equipment, regulatory, or statutory requirements, and responsible entity did not communicate the inability to follow the directive to the Reliability Coordinator. FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? No 2. Is the VSL assignment a binary requirement? No 3. Is it truly a "binary" requirement? N/A 4. If yes, is the VSL assignment consistent with other binary requirement assignments? N/A 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? Yes 6. Does the VSL redefine or undermine the stated requirement? No 7. Is the VSL based on a single violation of the requirement (not multiple violations)? No Standard - IRO-001 R3 Requirement (including sub-requirements) The Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider or Purchasing-Selling Entity shall immediately confirm the ability to comply with the directive or inform the Reliability Coordinator upon recognition of the inability to perform the directive. [Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations] Proposed Measure Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, or Purchasing-Selling Entity shall have evidence that it confirmed its ability to comply with the Reliability Coordinator's directives, or if for safety, equipment, regulatory or statutory requirements it could not comply, informed the Reliability Coordinator upon recognition of the inability to comply. Attributes of the requirement Binary Timing Omission Communication X Quality Other Discussion – The requirement appears to be based on communication and can be problematic by including the requirement to immediately confirm the ability to comply, a directive can be issued to one entity or several entities at one time (e.g. conference call, all call, electronic notification) that may create several issues when attempting to process all confirmations, the requirement language presents a risk of being found out of compliance for following a directive but not providing an "immediate" confirmation to the RC. The CEDRP believes it to be a reasonable expectation that all entities will comply with reliability directives and notification should be made only on exception. The SDT should consider combining this requirement with R2. SDT Proposed Lower VSL The responsible entity failed to immediately confirm the ability to comply with the directive issued by the Reliability Coordinator. CEDRP Proposed VSL See above discussion note SDT Proposed Moderate VSL N/A CEDRP Proposed VSL No comment SDT Proposed High VSL N/A CEDRP Proposed VSL No comment SDT Proposed Severe VSL The responsible entity failed to inform the Reliability Coordinator upon recognition of the inability to perform the directive. CEDRP Proposed VSL No comment FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? No 2. Is the VSL assignment a binary requirement? No 3. Is it truly a "binary" requirement? N/A 4. If yes, is the VSL assignment consistent with other binary requirement assignments? N/A 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? As currently worded the CEDRP believe that the requirement should be changed to eliminate that "immediate confirmation" portion of the requirement 6. Does the VSL redefine or undermine the stated requirement? No 7. Is the VSL based on a single violation of the requirement (not multiple violations)? No Standard - IRO-001 R4 Requirement (including sub-requirements) Each Reliability Coordinator that identifies an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area shall notify, without intentional delay, all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] Proposed Measure Each Reliability Coordinator shall have evidence that it notified, without intentional delay, all impacted Transmission Operators and balancing Authorities in its Reliability Coordinator Area when it identified a real or potential threat with Adverse Reliability Impacts, within its Reliability Coordinator Area. Attributes of the requirement Binary Timing X Omission Communication X Quality Other Discussion – To act with an intentional delay represents a willful act to disregard the requirement. Willful disregard of requirements is one of the factors that the enforcement authority uses to magnify penalties. Requirements should not include attempts to avoid willful disregard of the requirement. This requirement appears to fit the numerical category of the VSL guidelines best. SDT Proposed Lower VSL N/A CEDRP Proposed VSL The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify 25% or less of the Transmission Operators and Balancing Authorities within its Reliability Coordination Area. SDT Proposed Moderate VSL N/A CEDRP Proposed VSL The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify more than 25% but less than or equal to 50% of the Transmission Operators and Balancing Authorities within its Reliability Coordination Area. SDT Proposed High VSL

N/A CEDRP Proposed VSL The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify more than 50% but less than or equal to 75% of the Transmission Operators and Balancing Authorities within its Reliability Coordination Area. SDT Proposed Severe VSL: The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. CEDRP Proposed Severe VSL: The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify more than 75% of the Transmission Operators and Balancing Authorities within its Reliability Coordination Area. FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? No 2. Is the VSL assignment a binary requirement? No 3. Is it truly a "binary" requirement? N/A 4. If yes, is the VSL assignment consistent with other binary requirement assignments? 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? Yes 6. Does the VSL redefine or undermine the stated requirement? No 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Yes Standard - IRO-001 R5 Requirement (including sub-requirements) Each Reliability Coordinator who identifies an expected or actual threat with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify, without intentional delay, all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when the transmission problem has been mitigated. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] Proposed Measure Each Reliability Coordinator shall have evidence that it notified, without intentional delay, all impacted Transmission Operators and balancing Authorities in its Reliability Coordinator Area when the real or potential threat with Adverse Reliability Impacts within its Reliability Coordinator Area has been mitigated. Attributes of the requirement Binary Timing X Omission Communication X Quality Other Discussion – To act with an intentional delay represents a willful act to disregard the requirement. Willful disregard of requirements is one of the factors that the enforcement authority uses to magnify penalties. Requirements should not include attempts to avoid willful disregard of the requirement. Measure 5 is written implying that there is an Adverse Reliability Impact. The drafting team should consider wording the measurement to consider that there may not be an Adverse Reliability Impact requiring a directive. The Commission in paragraph 27 of the VSL order has stated that multiple VSLs are preferable where possible. Suggest applying the numerical category of the VSL Guidelines based on the number of entities notified.. SDT Proposed Lower VSL: N/A CEDRP Proposed Lower VSL: The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify 25% or less of the impacted Transmission Operators and Balancing Authorities within its Reliability Coordination Area that the Adverse Reliability Impact had been mitigated. SDT Proposed Moderate VSL: N/A CEDRP Proposed Moderate VSL: The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify more than 25% but less than or equal to 50% of the impacted Transmission Operators and Balancing Authorities within its Reliability Coordination Area that the Adverse Reliability Impact had been mitigated. SDT Proposed High VSL: N/A CEDRP Proposed High VSL: The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify more than 50% but less than or equal to 75% of the impacted Transmission Operators and Balancing Authorities within its Reliability Coordination Area that the Adverse Reliability Impact had been mitigated. SDT Proposed Severe VSL: The Reliability Coordinator failed to notify all impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated. CEDRP Proposed Severe VSL: The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify more than 75% of the impacted Transmission Operators and Balancing Authorities within its Reliability Coordination Area that the Adverse Reliability Impact had been mitigated. FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? No 2. Is the VSL assignment a binary requirement? No 3. Is it truly a "binary" requirement? N/A 4. If yes, is the VSL assignment consistent with other binary requirement assignments? N/A 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? Yes 6. Does the VSL redefine or undermine the stated requirement? No 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Yes Standard – IRO-002-2 R1 Requirement (including sub-requirements) Each Reliability Coordinator shall determine the data requirements to support its reliability coordination tasks and shall request such data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities, or adjacent Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] Proposed Measure Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a letter to Transmission Operators, Balancing Authorities, Transmission Owners, Generator Owners, Generator Operators, and Load-Serving Entities, or adjacent Reliability Coordinators, or other equivalent evidence that will be used to confirm that the Reliability Coordinator has requested the data required to support its reliability coordination tasks. Attributes of the requirement Binary Timing Omission X Communication X Quality Other Discussion – The VSLs attempt to measure the quality of the data requirements. They require the compliance auditor to judge if another RC has material impact and what data is administrative and what data is substantial. Given the typical length of a compliance audit, it is doubtful that the compliance auditor can make these types of judgments about the quality of the data and the material impact of another RC. The drafting team should consider applying numerical category of VSLs based on the number of entities the data request is made from. It is

interesting that the measure also does not require any documentation of a data specification. SDT Proposed Lower VSL: The Reliability Coordinator demonstrated that it 1) determined its data requirements and requested that data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators with a material impact on the Bulk Electric System in its Reliability Coordination Area but did not request the data from Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators with minimal impact on the Bulk Electric System in its Reliability Coordination Area or 2) determined its data requirements necessary to perform its reliability functions with the exceptions of data that may be needed for administrative purposes such as data reporting. CEDRP Proposed Lower VSL: The Reliability Coordinator failed to request data to support its reliability coordination tasks from 25% or less of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities, or adjacent Reliability Coordinators. SDT Proposed Moderate VSL: The Reliability Coordinator demonstrated that it determined the majority but not all of its data requirements necessary to support its reliability coordination functions and requested that data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators. CEDRP Proposed Moderate VSL: The Reliability Coordinator failed to request data to support its reliability coordination tasks from more than 25% but less than or equal to 50% of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities, or adjacent Reliability Coordinators. SDT Proposed High VSL: The Reliability Coordinator demonstrated that it determined 1) some but less than the majority of its data requirements necessary to support its reliability coordination functions and requested that data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators Or 2) all of its data requirements necessary to support its reliability coordination functions but failed to demonstrate that it requested data from two of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators. CEDRP Proposed High VSL: The Reliability Coordinator failed to request data to support its reliability coordination tasks from more than 50% but less than or equal to 75% of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities, or adjacent Reliability Coordinators. SDT Proposed Severe VSL: The Reliability Coordinator failed to demonstrate that it 1) determined its data requirements necessary to support its reliability coordination functions and requested that data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators Or 2) requested the data from three or more of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators. CEDRP Proposed Severe VSL: The Reliability Coordinator failed to request data to support its reliability coordination tasks from more than 75% of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities, or adjacent Reliability Coordinators, Or, The Reliability Coordinator failed to determine data requirements to support its reliability coordination tasks. FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? 2. Is the VSL assignment a binary requirement? 3. Is it truly a “binary” requirement? 4. If yes, is the VSL assignment consistent with other binary requirement assignments? 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? 6. Does the VSL redefine or undermine the stated requirement? 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Standard – IRO-002-2 R2 Requirement (including sub-requirements) Each Reliability Coordinator shall have the authority to veto planned outages to analysis tools, including final approvals for planned maintenance. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] Proposed Measure Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a documented procedure or equivalent evidence that will be used to confirm that the Reliability Coordinator has the authority to veto planned outages to analysis tools, including final approvals for planned maintenance as specified in Requirement 2. Attributes of the requirement Binary Timing Omission Communication Quality Other X Is this requirement needed? R1 IRO-001-2 requires the RC to mitigate Adverse Reliability Impacts. R2 IRO-001-2 requires responsible entities to comply with the RC directives. Wouldn't the RC thus have the right to cancel all types of outages (i.e. analysis tools, transmission equipment, etc). FERC has stated in paragraph 112 of Order 693-A that an RC does not derive their authority from agreements but rather from FERC's approval of the standards. Barring the team's decision to remove this requirement, the Severe VSL is confusing. We have suggested different wording. SDT Proposed Lower VSL Reliability Coordinator has approval rights for planned outages of analysis tools but does not have approval rights for maintenance on analysis tools. CEDRP Proposed VSL No Comment SDT Proposed Moderate VSL N/A CEDRP Proposed VSL No Comment SDT Proposed High VSL N/A CEDRP Proposed VSL No Comment SDT Proposed Severe VSL Reliability Coordinator approval is not required for planned maintenance or planned outages. CEDRP Proposed VSL Reliability Coordinator does not approve planned maintenance or planned outages. FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? 2. Is the VSL assignment a binary requirement? 3. Is it truly a “binary” requirement? 4. If yes, is the VSL assignment consistent with other binary requirement assignments? 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? 6. Does the VSL redefine or undermine the stated

requirement? 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Standard – IRO-014-2 R1 Requirement (including sub-requirements) R1. The Reliability Coordinator shall have Operating Procedures, Processes, or Plans for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address, as a minimum, the following: [Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning] R1.1. Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators. R1.2. Energy and capacity shortages. R1.3. Planned or unplanned outage information. R1.4. Voltage control, including the coordination of reactive resources for voltage control. R1.5. Coordination of information exchange to support reliability assessments. R1.6. Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas. Proposed Measure M1. The Reliability Coordinator's System Operators shall have available for Real-time use, the latest approved version of Operating Procedures, Processes, or Plans that require notifications, information exchange or the coordination of actions among impacted Reliability Coordinators. M1.1 These Operating Procedures, Processes, or Plans shall address: M1.2 Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators. M1.3 Energy and capacity shortages. M1.4 Planned or unplanned outage information. M1.5 Voltage control, including the coordination of reactive resources for voltage control. M1.6 Coordination of information exchange to support reliability assessments. Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas. Attributes of the requirement Binary Timing Omission x Communication x Quality Other Discussion – The CEDRP has no recommendations regarding this requirement. SDT Proposed Lower VSL: The Reliability Coordinator has Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address one or two of the subrequirements. CEDRP Proposed Lower VSL: No Comment SDT Proposed Moderate VSL: Coordinator has Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address three or four of the subrequirements. CEDRP Proposed High VSL: No Comment SDT Proposed High VSL: The Reliability Coordinator has Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address five of the subrequirements. CEDRP Proposed High VSL: No Comment SDT Proposed Severe VSL: The Reliability Coordinator failed to have Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability. CEDRP Proposed Severe VSL: No Comment FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? 2. Is the VSL assignment a binary requirement? 3. Is it truly a "binary" requirement? 4. If yes, is the VSL assignment consistent with other binary requirement assignments? 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? 6. Does the VSL redefine or undermine the stated requirement? 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Standard – IRO-014-2 R2 Requirement (including sub-requirements) R2. Each Reliability Coordinator's Operating Procedure, Process, or Plan that requires one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) shall be: [Violation Risk Factor: Lower] [Time Horizon: Real-time Operations and Operations Planning] R2.1. Agreed to by all the Reliability Coordinators required to take the indicated action(s). R2.2. Distributed to all Reliability Coordinators that are required to take the indicated action(s). Proposed Measure M2. The Reliability Coordinator shall have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were: M2.1 Agreed to by all the Reliability Coordinators required to take the indicated action(s). M2.2 Distributed to all Reliability Coordinators that are required to take the indicated action(s). Attributes of the requirement Binary Timing Omission X Communication X Quality Other Discussion – The High and Severe VSLs appear to use "not" incorrectly. SDT Proposed Lower VSL N/A CEDRP Proposed VSL No Comment SDT Proposed Moderate VSL: The Reliability Coordinator failed to have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were distributed to all Reliability Coordinators that are required to take action. CEDRP Proposed Moderate VSL: The Reliability Coordinator did not have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were distributed to all Reliability Coordinators that are required to take action. SDT Proposed High VSL: The Reliability Coordinator failed to have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were not agreed to by all Reliability Coordinators that are required to take action CEDRP Proposed High VSL: The Reliability Coordinator did not have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were agreed to by all Reliability Coordinators that are required to take action SDT Proposed Severe VSL: The Reliability Coordinator failed to have evidence that

the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were not agreed to by all Reliability Coordinators that are required to take action and were not distributed to all Reliability Coordinators that are required to take action CEDRP Proposed Severe VSL: The Reliability Coordinator did not have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were agreed to by all Reliability Coordinators that are required to take action and were distributed to all Reliability Coordinators that are required to take action FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? 2. Is the VSL assignment a binary requirement? 3. Is it truly a “binary” requirement? 4. If yes, is the VSL assignment consistent with other binary requirement assignments? 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? 6. Does the VSL redefine or undermine the stated requirement? 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Standard – IRO-014-2 R3 XXX-XXX Requirement (including sub-requirements) R3. The Reliability Coordinator shall make notifications and exchange reliability-related information with impacted Reliability Coordinators using its predefined Operating Procedures, Processes, or Plans for conditions that may impact other Reliability Coordinator Areas or other means to accomplish the notifications and exchange of reliability-related information. [Violation Risk Factor: Medium][Time Horizon: Real-time Operations and Operations Planning] Proposed Measure M3. The Reliability Coordinator shall have evidence it made notifications and exchanged reliability-related information with impacted Reliability Coordinators using its predefined Operating Procedures, Processes, or Plans for conditions that may impact other Reliability Coordinator Areas or other means to accomplish the notifications and exchange of reliability-related information. Attributes of the requirement Binary Timing Omission X Communication X Quality Other Discussion: The VSLs appear to be appropriate. Since the only difference is the use of the “and” and “or”, we suggest emphasizing those words in bold. We read this more than once before we noticed the difference. SDT Proposed Lower VSL N/A CEDRP Proposed VSL N/A SDT Proposed Moderate VSL N/A CEDRP Proposed VSL N/A SDT Proposed High VSL: The Reliability Coordinator failed to make notifications or exchange reliability-related information with impacted Reliability Coordinators. CEDRP Proposed High VSL: The Reliability Coordinator failed to make notifications or exchange reliability-related information with impacted Reliability Coordinators. SDT Proposed Severe VSL: The Reliability Coordinator failed to make notifications and exchange reliability-related information with impacted Reliability Coordinators. CEDRP Proposed Severe VSL: The Reliability Coordinator failed to make notifications and exchange reliability-related information with impacted Reliability Coordinators. FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? 2. Is the VSL assignment a binary requirement? 3. Is it truly a “binary” requirement? 4. If yes, is the VSL assignment consistent with other binary requirement assignments? 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? 6. Does the VSL redefine or undermine the stated requirement? 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Standard – IRO-014-2 R4 XXX-XXX Requirement (including sub-requirements) R4. The Reliability Coordinator shall participate in agreed upon conference calls and other communication forums with impacted Reliability Coordinators. [Violation Risk Factor: Lower][Time Horizon: Real-time Operations] The frequency of these conference calls shall be agreed upon by all involved Reliability Coordinators and shall be at least weekly. Proposed Measure M4. The Reliability Coordinator shall have evidence it participated in agreed upon (at least weekly) conference calls and other communication forums with impacted Reliability Coordinators. Attributes of the requirement Binary Timing X Omission X Communication X Quality Other Discussion – This requirement is purely administrative and probably does not rise to a level of a reliability standard requirement. It is in essence redundant, with R1.1 IRO-014-2? It appears R1.1 addresses the same information that would be expected to be discussed in a weekly conference call. Should the drafting team disagree and retain this requirement, please consider applying multiple VSLs based on how often the RC participates in conference calls, how many they missed, or how many impacted RCs they participated in conference calls with. SDT Proposed Lower VSL: The Reliability Coordinator failed to participate in agreed upon (at least weekly) conference calls and other communication forums with impacted Reliability Coordinators. CEDRP Proposed Lower VSL: The Reliability Coordinator participated in agreed upon conference calls and other communication forums with impacted Reliability Coordinators bi-weekly, Or the Reliability Coordinator failed to participate in one weekly conference call, Or the Reliability Coordinator agreed to participate in conference calls with 25% or less of the impacted Reliability Coordinators. SDT Proposed Moderate VSL: N/A CEDRP Proposed Moderate VSL: The Reliability Coordinator participated in agreed upon conference calls and other communication forums with impacted Reliability Coordinators every third week, Or the Reliability Coordinator failed to participate in two weekly conference calls, Or the Reliability Coordinator agreed to participate in conference calls with more than 25% but less than or equal to 50% of the impacted Reliability Coordinators. SDT Proposed High VSL: N/A CEDRP Proposed High VSL: The Reliability Coordinator participated in agreed upon conference calls and other communication forums with impacted Reliability Coordinators fourth week, Or the Reliability Coordinator failed to participate in three weekly conference calls, Or the Reliability Coordinator agreed to participate in conference calls with more than 50% but less than or equal to 75% of the impacted Reliability Coordinators. SDT Proposed Severe VSL: N/A CEDRP Proposed Severe VSL: The Reliability Coordinator participated in agreed upon conference calls and other communication forums with impacted Reliability Coordinators at least every fifth week, Or the Reliability Coordinator failed to participate in four weekly conference calls, Or the Reliability Coordinator failed to agree to participate in any conference calls, Or the Reliability Coordinator agreed to participate in conference calls with more than 75% but less than 100% of the

impacted Reliability Coordinators. FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? 2. Is the VSL assignment a binary requirement? 3. Is it truly a "binary" requirement? 4. If yes, is the VSL assignment consistent with other binary requirement assignments? 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? 6. Does the VSL redefine or undermine the stated requirement? 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Standard – IRO-014-2 R5 XXX-XXX Requirement (including sub-requirements) R5. When an expected or actual reliability issue is detected, the Reliability Coordinator shall confirm the existence of the issue with the impacted Reliability Coordinators. In the event that the issue cannot be confirmed, each Reliability Coordinator shall operate as though the problem exists. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] Proposed Measure The Reliability Coordinator shall have evidence that, in cases when an expected or actual reliability issue was detected, it has confirmed the existence of the issue with the impacted Reliability Coordinators. Attributes of the requirement Binary Timing Omission X Communication X Quality Other Discussion – This requirement is confusing in the way it is worded. We think it is trying to say that the RC should operate as though the reliability issue (should this be Adverse Reliability Impact) is detected until the issue is confirmed not to exist. The way it is worded might imply that if one doesn't confirm it to exist, operate as though it does. This leaves open the interpretation that a confirmation that it doesn't exist must still be operated to as though it does exist. The drafting team should consider splitting operating to prevent from operating to mitigate an existing event in the VSLs. SDT Proposed Lower VSL The Reliability Coordinator that detected an expected or actual reliability issue contacted the other Reliability Coordinator(s) to confirm that there was a problem but could not confirm that the problem existed and failed to operate as though the problem existed. CEDRP Proposed VSL N/A SDT Proposed Moderate VSL N/A CEDRP Proposed VSL N/A SDT Proposed High VSL N/A CEDRP Proposed VSL The Reliability Coordinator that detected an expected reliability issue failed to contact the other Reliability Coordinator(s) to confirm that there was a problem. SDT Proposed Severe VSL The Reliability Coordinator that detected an expected or actual reliability issue failed to contact the other Reliability Coordinator(s) to confirm that there was a problem. CEDRP Proposed VSL The Reliability Coordinator that detected an actual reliability issue failed to contact the other Reliability Coordinator(s) to confirm that there was a problem. FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? 2. Is the VSL assignment a binary requirement? 3. Is it truly a "binary" requirement? 4. If yes, is the VSL assignment consistent with other binary requirement assignments? 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? 6. Does the VSL redefine or undermine the stated requirement? 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Standard – IRO-014-2 R6 XXX-XXX Requirement (including sub-requirements) When an expected or actual reliability issue exists and the impacted Reliability Coordinators cannot agree on a mitigation plan, all impacted Reliability Coordinators shall implement the mitigation plan developed by the Reliability Coordinator who has the reliability issue. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] Proposed Measure The affected Reliability Coordinators shall have evidence that, in cases when an expected or actual reliability issue existed and the impacted Reliability Coordinators could not agree on a mitigation plan, they implemented the mitigation plan developed by the Reliability Coordinator who has the reliability issue. Attributes of the requirement Binary Timing Omission X Communication X Quality Other Discussion: We are concerned the validity of this requirement, it may force an RC to implement a solution that they don't agree with and ultimately result in an Adverse Reliability Impact. The RC may not agree with the solution because it may not be reliable for their footprint. They need to have the ability to veto mitigation plans that cause Adverse Reliability Impacts in their footprint without incurring a compliance violation. SDT Proposed Lower VSL The Reliability Coordinator did not agree on a mitigation plan and implemented a plan other than the one developed by the Reliability Coordinator who had the reliability issue. CEDRP Proposed VSL N/A SDT Proposed Moderate VSL N/A CEDRP Proposed VSL N/A SDT Proposed High VSL N/A CEDRP Proposed VSL N/A SDT Proposed Severe VSL The Reliability Coordinator did not agree on a mitigation plan and did not implement a mitigation plan. CEDRP Proposed VSL What if the RC is correct in disagreeing and the mitigation plan would have caused an Adverse Reliability Impact on their system? FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? 2. Is the VSL assignment a binary requirement? 3. Is it truly a "binary" requirement? 4. If yes, is the VSL assignment consistent with other binary requirement assignments? 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? 6. Does the VSL redefine or undermine the stated requirement? 7. Is the VSL based on a single violation of the requirement (not multiple violations)?

Group

MRO NERC Standards Review Subcommittee

Terry Bilke

MidwestISO

No

The new R2 requirement is too verbose. We suggest that you strike the final clause: "and shall verify that alternate means of telecommunications are functional." It is obviated by the requirement to notify impacted parties. The responsible entity is already implicitly required to verify its alternate means of communication is functional since it is required to notify its impacted parties of the failure of its normal telecommunications. It can't notify its impacted

parties if the alternate communications means are not functional. This clause is similar to the old requirement one that the drafting team appropriately struck. We tend to agree that striking R1 makes sense due to the drafting team's reasoning. However, we are not clear why the new R4 is necessary then. If the drafting team does not believe R1 is necessary shouldn't they respond to the FERC directive with the same reason why R4 is not really necessary? The VRF for new requirement 1 should be lower. It does not fit the definition of a medium VRF. A medium VRF requires that a violation of the requirement directly affect the state or capability or the ability to effectively monitor and control. Failure to test does not result in directly affecting the state or capability or the ability to effectively monitor and control. At a minimum, a failure of the alternative communication systems and primary communication systems must occur first. The failure to perform a single test in a given quarter does not mean that primary and alternative communication systems will fail. Thus, testing is really an administrative issue and should thus be a lower VRF. In the Data Retention section, Distribution Provider and Generation Operators should be added. Currently, there are no data retention requirements listed for them. Suggest modifying the language regarding data retention for compliance violations to: "... is found in violation of a requirement, it shall keep information related to the violation until it the Compliance Enforcement Authority finds it compliant."

No

M4 does not appear to be worded as a measurement. If R4 is kept, we suggest the following modification: "The Distribution Provider and Generation Operator shall demonstrate the existence of its telecommunication systems identified in R4."

No

The VSLs as defined for Requirement 1 appear to violate Guideline 4 that the Commission established in their "Order on Violation Severity Levels Proposed by the Electric Reliability Organization". Guideline 4 requires that a VSL should be based on a single violation. The VSLs as defined accumulate the number of consecutive quarters. This would imply that a single violation could last more than a year and that the compliance auditor could not determine sanctions until the entity becomes compliant or year has passed. A single violation appears to be the failure to test in a single quarter. This requirement is binary in nature in that it is either met or isn't. We suggest that only a lower VSL should be defined as: "The RC, TOP, or BA failed to test the backup telecommunication facilities for a single calendar quarter." The Lower VSL for R2 is not possible. The act of notifying all impacted entities of the failure of their primary telecommunication system requires the use of the alternative telecommunications systems which is a form of verifying that the alternative telecommunications facilities are functional. The drafting team should consider applying the numeric performance category of the VSL Development Guideline Criteria for R2.

Yes

Yes

Yes

No

New requirement R2 should omit act without intentional delay. The desired outcome is for the responsible entity to comply with the RC directive. Adding act without intentional delay only confuses the situation and adds questions. What is an intentional delay? The word act implies that the requirement is met simply if the responsible entity attempted to meet the directive but was unable to do so. That is already considered in with the clause that begins "unless such actions would violate ...". Thus, the word act is not necessary. The word immediately should be removed from the new R3. This attempts to time frame the response of the responsible entity and remove the judgment from the compliance auditor. We agree with the concept of doing this but in reality it only confuses the issue and the compliance auditor will likely apply his judgment regarding what immediate is anyway. Additionally, the requirement attempts to separate the act of confirming that the responsible entity can take the action from notifying the RC that the entity can't take the action. This is not logical. What RC is going to request a responsible entity to take action that would violate safety, equipment, statutory, or regulatory requirements? The RC should already be aware of those requirements and likely won't direct actions that violate them. Thus, the likely scenario is that the responsible entity will attempt to take action and discover that equipment is not functional properly and thus notify the RC. We suggest striking the "shall immediately confirm the ability to comply with the directive or" from the requirement. This part of the requirement is not needed because the responsible entity is already obligated to follow the RCs directive (see order 693.) Thus, the assumption is that the order will be followed unless it can't be followed because it will violated safety, equipment, statutory, or regulatory requirements. Requirements R4 and R5 are unnecessary. New R1 requires the RC to direct actions to be taken by the TOP, BA, GOP, TSP, LSE, DP and PSE to prevent or mitigate the magnitude or duration of events that result in Adversely Reliability Impacts. The RC can't direct these actions without notifying all impacted TOPs and BAs. They would also have to notify them when actions are no longer necessary.

No

Some compliance auditors have been taking the need for evidence to the extreme. We have encountered actual situations where if a measure states evidence shall be provided for requirements that are event based, the

compliance auditor expected evidence even if no event occurred. For example, some RCs rarely issue directives. As M1 is written, some compliance auditors would require the RC to provide evidence that no reliability directives were issued. This is not possible. We suggest modifying the measurement to: Each Reliability Coordinator shall have evidence that it acted, or issued directives, to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts within its Reliability Coordinator Area if needed. If there were no directives issued (assuming there are no complaints or evidence to the contrary of the need to issue a directive), no evidence is necessary."

No

The R1 High and Severe VSL appear to differ only by the inclusion of directing actions in Severe. From a practical perspective, what is the difference between directing actions and acting? We don't believe there is any. The actions are the result of the RC authority whether the RC takes the actions themselves or directs someone else to. We suggest a better alternative for the VSL levels would be for the High level to reflect that the RC did not act or direct actions to prevent an Adverse Reliability Impact and Severe would be that the RC did not act or direct actions to mitigate the magnitude or duration of an existing Adverse Reliability Impact. The moderate VSL for R2 is not practical and too subjective. What constitutes a delay? What if the responsible entity takes five minutes to determine how to carry out the action or if their equipment currently is capable of carrying out the action? Is this a delay? We suggest striking this Moderate VSL. The High VSL does not agree with the requirement. It considers the inability to fully follow an RC directive due to a violation of the safety, equipment, statutory, or regulatory requirements a violation. This is in direct conflict with the requirement. We suggest that the High VSL should be struck. We suggest the Severe VSL should be that the responsible entity failed to follow the RC directive and it would not have violated the safety, equipment, statutory or regulatory requirements. Currently, the Severe category does not allow that the responsible entity may not be able to carry out the directive due to the violation of safety, equipment, statutory, or regulatory requirements. In question 7, we request that the drafting team strike part of requirement 3. The striking of that portion of requirement 3 obviates the lower VSL. In paragraph 27 of the ORDER ON VIOLATION SEVERITY LEVELS PROPOSED BY THE ELECTRIC RELIABILITY ORGANIZATION, the Commission expresses "that, as a general rule, graduated Violation Severity Levels, wherever possible, would be preferable to binary Violation Severity Levels". Given that it is possible to define graduated VSLs for R4 and R5, we suggest that the drafting team should consider applying the numeric performance category of the Violation Severity Levels Development Guidelines Criteria based on the number of impacted TOPs and BAs that were notified.

No

New Requirement R1 is duplicate to the requirement TOP-005-1 R1.1. If the drafting team can't delete TOP-005-1 R1.1, they should notify other appropriate drafting teams of the need to remove the requirement. We do not agree with eliminating requirements R5, R6, R7, and R8 in their entirety. The requirements as they are written are problematic. However, we do believe that there is a need for a basic requirement to monitor the system. The requirements should be that the RC should compare actual system flows to SOLs and IROLs. While some will argue SOLs are not the responsibility of the RC, failure to monitor SOLs could cause the RC to miss unknown IROLs since an SOL can become an IROL. Several SOL violations in a given area also can be indicative of a broader system problem the RC should be addressing. We also do not agree with the drafting team's conclusion that it is not practical to measure real-time monitoring. It is very easy to measure. As an example, a compliance auditor could select a day and an SOL or IROL and ask for the system flows from that day or hour etc. This is generally easy for any RC to produce with today's data archiving software. We believe that there should be a requirement that the RC have a state estimator and real-time contingency analysis as well (RTCA). The drafting team needs to be careful in the construction of these requirements to make them practical and measurable. For instance, making the requirement to have a state estimator and RTCA is measurable in that the compliance auditor can verify their existence but this is not stringent enough because they may only run once a week. At the same time, if we create a requirement that SE and RTCA must run every 5 minutes, we could inadvertently create a requirement that any missing 5 minute run of RTCA and SE could be construed as a violation. There also needs to be a requirement that there is a real-time assessment of voltage as well. New Requirement R2 is no longer needed as a result of paragraph 112 in Order 693-A. Since the RC's "authority to issue directives arises out of the Commission's approval of Reliability Standards" the RC already has veto authority or will have once R1 IRO-001-2 is approved. This requirement obligates the RC to take actions or direct actions to prevent Adverse Reliability Impacts. Veto outages of equipment and analysis tools would fall into this category even if the RC couldn't say for certain that an Adverse Reliability Impact was going to occur but rather they are concerned one could occur due to heavy loads for example.

No

Measure 1 should not focus on a letter as evidence. A more appropriate measure would be a data specification document and actual verification that data has been received. The letter or equivalent is only needed if data has not been supplied. Demonstration of the actual receipt the data would be easy. Requirement 2 is not needed and thus Measure 2 is not needed per paragraph 112 of Order 693-A. Additional measures are needed to address the proposed requirements in question 10.

No

For R1, the lower VSL contradicts itself. It states that RC demonstrated that it determined its data requirements and requested that data and then follows with that it didn't request that data. The second option in the Lower VSL category is not practical and a compliance auditor would not be in a position to determine this. In fact, if the

administrative data is not requested, other administrative requirements for reporting would be violated. Additionally, it does not make sense that an RC would determine its data needs and then omit data for administrative reporting. Further, is it the compliance auditor's job to judge if the data the RC requests is sufficient or is it his job to see that the RC has met the requirement to define the data? The remaining VSLs imply that the RC may define only partial data requirements. This does not seem likely. Why would the RC do this? This VSL appears to add to the requirement by making it appear that the compliance auditor is to judge the completeness of the data requirement. This violates Guideline 3 of the FERC ORDER ON VIOLATION SEVERITY LEVELS PROPOSED BY THE ELECTRIC RELIABILITY ORGANIZATION. Practically, it would not be enforceable anyway. It would require the RC to admit that they did not include administrative data in their data requirements. It is doubtful this would happen because the RC likely believes they prepared a complete data requirement document. We suggest that the VSLs should be: Severe: The RC did not determine its data requirements or the RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be demonstrated for greater than 75 to 100% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs. High: The RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be demonstrated for greater than 50 and less than or equal to 75% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs. Medium: The RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be demonstrated for greater than 25% and less than or equal to 50% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs. Lower: The RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be demonstrated for greater than 0% and less than or equal to 25% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs. R2 VSLs are not needed per paragraph 112 of Order 693-A. The Severe VSL contradicts the requirement.

No

R1 includes many requirements for monitoring the system that are important, measurable and should be retained. Monitoring is too critical to operating the system to completely eliminate these requirements. R4, R8 and R11 are problematic as currently written. However, there have been actual instances of a large BA intentionally operating short hundreds of MWs of energy. I believe this occurred during the summer of 1999. Thus, the RC should be monitoring the BAs ACE and directing the BA to correct it if it becomes too large. It is not necessary or even useful for the RC to monitor the BA CPS performance.

No

Please strike "as a minimum" in R1. By definition, the requirement defines the minimum. Please strike R1.6. RCs already have the authority to act per paragraph 112 of Order 693-A. Since R2 requires the RCs to agree, is the "mutually agreed to" clause in R1.1 necessary? Please strike requirements R4 and R4.1. It is duplicative to R1.1. Conference calls are a form of communication and should be addressed per R1.1. R5 is confusing. If a reliability issue isn't confirmed, doesn't this mean there is no reliability issue? Isn't this the point of confirming? Additionally, we suggest using validate instead of confirm. R6 appears to be a rewrite of requirements R1, R2 and their sub-requirements in IRO-016. We agree that those requirements do need to be written more succinctly or removed altogether. However, R6 does not accomplish the goal and only confuses that matter further. The reason the RCs may not be able to agree on a mitigation plan is that RC with the reliability issue may be requesting mitigations that the other RCs believe may cause them reliability issues. This requirement appears to suggest that the solution to a disagreement on the mitigation plan is cut and dried. Generally, the reason the disagreement arises is due to one RC not fully understanding the impact of their actions on another RC. The bottom line is that the RCs may have disagreements and there is no way to require a solution in these types of situations. Please revise R6 to require using the mitigation plan developed by the Reliability Coordinator who has the reliability issue provided that the mitigation plan does not cause a reliability issue in the other region. As Requirement 1 is currently written, one could interpret the requirement for every Operating Process, Procedure and Plan to address each of the sub-requirements. That is not necessary. The drafting team needs to consider modifying the requirement to make it clear that not every sub-requirement must be addressed in every Operating Process, Procedure, and Plan and to also make it clear that the some sub-requirements may only be appropriately addressed in a Process but not a Plan for instance.

No

Measure 1 appears to add to the requirement. Requirement 1 does not mention anything about System Operators yet the measurement does. The measurement should just be to verify that the RC has have Operating Processes, Procedures, and Plans. The sub-measurements are not measurements at all. There should be the single measurement to verify the Operating Processes, Procedures, and Plans have been developed and address the sub-requirements. This really points out the problem with making the criteria that must be considered in the Operating Processes, Procedures, and Plans sub-requirements in the first place. They aren't requirements of any sort. They represent criteria. The drafting team should consider making them a bulleted list without the Rs, then the drafting team won't feel compelled to write sub-measures that don't measure anything. We do not agree with M6 because we don't agree with R6.

No

For R2, the High and Severe VSLs contradict the requirement. We believe all of the "nots" should be removed. We don't agree with the VSLs in R4 since we believe R4 should be struck. The Lower VSL for R6 should not even be a violation unless the impact was negative. If the RC implemented a different mitigation plan and resolved the issue, then the RC was likely correct to disagree.

Yes
Yes
We do agree with moving the requirement. However, the drafting team needs to revisit the wording of the requirement. The new wording is much more confusing. Until we reviewed IRO-016-2, it was not clear at all that R6 in IRO-014 was attempting to mimic R1 and its sub-requirements in IRO-016-2.
Group
Southern Company Transmission
Jim Busbin
Southern Company Services, Inc.
No
1.1 - In R1, we suggest that "operationally test by way of operator action" should be defined to remove any confusion regarding what the term requires. The word "ensure" needs to be changed to "assure" to more accurately convey the intent of the requirement. We also suggest changing the word "facilities" to "capabilities". 1.2 - R2 is overly broad and should include a reasonable time frame for notification. For example, as currently written, a telecom outage of only one minute for which a notification is not made would be a severe violation. The VSL should be consistent with the language of the requirement. A very short, insignificant telecom outage with no notification could result in a severe violation as the requirement is presently written and VSL's applied. 1.3 - R1, R2 and R3 should be expanded to include the list of entities the RC needs to talk with as included in the Applicability section of IRO-001-2 (RC, TO, BA, GO, DP, TSP, LSE, PSE). These entities should also be included in the purpose statement and R4 and M4 can then be eliminated. 1.4 - In R3, we suggest that the last sentence of R3 should be changed to "entities may use an alternative language for internal operations" rather than allowing only TOs and BAs to have this option.
No
2.1 - A general comment regards the production of evidence - such language should be standardized as "have and provide upon request" and the authorized requestors identified. This comment should apply to all standards. 2.2 - M2 is overly broad and should include a reasonable time frame for notification. For example, as currently written, a telecom outage of only one minute for which a notification is not made would be a severe violation. 2.3 - The Drafting Team should coordinate the data retention time frame with the requirement measures for R1. DPs and GOs should also be included in the measures requirements.
Yes
3.1 - The expanded list of entities recommended in comment 1.3 and 1.4 need to be included the VSLs 3.2 - The Severe VSL for R2 should be corrected. Add the word 'to' as follows: "...and failed to verify the ..."
No
4.1 - We agree with the recommendation to retire COM-002-3 when COM-003-1 is approved; however we suggest the following changes should be made for the interim applicability of COM-002-3: 4.2 - The Purpose statement should be revised to re-align with the revisions in the Standard. 4.3 - The applicability of COM-002-3 should be consistent with the applicability of IRO-001-2. 4.4 - The words "clear, concise, and definitive manner" in R1 are ambiguous and impossible to measure. We suggest they be replaced with "the RC shall direct". 4.5 - An additional requirement, R2, should be added that requires the Operator to repeat the information back correctly (i.e., separate this requirement from R1). 4.6 - Grammatical changes are suggested. The revised requirement reads as follows: "To ensure Balancing Authorities, Transmission Operators, and Generator Operators have adequate communications; to ensure that these communication capabilities are staffed and available for addressing a real-time emergency condition; and to ensure effective communications by operating personnel." 4.7 - At the Data Retention section, the reference to 'Requirement 3, Measure 3' should be consistent with the modified standard. The revised standard only has one requirement. 4.8 - The use of calendar days in the Data Retention section is inconsistent with related standards where 'months' are used.
No
5.1 - The measures need to be revised to match the new requirements.
No
6.1 - The severity levels need to be revised to match the new requirements.
No
7.1 - Applicability 4.2 - Transmission Operator should be plural. 7.2 - The revised definition of "Adverse Reliability Impacts" (R1) should be included at the top of Standard IRO-001-2, per Glossary of Terms Used in Standards: All defined terms used in reliability standards shall be defined in the glossary. Definitions may be approved as part of a standard action or as a separate action. All definitions must be approved in accordance with the standards process. 7.3 - In R2 insert the word "its" before Reliability Coordinator. 7.4 - In R3, replace "immediately" with "without intentional delay", replace "ability" with "intent", replace "or" with "and" and replace "the" with "its" before Reliability Coordinator.

No
8.1 - In M2 and M3, Add Distribution Provider. 8.2 - In M2 add "intentional" between "without" and "delay". 8.3 - In M3 replace "ability" with "intent", replace "or" with "and" and replace "the" with "its" before Reliability Coordinator's and Reliability Coordinator. 8.4 - In M5, change "has" to "had".
No
9.1 - R1 is a binary requirement and should have only a severe VSL. The RC either acts or he doesn't - If he fails to act, he fails to direct and mitigate the problem by default. 9.2 - R2 VSLs need to be rewritten to recognize that some directives may not be followed because of safety, regulatory or statutory requirements. 9.3 - Remove the Lower severity level in R3 to conform to changes in R3 and M3.
No
10.1 - We propose that R1 and R2 should be moved to the RC Certification Procedure and this standard retired. If this standard is not retired then we recommend Comments 10.2 and 10.3. 10.2 - At Requirement R2, the RC is given 'veto' authority. Is a standard an appropriate place to give this type of authority? 10.3 - The revised Purpose basically provides that the RC will have access to information and control of analysis tools. What is the correlation of information/control to veto authority/approval of planned maintenance?
No
11.1 - Moving R1 and R2 to the RC Certification Procedure, will eliminate measurement requirements.
No
12.1 - Moving R1 and R2 to the RC Certification Procedure, will eliminate VSL requirements.
Yes
13.1 - We agree with retiring this standard.
No
14.1 - R1 and R2 - The word "impacted" tends to broaden the requirements to have procedures, processes and plans in place with each RC within the RC's Interconnection. We suggest the phrasing should be tightened up to convey the original meaning that the team intended. For example, does the team intend for the FRCC RC to have an agreement with the PJM or MISO RC? 14.2 - We suggest bringing R6 under R1 as subrequirement R1.7 and rewrite it as follows: R1 - The Dispute Resolution process will be followed when the Reliability Coordinator issuing a mitigation plan and the Reliability Coordinator(s) receiving a mitigation plan disagree on the proper steps to be taken. 14.3 - We suggest deleting R4.1 and adding a second sentence to R4: The frequency of these communications shall be at least weekly. 14.4 - R4: The word "impacted" makes it sound like these calls are only to be made when problems are expected or are occurring. If this requirement is intended more for operational awareness calls (such as the daily SERC RC call), then the word "impacted" needs to be changed to "contiguous" or a similar term. 14.5 - We suggest rewriting R5 to read: In the event that a reliability issue cannot be confirmed, each Reliability Coordinator shall operate as though the problem exists. 14.6 - At Requirement R1, the use of the phrase "as a minimum" seems to add some flexibility for development of procedures, processes and plans. A negative consequence is that it introduces more ambiguity. The recommendation is to strike the phrase. 14.7 - At Requirement R1.6, consider the following: "Authority to act to prevent and mitigate instances 'that have the potential to cause' Adverse Reliability Impacts to other Reliability Coordinator Areas."
No
15.1 - In M1, delete "for Real-time use". 15.2 - Modify the measures to be consistent with changes requested in R1, R2, R4, R4.1 and R5.
No
16.1 - In R2, severe should be "... and no action was taken by the RC". 16.2 - In R5, severe should also include "... or that the RC failed to operate as though the problem existed." 16.3 - Modify the VSLs to be consistent with changes requested in R1, R2, R4, R4.1 and R5.
Yes
17.1 - We agree with the recommendation to retire IRO-015-2.
Yes
18.1 - We agree with the recommendation to retire IRO-016-2.
19.1 - We suggest the effective date for the retirement of R5 (NERC Net Security Policy) in the COM-001-2 Standard should be effective immediately upon regulatory approval. As written, the Policy is unenforceable, contains no measures and is not germane to BES Reliability.
Individual
Kathleen Goodman
ISO New England Inc.
No
ISO New England does not support the removal of Requirement 1. Also, we believe Requirement 3 is written such that it may pose an unnecessary requirement on the Hydro Quebec area given the terminology "inter-entity" and support further clarification.

No
See answer to #1.
No
ISO New England believes it is inefficient to have a (temporary) Standard with only one Requirement and recommend including this Requirement in COM-001, with COM-001 renamed to "Communications."
No
See response to Q#4
Yes and No
We beleive the word "threat" shoudl be replaced with "events" in Requirements 4 and 5.
Yes and No
Suggest changing with word "request" to "document" in Requirement 1.
Yes
Yes and No
As Requirement 1 is currently written, one could interpret the requirement for every Operating Process, Procedure and Plan to address each of the sub-requirements. That is not necessary. The drafting team needs to consider modifying the requirement to make it clear that not every sub-requirement must be addressed in every Operating Process, Procedure, and Plan and to also make it clear that the some sub-requirements may only be appropriately addressed in a Process but not a Plan for instance. Use of the term collectively may resolve this dilemma.
Yes
Yes
Individual
Edward Davis
Entergy Services, Inc
Yes
The drafting team should consider expanding the second sentence of R3 to apply to internal communications of any affected entity not just BAs and TOPs.
Yes
Yes
Yes
Yes
Yes
No
PER-003 R1 does not specifically addresss delegated functions; therefore, this requirement is not redundant with IRO-001 R6 without changes to PER-003 to specifically deal with employees performing delegated functions.
Yes
No

The VSL for R2 does not seem consistent with the language in the requirement. It is not clear why the entity should be subject to a high VSL if the entity did not comply with an RC directive due to safety or regulatory prohibition, and made the RC aware of same.
No
IRO-002-1 R9, the deleted language of the second sentence is not adequately covered by the language in EOP-008-0 R1, unless those outages are tied to the loss of a control center. EOP-008-0 is in the process of being revised and this language could be included in the revision, but it isn't adequately addressed by the version 0 standard.
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Overall, we think the coordinated set of standards being developed by the RTOSDT and IROLSDT are good for reliability, crisp, and tightens up the reliability concepts.
Individual
Danny Dees
MEAG Power
No
Directives that are mandatory under R2 of IRO-001-2 should have boundaries consistent with the proper role of an RC. For example, if an RC directs an LSE with a 15% planning reserve margin to execute purchase power agreements until its reserve margin is at least 20% and the LSE refuses, then the LSE may have violated this standard. Other examples of improper RC directives are directives to increase coal inventories, buy firm fuel transportation rights, reconductor transmission lines, purchase spare equipment, etc. Granted entities may be able to conjure up a regulatory or statutory basis for refusing many improper RC directives but in some instances there may be no permissible grounds to refuse. The appropriate solution is to modify the standard to ensure that improper directives are never mandatory in the first place. Specifically, NERC is urged to state that RC directives are mandatory only if they pertain to specific categories such as: switching orders to reconfigure the BES, orders to postpone scheduled outages of BES equipment, orders to change generator output, orders to curtail transactions or orders to curtail load.
No
The M2 measure should not mandate compliance with RC directives that are improper as defined in my response to question 7.

My other concerns are addressed in the comments of the SERC OC Standards Review Group.
Individual
Mike Gentry
Salt River Project
Yes
No
M3 should include providing evidence of concurrence to use a language other than English. This will better align the measure with the VSL language.
Yes
Yes
Yes
Yes
Yes
Yes
No
R1 states the RC must act OR direct. The R1 VSL's attempt to distinguish between act and direct. The requirement allows for either action. I suggest that the High VSL be removed and replaced by an N/A. The Severe VSL should be amended so that the words "act and direct" are replaced by the words "act OR direct" as is consistent with the requirement and the measure. R2:The moderate VSL introduces the phrase "equipment problems" for the first time in the Standard. "Equipment Problems" needs to be included in the Requirement, R2, and defined in the Measure for R2. R5: The Severe VSL needs to be moved to the Moderate category. This condition does not constitute an Adverse Reliability Impact that severely threatens the BES.
Yes
No
R1: The Requirement and VSL's mention that the RC will determine it's data needs. Yet the Measure for R1 does not mention this, it only mentions the RC requesting the data from it's member emtities. This Measure needs to include a measure for how the RC determines it's data needs.
Yes
Yes
Yes
Yes
Yes
Yes
Yes
I appreciate the new comment form in Word version. his allows me to comment on each requirement specifically addressing the requirement, measure or the VSL's

Group
SERC OC Standards Review Group
Jim Griffith
Southern Co.
Yes and No
1.1 - In R1, we suggest that "operationally test" should be defined to remove any confusion regarding what the term requires. The word "ensure" needs to be changed to "assure" to more accurately convey the intent of the requirement. We also suggest changing the word "facilities" to "capabilities". 1.2 - R2 is overly broad and should include a reasonable time frame for notification. For example, as currently written, a telecom outage of only one minute for which a notification is not made would be a severe violation. 1.3 - R1, R2 and R3 should be expanded to include the list of entities the RC needs to talk with as included in the Applicability section of IRO-001-2 (RC, TO, BA, GO, DP, TSP, LSE, PSE). These entities should also be included in the purpose statement and R4 and M4 can then be eliminated. 1.4 - In R3, we suggest that the last sentence of R3 should be changed to "entities may use an alternative language for internal operations" rather than allowing only TOs and BAs to have this option.
Yes and No
2.1 - A general comment regards the production of evidence - such language should be standardized as "have and provide upon request" and the authorized requestors identified. This comment should apply to all standards. 2.2 - M2 is overly broad and should include a reasonable time frame for notification. For example, as currently written, a telecom outage of only one minute for which a notification is not made would be a severe violation. 2.3 - The Drafting Team should coordinate the data retention time frame with the requirement measures for R1. DPs and GOs should also be included in the measures requirements
Yes and No
3.1 - The expanded list of entities recommended in comment 1.3 and 1.4 need to be included the VSLs
Yes and No
4.1 - We agree with the recommendation to retire COM-002-3 when COM-003-1 is approved; however we suggest the following changes should be made for the interim applicability of COM-002-3: 4.2 - The Purpose statement should be revised to re-align with the revisions in the Standard. 4.3 - The applicability of COM-002-3 should be consistent with the applicability of IRO-001-2. 4.4 - The words "clear, concise, and definitive manner" in R1 are ambiguous and impossible to measure. We suggest they be replaced with "the RC shall direct". 4.5 - An additional requirement, R2, should be added that requires the Operator to repeat the information back correctly (i.e., separate this requirement from R1).
No
5.1 - The measures need to be revised to match the new requirements.
No
6.1 - The severity levels need to be revised to match the new requirements
Yes and No
7.1 - Applicability 4.2 - Transmission Operator should be plural. 7.2 - The revised definition of "Adverse Reliability Impacts" (R1) should be included at the top of Standard IRO-001-2, per Glossary of Terms Used in Standards: All defined terms used in reliability standards shall be defined in the glossary. Definitions may be approved as part of a standard action or as a separate action. All definitions must be approved in accordance with the standards process. 7.3 - In R2 insert the word "its" before Reliability Coordinator 7.4 - In R3, replace "immediately" with "without intentional delay", replace "ability" with "intent", replace "or" with "and" and replace "the" with "its" before Reliability Coordinator.
Yes and No
8.1 - In M2 and M3, Add Distribution Provider. 8.2 - In M2 add "intentional" between "without" and "delay". 8.3 - In M3 replace "ability" with "intent", replace "or" with "and" and replace "the" with "its" before Reliability Coordinator's and Reliability Coordinator. 8.4 - In M5, change "has" to "had".
Yes and No
9.1 - R1 is a binary requirement and should have only a severe VSL. The RC either acts or he doesn't - If he fails to act, he fails to direct and mitigate the problem by default. 9.2 - R2 VSLs need to be rewritten to recognize that some directives may not be followed because of safety, regulatory or statutory requirements. 9.3 - Remove the Lower severity level in R3 to conform to changes in R3 and M3.
Yes and No
10.1 - We propose that R1 and R2 should be moved to the RC Certification Procedure and this standard retired.
Yes and No
11.1 - Moving R1 and R2 to the RC Certification Procedure, will eliminate measurement requirements.
Yes and No
12.1 - Moving R1 and R2 to the RC Certification Procedure, will eliminate VSL requirements.
Yes

13.1 - We agree with retiring this standard
Yes and No
14.1 - R1 and R2 - The word "impacted" tends to broaden the requirements to have procedures, processes and plans in place with each RC within the RC's Interconnection. We suggest the phrasing should be tightened up to convey the original meaning that the team intended. For example, does the team intend for the FRCC RC to have an agreement with the PJM or MISO RC? 14.2 - We suggest bringing R6 under R1 as subrequirement R1.7 and rewrite it as follows: R1 - The Dispute Resolution process will be followed when the Reliability Coordinator issuing a mitigation plan and the Reliability Coordinator(s) receiving a mitigation plan disagree on the proper steps to be taken. 14.3 - We suggest deleting R4.1 and adding a second sentence to R4: The frequency of these communications shall be at least weekly. 14.4 - R4: The word "impacted" makes it sound like these calls are only to be made when problems are expected or are occurring. If this requirement is intended more for operational awareness calls (such as the daily SERC RC call), then the word "impacted" needs to be changed to "contiguous". 14.5 - We suggest rewriting R5 to read: In the event that an operating issue cannot be confirmed, each Reliability Coordinator shall operate as though the problem exists.
Yes and No
15.1 - In M1, delete "System Operator" and "for real-time use". 15.2 - Modify the measures to be consistent with changes requested in R1, R2, R4, R4.1 and R5.
Yes and No
16.1 - In R2, severe should be "no action was taken by the RC". 16.2 - In R5, severe should also include that the RC failed to operate as though the problem existed. 16.3 - Modify the VSLs to be consistent with changes requested in R1, R2, R4, R4.1 and R5.
Yes
17.1 - We agree with the recommendation to retire IRO-015-2
Yes
18.1 - We agree with the recommendation to retire IRO-016-2
19.1 - We suggest the effective date for the retirement of R5 (NERC Net Security Policy) in the COM-001-2 Standard should be effective immediately upon regulatory approval. As written, the Policy is unenforceable, contains no measures and is not germane to BES Reliability
Individual
Jay Seitz
US Bureau of Reclamation
No
Purpose Distribution Providers and Generator Operators were added to the applicability; the Purpose should be revised to reflect that.
Yes
Yes
No
Purpose Since Generator Operators were deleted from the applicability; the Purpose should be revised to reflect that and include Reliability Coordinators. The language is somewhat redundant, recommend it be simplified to "To ensure Balancing Authorities, Reliability Coordinators, and Transmission Operators communicate in an effective manner."
Yes
Yes
No
R4. and R5. Both of these Requirements use the phrase "without intentional delay" to describe the urgency of the notification to impacted entities. In both requirements we recommend the language be changed from "notify, without intentional delay" to "immediately notify".
No
M4. and M5. In both Measures, recommend "without intentional delay" be changed as described above for R4. and R5.
Yes
No

R2. This requirement provides authority to the Reliability Coordinator to veto planned outages and approve planned maintenance to "analysis tools". It is not clear in this standard what these "analysis tools" are. Per FERC Order 693, NERC was to identify a minimum set of analysis tools and the task was assigned to the Real-Time Tools Best Practices Task Force. Until the tools are identified, it is premature to insert a placeholder in a mandatory standard; this also applies to the violation severity levels table.
No
M2 again "analysis tools" have not been identified.
No
Until the tools are identified, it is premature to insert a placeholder in a mandatory standard; this also applies to the violation severity levels table.
Yes
Yes
Yes
Yes
Yes
Yes
Group
PJM Interconnection
Patrick Brown
PJM Interconnection
Yes
We agree with the revisions, but recommend adding applicability to Distribution Providers and Generator Operators for data retention requirements.
Yes
M4 should be revised to reflect that each Distribution Provider and Generation Operator has evidence demonstrating the functionality of telecommunications facilities with the TOP and BA for the exchange of interconnection and operating information.
No
Recommend the following VSLs for R1: Proposed Lower VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on at least one occasion. Proposed Moderate VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on two separate occasions. Proposed High VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on three separate occasions. Proposed Severe VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on more than three separate occasions. Recommend the following VSLs for R2: Proposed Lower VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on at least one occasion. Proposed Moderate VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on two separate occasions. Proposed High VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on three separate occasions. Proposed Severe VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on more than three separate occasions. Recommend the following VSLs for R4: Proposed High VSL: The Responsible Entity failed to establish telecommunications with either their Balancing Authority or Transmission Operator for the exchange of Interconnection and operating information. Proposed Severe VSL: The Responsible Entity failed to establish telecommunications with their Balancing Authority and Transmission Operator for the exchange of Interconnection and operating information.
Yes
We note that this requirement really is "3-part communication" and will be moved to the new communications standard, COM-003-1.

Standard – COM-001-2 Telecommunications Requirement 1: Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall operationally test, on a quarterly basis at a minimum, alternative telecommunications facilities to ensure the availability of their use when normal telecommunications facilities fail. Proposed Measure: Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall provide evidence that it operationally tested, on a quarterly basis at a minimum, alternative telecommunications facilities to ensure the availability of their use when normal telecommunications facilities fail. Attributes of the requirement Binary Quarterly operational tests of alternate telecommunications Timing X Omission Communication Quality X Other SDT Proposed Lower VSL: The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to operationally test within the last quarter. CEDRP Proposed Lower VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator performed operational testing of alternative telecommunications, but did not perform a test in one of the previous four quarters. SDT Proposed Moderate VSL: The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to operationally test within the last 2 quarters. CEDRP Proposed Moderate VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator performed operational testing of alternative telecommunications, but did not perform a test in two of the previous four quarters. SDT Proposed High VSL: The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to operationally test within the last 3 quarters. CEDRP Proposed High VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator performed operational testing of alternative telecommunications, but did not perform a test in three of the previous four quarters. SDT Proposed Severe VSL: The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to operationally test within the last 4 quarters. CEDRP Proposed Severe VSL: The Responsible Entity failed to operationally test alternative telecommunications every quarter on more than three separate occasions (i.e. more than any three different quarters). FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? No 2. Is the VSL assignment a binary requirement? Yes 3. Is it truly a “binary” requirement? Yes 4. If yes, is the VSL assignment consistent with other binary requirement assignments? Yes 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? Yes 6. Does the VSL redefine or undermine the stated requirement? No 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Yes Standard – COM-001-2 Telecommunications Requirement 2: Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities of the failure of its normal telecommunications facilities, and shall verify that alternate means of telecommunications are functional. Proposed Measure: Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide evidence that it notified impacted entities of failure of their normal telecommunications facilities, and verified the alternate means of telecommunications were functional. Attributes of the requirement Binary Timing Notify impacted entities and verify functionality of alternate telecommunications Omission Communication X Quality Other - Test X Discussion - This requirement needs to be re-written to be more clearly define who the entities are that are “impacted.” The key attributes appear to be notification of ALL (communication) impacted entities (possible omission if some, but not all are not notified). The requirement does not give any guidance on the “verification” side – this is a problem, one entity can interpret that to mean “we looked and it was working”, another may be to verify with all impacted entities that alternate communication is working. We suggest this requirement needs a little more clarification. The CEDRP does not feel it can write a valid VSL for this requirement as currently worded. SDT Proposed Lower VSL: The Reliability Coordinator, Transmission Operator or Balancing Authority notified all impacted entities of the failure of their normal telecommunications facilities, but failed to verify the alternate means of telecommunications are functional. CEDRP Proposed Lower VSL: See Discussion SDT Proposed Moderate VSL: The Reliability Coordinator, Transmission Operator or Balancing Authority notified some, but not all, impacted entities of the failure of their normal telecommunications facilities, and failed to verify the alternate means of telecommunications are functional. CEDRP Proposed Moderate VSL: See Discussion SDT Proposed High VSL: N/A CEDRP Proposed High VSL: See Discussion SDT Proposed Severe VSL: The Reliability Coordinator, Transmission Operator or Balancing Authority failed to notify any impacted entities of the failure of their normal telecommunications facilities, and failed verify the alternate means of telecommunications are functional. CEDRP Proposed Severe VSL: See Discussion FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? No 2. Is the VSL assignment a binary requirement? No 3. Is it truly a “binary” requirement? No 4. If yes, is the VSL assignment consistent with other binary requirement assignments? N/A 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? Yes 6. Does the VSL redefine or undermine the stated requirement? No 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Yes Standard – COM-001-2 Telecommunications Requirement 3: Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider shall use English as the language for all inter-entity Bulk Electric System (BES) reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected BES. Transmission Operators and Balancing Authorities may use an alternate language for internal operations. Proposed Measure: The Reliability Coordinator, Transmission Operator or Balancing Authority shall have and

provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, that will be used to determine that personnel used English as the language for all inter-entity BES reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected BES. Attributes of the requirement Binary Use English for real-time communications unless agreed to otherwise. NOTE: OK with this as is because the requirement and VSLs have been re-written, will be removed from this standard shortly, and included in the new COM-003-1 standard. Timing Omission Communication X Quality Other SDT Proposed Lower VSL: N/A CEDRP Proposed Lower VSL: No change SDT Proposed Moderate VSL: N/A CEDRP Proposed Moderate VSL: No change SDT Proposed High VSL: N/A CEDRP Proposed High VSL: No change SDT Proposed Severe VSL: The responsible entity failed to provide evidence of concurrence to use a language other than English for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. CEDRP Proposed Severe VSL: The Responsible Entity failed to provide evidence of the concurrence to use a language other than English for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? No 2. Is the VSL assignment a binary requirement? Yes 3. Is it truly a "binary" requirement? Yes 4. If yes, is the VSL assignment consistent with other binary requirement assignments? It's a little inflated as being Severe 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? It's OK for the interim 6. Does the VSL redefine or undermine the stated requirement? No 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Yes Standard – COM-001-2 Telecommunications Requirement 4: Each Distribution Provider and Generation Operator shall have telecommunications facilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information. Proposed Measure: Each Distribution Provider and Generation Operator has telecommunications facilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information. Attributes of the requirement Binary "has" telecomm with TOP and BA Timing Omission Communication X Quality Other Discussion – Telecommunication Facilities is ambiguous and is not included in the NERC glossary of terms – the CEDRP recommend deleting the word "facilities" from the requirement and measure and leaving it just as "telecommunications" with its TOP and BA . SDT Proposed Lower VSL: N/A CEDRP Proposed Lower VSL: No change SDT Proposed Moderate VSL: N/A CEDRP Proposed Moderate VSL: No change SDT Proposed High VSL: N/A CEDRP Proposed High VSL: The Responsible Entity failed to establish telecommunications with either their Balancing Authority OR Transmission Operator for the exchange of Interconnection and operating information. SDT Proposed Severe VSL: The Distribution Provider or Generation Operator failed to have telecommunications facilities with its Transmission Operator and Balancing Authority CEDRP Proposed Severe VSL: The Responsible Entity failed to establish telecommunications with their Balancing Authority AND Transmission Operator for the exchange of Interconnection and operating information. FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? No 2. Is the VSL assignment a binary requirement? Mostly 3. Is it truly a "binary" requirement? Mostly 4. If yes, is the VSL assignment consistent with other binary requirement assignments? Yes 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? Yes, considering the wording of the requirement as written. More specifically, the word "have" as used in the requirement is a bit vague. A better choice could have been, "established and maintains." 6. Does the VSL redefine or undermine the stated requirement? No 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Yes Standard: COM-002-3 Communications and Coordination Requirement 1: Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall issue directives in a clear, concise, and definitive manner; shall ensure the recipient of the directive repeats the information back correctly; and shall acknowledge the response as correct or repeat the original statement to resolve any misunderstandings. Proposed Measure: Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have evidence such as voice recordings or transcripts of voice recordings to show that it issued directives in a clear, concise, and definitive manner; ensured the recipient of the directive repeated the information back correctly; and acknowledged the response as correct or repeated the original statement to resolve any misunderstandings. Attributes of the requirement: Binary Timing Omission Communication X Quality X Other SDT Proposed Lower VSL: None CEDRP Proposed Lower VSL: No Comment SDT Proposed Moderate VSL: The responsible entity provided a clear directive in a clear, concise and definitive manner and required the recipient to repeat the directive, but did not acknowledge the recipient was correct in the repeated directive. CEDRP Proposed Moderate VSL: No comment SDT Proposed High VSL: The responsible entity provided a clear directive in a clear, concise and definitive manner, but did not require the recipient to repeat the directive. CEDRP Proposed High VSL: No comment SDT Proposed Severe VSL: The responsible entity failed to provide a clear directive in a clear, concise and definitive manner when required. CEDRP Proposed Severe VSL: No comment FERC Guidance for VSLs 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? No 2. Is the VSL assignment a binary requirement? No 3. Is it truly a "binary" requirement? No 4. If yes, is the VSL assignment consistent with other binary requirement assignments? 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? Yes 6. Does the VSL redefine or undermine the stated requirement? No 7. Is the VSL based on a single violation of the requirement (not multiple violations)? Yes and No (Severe is for multiple occasions of not issuing directives per the requirement).

[illegible]

placed. This design ensures that all communications paths are tested regularly in day-to-day use. However, the design of these systems makes it difficult, if not impossible, to substantiate that a functional test of the circuitry has been performed. This requirement should be broken into two requirements. The first should cover data circuitry and the second should cover voice circuitry. This will allow the drafting team to address the inherent differences in these two methods of communications. Lastly, the requirements need to be much more specific concerning the criticality of the facilities to be tested to improve the measurability of the standard. The drafting team dropped the phrase "for the exchange of Interconnection and operating data" from the standard requirement. This deletion appears to open the application of this standard to virtually every communication path used by an RC, BA, TOP whether or not it is used for communicating real-time operating information or not. We do not believe this was the intention of the drafting team and suggest this phrase be reinserted or another one added that limits applicability to only those communication paths that support the real-time reliability of the bulk electric system. R2 - It is not clear who the "impacted entities" would be in this requirement. The SDT should consider specifying these entities. R3 - The last sentence of this requirement should be deleted. It is not a requirement, it does not add clarity, and the first sentence is very specific as to the communications covered by the requirement. R4 - This requirement makes no distinction between data and voice communications facilities and assumes a designated primary and backup facility configuration such that the backup communications systems are not used regularly. This may be an accurate assumption for data communications; however voice communications may be different. Today many organizations use voice communications systems that allow the system to choose the communication path each time a call is placed. This design ensures that all communications paths are tested regularly in day-to-day use. However, the design of these systems makes it difficult, if not impossible, to substantiate that a functional test of the circuitry has been performed. This requirement should be broken into two requirements. The first should cover data circuitry and the second should cover voice circuitry. This will allow the drafting team to address the inherent differences in these two methods of communication.

No

The measures should be modified per our suggested modifications in question 1.

No

The VSL should be modified per our suggested modifications in question 1. R1 VSL - The statement in the VSL that the responsible entity did not "operationally test" is too broad. It should be more specific with the language used in the requirement.

No

Purpose - The GOP is still shown in the purpose statement although it was removed from the applicability. Also, it may be better if the purpose was written more generally as "To ensure adequate communications capabilities for addressing real-time emergency conditions and ensure communications by operating personnel are effective to maintain BES reliability". Applicability - In the SDT's document "Scope of Work Assigned to the Reliability Coordination Standard Drafting Team", the team decided to not include the FERC directive to include the DP in the applicability with the following reasoning "The proposed revisions do not include the DP entity because they are not applicable." We would like clarification on this. R1 - It does not appear that the implementation plan addresses the FERC direction to consider comments from Santa Clara, FirstEnergy, and Six Cities per 693 par. 539 regarding staffing requirements. Santa Clara asks that these requirements apply "only to operating staff available on site at all times or includes repair personnel who are available only on an on-call basis". FirstEnergy asks that the "term [staffed] should not require a physical presence at all facilities at all times because some units, such as peaking units, are not staffed 24 hours a day". FirstEnergy also suggest "because nuclear units are already subject to communications requirements in their operating procedures, their compliance with NRC operating procedures should be deemed in compliance with the NERC Reliability Standards". Six Cities "states that, to avoid unnecessary staffing burdens, particularly for smaller entities, the Commission should direct NERC to clarify COM-002-2 by providing that identification of an emergency contact person on call to respond to real-time emergency conditions will constitute adequate compliance". R1 - Just as an FYI, with regard to the proposed replacement requirement statement in the implementation plan: "TOP-005-1, R1 and R3 require adequate telecommunications for BAs and TOPs to provide each other with operating data as well as providing data to the RC", per recently stakeholder approved ballots, R1 of TOP-005-1 has been retired and now covered in new standard IRO-010-1. R1.1 - The existing requirement includes "through predetermined communication paths of any condition that could threaten the reliability of its area or when firm load shedding is anticipated". The proposed replacement requirements do not address the need for "predetermined communication paths".

No

The measures should be modified if our comments in question 4 result in changes to the proposed requirements.

No

The VSL should be modified if our comments in question 4 result in changes to the proposed requirements.

No

R3 - should be a sub requirement of R2. These two requirements are sequential in nature and should be measured at the same time. The VRFs and Time Horizons are the same for both requirements lending to their combination into a requirement with a sub requirement. In the VSL for R2, an entity is being penalized with a high severity level for not completely following an RC directive even though it violated safety, equipment, statutory, or regulatory

requirements. Measuring R2 and R3 at the same time allows for the process to complete prior to the measurement taking place. R3 - The "or" between "Distribution Provider" and "Purchasing-Selling Entity" should be replaced with an "and". R4 - Should be revised by adding the phrase "of the expected or actual threat" to the end of the requirement to add clarity. Existing R7 requirement - This requirement is proposed for retirement because it is redundant with IRO-014-1 R1. However, it is not clear how the existing requirement to "have clear, comprehensive coordination agreements with adjacent RCs to ensure that SOL or IROL violation mitigation requiring actions in adjacent RC areas are coordinated" is covered in IRO-014-1 R1. IRO-014-1 R1 requires agreements for coordination of actions between RCs to support Interconnection reliability, but it does not specifically require "clear" and "comprehensive" agreements to mitigate SOL or IROL violations. IRO-014-1 only vaguely covers the existing requirement R7 of IRO-001-1.
No
M2 - The word "intentional" should be added between "without" and "delay".
No
R2 VSL - The Severe VSL should include after the word directive: "that would not violate safety, equipment, statutory or regulatory requirements".
No
R2 - As written, this requirement does not clearly define the scope of the authority of the Reliability Coordinator over analysis tools. Is it the intent of the drafting team to give the RC authority over analysis tools owned and operated by the RC. Is it the intent of the drafting team to give the RC authority over the analysis tools owned and operated by the BA, TOP, GOP, etc.? Are the tools intended to be the real-time (EMS) or the off-line engineering planning analysis tools or any analysis tool used in real-time. Does this include the analysis tools used by field personnel? This requirement should be revised to specify exactly the analysis tools under the authority of the Reliability Coordinator.
No
The measures should be modified per our suggested modifications in question 10.
No
The VSL should be modified per our suggested modifications in question 10.
Yes
No
R1 - Should be revised as follows to improve readability and clarity: R1.3 - Add "Exchanging" before "Planned" R1.4 - Add "Control of voltage" at the beginning of the requirement and delete "for voltage control" at the end of the requirement. Add a new R1.7 as follows: "A process for resolution of the disagreement covered by R6 of this standard."
No
The measures should be modified per our suggested modifications in question 14.
No
The VSL should be modified per our suggested modifications in question 14.
Yes
Yes
Group
Bonneville Power Administration
Denise Koehn
Transmission Reliability Program
Yes
Yes
Yes
Yes
Yes

No
VSL for Requirement R1 - The VSL for R1 seems to imply that an operational test needs to have been performed in the last 90 days – this is read in conjunction with the data retention requirements. Need to clarify in the requirement how “quarter basis” is defined - is it the calendar quarter, or a rolling 90 days? In addition, the VSLs for Requirement R1 appear to violate NERC guidelines, since the Moderate, High and Severe VSLs are based upon cumulative violations of the Lower VSL.
No
Requirement R1 - As defined by Merriam Webster, the use of the word “ensure” implies virtual guarantee <the government has ensured the safety of the refugees>; while the use of the alternative word “assure” implies the removal of doubt and suspense from a person's mind. We suggest that “assure” is more appropriate than “ensure” in this context in the standards. The use of words like “clear, concise, and definitive manner” is subject to interpretation. This same language is used in the VSLs. Depending on the interpretation of this phrase, an entity could be found to be in a “Severe” violation level. The issuer of the directive should not be subject to non-compliance if the recipient of the directive refuses to repeat back. Need to add a requirement, measure, and VSL that clarifies that the recipient of a directive is obliged to perform their portion of a repeat-back. The inclusion of TSPs, LSEs, and PSEs in IRO-001-2 indicates the need to include these functions in the COM-002-3 requirement concerning repeat-backs. What is a “directive”? The regional compliance processes are having difficulty in auditing this existing standard due to lack of clarity of what constitutes a directive. “Directive” should be defined as being associated with real-time operational emergency conditions, and not ordinary day-to-day communications. Otherwise a VRF of High is not warranted.
No
The use of words like “clear, concise, and definitive manner” is subject to interpretation. The issuer of the directive should not be subject to non-compliance if the recipient of the directive refuses to repeat back. Need to add a requirement, measure, and VSL that clarifies that the recipient of a directive is obliged to perform their portion of a repeat-back.
No
The use of words like “clear, concise, and definitive manner” is subject to interpretation. The issuer of the directive should not be subject to non-compliance if the recipient of the directive refuses to repeat back. Need to add a requirement, measure, and VSL that clarifies that the recipient of a directive is obliged to perform their portion of a repeat-back.
No
Requirement R1 - What happens if the RC failed to recognize that such an event was happening as opposed to failed to take action. Is this intended to cover both scenarios? The term “Adverse Reliability Impacts” is being changed and is listed in the associated Implementation Plan. The revision development of this definition needs to go thru Due Process. The inclusion of TSPs, LSEs, and PSEs here indicates the need to include these functions in the COM-001-2 requirements concerning the use of English as the approved language. In addition, this also indicates the need for all of these listed entities to be included in COM-002-3 requirements concerning repeat-backs. The RC, TOP, and BA should not be placed in a possible non-complaint state because the counter party refuses a repeat-back AND these requirements are not applicable to the counter party. Requirement R2 - The language in the Moderate VSL of R2 recognizes another potential reason for delay in execution of a directive. Requirement 2 of the Standards needs to be modified to also recognize this potential. Requirements R2 and R3 - Clarify that entities are obligated to take action and confirm directives only from their Reliability Coordinators, not from any Reliability Coordinator. Requirements R2, R3, R4, R5 - Inconsistent use of “timing” words in the standards – “without intentional delay” and “immediately”. Suggest deleting these words due to the difficulty of determining compliance. Requirement R4 - The term “Adverse Reliability Impacts” is being changed and is listed in the associated Implementation Plan. The revision of this definition needs to go through Due Process. Requirement R5 - The VRF should be “Lower” instead of “High” since the notification is that the threat has been mitigated. Also, the term “Adverse Reliability Impacts” is being changed and is listed in the associated Implementation Plan. The revision of this definition needs to go through Due Process.
No
Measures M2, M4 and M5 use the terms “without delay” and “without intentional delay”. Suggest deleting these words due to the difficulty of determining compliance. The term “Adverse Reliability Impacts” is being changed and is listed in the associated Implementation Plan. The revision of this definition needs to go through Due Process.
No
The language in R1 of the VSL is not consistent with the requirements and measures in the standard. The VSL needs to recognize that the RC may EITHER act or give direction to others to act. The term “Adverse Reliability Impacts” is being changed and is listed in the associated Implementation Plan. The revision of this definition needs to go through Due Process. The language in R2 of the VSL places an entity in Moderate or High violation level even if failure is “allowed” in the standard; i.e. failure to act is due to violation of safety, regulatory, statutory requirements. The language in R2 of the VSL recognizes another potential reason for delay in execution of a directive. Requirement R2 of the Standard needs to be modified to also recognize this potential.
No

Requirement R1 - This requirement is in the wrong standard – this is a Facilities standard. This requirement belongs in another standard. Question: Is there a requirement in another standard that compels the TOPS, BAs, etc to provide the requested data? Requirement R2 - Need to clarify whose analysis tools (I assume it is the RCs analysis tools, not the analysis tools of another entity) and planned maintenance to what – is it tools, facilities, transmission, generation, etc. Depending on the answer above, this requirement is in the wrong standard – this is a Facilities standard. This requirement belongs in another standard. Question: Where is the Requirement for the RC to have analysis tools? It appears that the Requirement the RC has analysis tools have been removed in the revisions to the standard.
No
See response to Question #12 above. If the requirements are moved to another standard, the measures aren't needed here.
No
R1 VSL - As a general comment, this VSL is unclear and would be difficult to audit. This VSL uses subjective terms like "material impact" and "minimal impact". These terms are not used in the associated requirement or measure and should be removed from the VSL. This VSL uses terms like "majority, but not all"; "some, but less than a majority" which provides an opportunity for a subjective review by Compliance as to what a complete listing of data requirements should be. This term is not used in the Requirements or Measures and should be removed from the VSL. This VSL introduces a concept, data the RC needs for " ... administrative purposes, such as data reporting ...". This concept is not included in the Requirements or Measures portions of the Standard and should be removed from the VSL. This VSL should be written to simply assess whether the RC has made determination of what its data needs are and whether those needs have been communicated to the entities in the footprint. R2 VSL - This VSL clarifies the questions posed above regarding what the RC needs approval rights over. R2 needs to be modified to include this clarity. This VSL needs to clarify that the RC approval rights are for the RC's tools, not tools of other entities. The Severe level of this VSL needs to be re-written along the lines of: The RC does not have approval rights for planned maintenance or outages to its analysis tools.
Yes
No
R1 and R2 - The word "impacted" tends to broaden the requirements to have procedures, processes and plans in place with each RC within the RC's Interconnection. We suggest the phrasing should be tightened up to convey the original meaning that the team intended. For example, does the team intend for the FRCC RC to have an agreement with the PJM or MISO RC? We suggest bringing R6 under R1 as subrequirement R1.7 and rewrite it as follows: R1 - The Dispute Resolution process will be followed when the Reliability Coordinator issuing a mitigation plan and the Reliability Coordinator(s) receiving a mitigation plan disagree on the proper steps to be taken. We suggest deleting R4.1 and adding a second sentence to R4: The frequency of these communications shall be at least weekly. R4: The word "impacted" makes it sound like these calls are only to be made when problems are expected or are occurring. If this requirement is intended more for operational awareness calls (such as the daily SERC RC call), then the word "impacted" needs to be changed to "contiguous". We suggest rewriting R5 to read: In the event that an operating issue cannot be confirmed, each Reliability Coordinator shall operate as though the problem exists.
No
See comment #14 above. Also, Measure M5 is inconsistent with Requirement R5. It should mirror the requirement. Also, need to add the requirement number at the end of each Measure.
No
See comments #14 and #15 above - VSLs need to be revised to correspond to the revised Requirements and Measures.
Yes
No
See comment #14 above regarding re-write needed for Requirement R6 of IRO-014-2.
Individual
Thad Ness
AEP
No
A precise definition of telecommunications facilities needs to be established in this standard. R2 needs to be clarified regarding impacted utilities. FERC Order 693 suggests that this standard should apply Distribution Providers (DP) along with Generation Operators (GOP). AEP acknowledges that there needs to be some level of coordination and communication between DP's and other function model entities; however, the requirements, as applied to the DP, for telecommunications with the TOP and BA might not address the current communication

paths adequately. Today, the DP usually does not communicate with the RTO (performing the BA and/or TOP function), but the DP could either communicate directly or through a joint action agency to the IOU that may serve as the TO (or maybe the TOP). As this draft is written the DP's would be required to have telecommunication facilities with the RTO in this scenario. There will likely be many exceptions to the rule that the requirements and measures create when applied to the DP. We ask that the drafting team consider the applicability, some of the current channels of communications, and options for addressing the FERC comments without creating telecommunication paths that do not make practical sense.

No

M2 needs to be clarified regarding impacted functions.

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Individual

Chris de Graffenried

Consolidated Edison Co. of NY, Inc.

Yes and No

Wording in question: R.2/M.2 Each ... Load-Serving Entity, or Purchasing-Selling Entity shall have evidence that it acted without intentional delay to comply with the Reliability Coordinator's directives. R.3/M.3 Each ... Load-

M2 should be changed to reflect the comments noted in Question 1 for R2.
Yes
Based upon revisions to Question 1.
Yes
Yes and No
As long as the measurement of compliance does not include proving the negative, that no directives were issued.
No
R1-High VSL-If the directive was followed and there was no threat to the BES, then a lack of repetition of the directive does not constitute a "high" VSL. Suggest that this be a low or moderate VSL.
No
R2 refers to "intentional delay". The determination of intent should be left to the VSL portion of the standard, not the requirement portion.
Yes
If some language is changed, we support the revisions. R2 has language in it that should be added to M4 to be consistent. In M2, we propose adding language "unless such actions would violate safety, statutory or regulatory requirements."
No
VSL's for R2 and R3 are not appropriate. In order to assess a situation we may not be able to immediately inform the RC of our ability to comply with the directive. The high VSL for R2 currently states that if we do not follow the directive because of safety, statutory or regulatory requirements, it is a high VSL. An entity should not be penalized for not breaking the law.
Abstain.
Abstain.
Abstain.
No
The accountability and monitoring addressed in this Standard is still required. The drafting team's intent was that the ability to monitor is part of the certification process. However, certification is to Standards, and if there is not a Standard which addresses this issue, then an entity cannot certify to it.
Abstain
Abstain
Abstain
Abstain
Abstain
Group
ISO/RTO Council Standards Review Subcommittee
Charles Yeung
SPP
Yes and No
We suggest that a definition of telecommunications be written by the drafting team because it is not clear what all telecommunications is intended to be included. Does this requirement apply to data, voice, rtus, networks, etc? For requirement R2, e suggest that you strike the final clause: "and shall verify that alternate means of telecommunications are functional." It is obviated by the requirement to notify impacted parties. The responsible entity is already implicitly required to verify its alternate means of communication is functional since it is required to notify its impacted parties of the failure of its normal telecommunications. It can't notify its impacted parties if the alternate communications means are not functional. The VRF for new requirement 1 should be lower. It does not fit the definition of a medium VRF. A medium VRF requires that a violation of the requirement directly affect the state or capability or the ability to effectively monitor and control. Failure to test does not result in directly affecting the state or capability or the ability to effectively monitor and control. At a minimum, a failure of the alternative communication systems and primary communication systems must occur first. The failure to perform a single test in a given quarter does not mean that primary and alternative communication systems will fail. Thus, testing is really an administrative issue and should thus be a lower VRF. In the Data Retention section, Distribution Provider and Generation Operators should be added. Currently, there are no data retention requirements listed for them. Suggest modifying the language regarding data retention for compliance violations to: "... is found in violation of a requirement, it shall keep information related to the violation until it the Compliance Enforcement Authority finds it compliant."
Yes and No

M3: The evidence to show that concurrence is in place to allow communication using a language other than English is missing. The Measure as written merely asks for evidence that communication in a different language has occurred.
No
The VSLs as defined for Requirement 1 appear to violate Guideline 4 that the Commission established in their "Order on Violation Severity Levels Proposed by the Electric Reliability Organization". Guideline 4 requires that a VSL should be based on a single violation. The VSLs as defined accumulate the number of consecutive quarters. This would imply that a single violation could last more than a year and that the compliance auditor could not determine sanctions until the entity becomes compliant or year has passed. A single violation appears to be the failure to test in a single quarter. This requirement is binary in nature in that it is either met or it isn't. We suggest that only a lower VSL should be defined as: "The RC, TOP, or BA failed to test the backup telecommunication facilities for a single calendar quarter." The Lower VSL for R2 is not possible. The act of notifying all impacted entities of the failure of their primary telecommunication system requires the use of the alternative telecommunications systems which is a form of verifying that the alternative telecommunications facilities are functional. The drafting team should consider applying the numeric performance category of the VSL Development Guideline Criteria for R2. (i) R1: Suggest to revise the conditions for all levels to read "...failed to operationally test the alternate communication facilities within the last..... (ii) R2: The second part under Severe is not needed since failing to notify any impacted entities would imply no communication to the affected entities anyway. If verification of the functionality of the alternate means of telecommunications is also critical even without communicating to the affected entities, then the second condition should be an "OR". (iii) R3: Failure to having concurrence to use a language other than English for communications between and among operating personnel responsible for real-time operations by itself does not constitute a violation of any requirements; it is the absence of such a concurrence AND having used a language other than English that would constitute a violation. Suggest to revise this condition.
Yes
Yes
Yes
Yes and No
New requirement R2 should omit act without intentional delay. Use of intentional implies willful disregard for compliance for the requirement. Intention should not be addressed as part of the compliance with the requirement but rather through the enforcement process once the compliance auditor has identified a violation. The word immediately should be removed from the new R3. This attempts to time frame the response of the responsible entity and remove the judgment from the compliance auditor. We agree with the concept of doing this but in reality it only confuses the issue and the compliance auditor will likely apply his judgment regarding what immediate is anyway. Additionally, the requirement attempts to separate the act of confirming that the responsible entity can take the action from notifying the RC that the entity can't take the action. This is not logical. What RC is going to request a responsible entity to take action that would violate safety, equipment, statutory, or regulatory requirements? The RC should already be aware of those requirements and likely won't direct actions that violate them. Thus, the likely scenario is that the responsible entity will attempt to take action and discover that equipment is not functioning properly and thus notify the RC. We suggest striking the "shall immediately confirm the ability to comply with the directive or" from the requirement. This part of the requirement is not needed because the responsible entity is already obligated to follow the RCs directive (see order 693.) Thus, the assumption is that the order will be followed unless it can't be followed because it will violate safety, equipment, statutory, or regulatory requirements. Requirements R4 and R5 are unnecessary. New R1 requires the RC to direct actions to be taken by the TOP, BA, GOP, TSP, LSE, DP and PSE to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts. The RC can't direct these actions without notifying all impacted TOPs and BAs. They would also have to notify them when actions are no longer necessary. The VRF for R5 should not be High. Failure to notify others when potential threats to system reliability have been mitigated does not constitute a high risk to the interconnected system. We suggest it be reduced to a Medium (i.e., that it affects control of the BES).
No
The R1 High and Severe VSL appear to differ only by the inclusion of directing actions in Severe. From a practical perspective, what is the difference between directing actions and acting? We don't believe there is any. The actions are the result of the RC authority whether the RC takes the actions themselves or directs someone else to. We suggest a better alternative for the VSL levels would be for the High level to reflect that the RC did not act or direct actions to prevent an Adverse Reliability Impact and Severe would be that the RC did not act or direct actions to mitigate the magnitude or duration of an existing Adverse Reliability Impact. The moderate VSL for R2 is not practical and too subjective. What constitutes a delay? What if the responsible entity takes five minutes to determine how to carry out the action or if their equipment currently is capable of carrying out the action? Is this a

delay? We suggest striking this Moderate VSL. The High VSL does not agree with the requirement. It considers the inability to fully follow an RC directive due to a violation of the safety, equipment, statutory, or regulatory requirements a violation. This is in direct conflict with the requirement. We suggest that the High VSL should be struck. We suggest the Severe VSL should be that the responsible entity failed to follow the RC directive and it would not have violated the safety, equipment, statutory or regulatory requirements. Currently, the Severe category does not allow that the responsible entity may not be able to carry out the directive due to the violation of safety, equipment, statutory, or regulatory requirements. In question 7, we request that the drafting team strike part of requirement 3. The striking of that portion of requirement 3 obviates the lower VSL. In paragraph 27 of the ORDER ON VIOLATION SEVERITY LEVELS PROPOSED BY THE ELECTRIC RELIABILITY ORGANIZATION, the Commission expresses "that, as a general rule, graduated Violation Severity Levels, wherever possible, would be preferable to binary Violation Severity Levels". Given that it is possible to define graduated VSLs for R4 and R5, we suggest that the drafting team should consider applying the numeric performance category of the Violation Severity Levels Development Guidelines Criteria based on the number of impacted TOPs and BAs that were notified.

No

New Requirement R2 is no longer needed as a result of paragraph 112 in Order 693-A. Since the RC's "authority to issue directives arises out of the Commission's approval of Reliability Standards" the RC already has veto authority or will have once R1 IRO-001-2 is approved. This requirement obligates the RC to take actions or direct actions to prevent Adverse Reliability Impacts. Veto outages of equipment and analysis tools would fall into this category even if the RC couldn't say for certain that an Adverse Reliability Impact was going to occur but rather they are concerned one could occur due to heavy loads for example.

No

Measure 1 should not focus on a letter as evidence. A more appropriate measure would be a data specification document and actual verification that data has been received. The letter or equivalent is only needed if data has not been supplied. Demonstration of the actual receipt the data would be easy.

No

For R1, the lower VSL contradicts itself. It states that RC demonstrated that it determined its data requirements and requested that data and then follows with that it didn't request that data. The second option in the Lower VSL category is not practical and a compliance auditor would not be in a position to determine this. In fact, if the administrative data is not requested, other administrative requirements for reporting would be violated. Additionally, it does not make sense that an RC would determine its data needs and then omit data for administrative reporting. Further, is it the compliance auditor's job to judge if the data the RC requests is sufficient or is it his job to see that the RC has met the requirement to define the data? The remaining VSLs imply that the RC may define only partial data requirements. This does not seem likely. Why would the RC do this? This VSL appears to add to the requirement by making it appear that the compliance auditor is to judge the completeness of the data requirement. This violates Guideline 3 of the FERC ORDER ON VIOLATION SEVERITY LEVELS PROPOSED BY THE ELECTRIC RELIABILITY ORGANIZATION. Practically, it would not be enforceable anyway. It would require the RC to admit that they did not include administrative data in the their data requirements. It is doubtful this would happen because the RC likely believes they prepared a complete data requirement document. We suggest that the VSLs should be: Severe: The RC did not determine it data requirements or the RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be deomstrated for greater than 75 to 100% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs. High: The RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be deomstrated for greater than 50 and less than or equal to 75% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs. Medium: The RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be deomstrated for greater than 25% and less than or equal to 50% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs. Lower: The RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be deomstrated for greater than 0% and less than or equal to 25% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs. R2 VSLs are not needed er paragraph 112 of Order 693-A. The Severe VSL contradicts the requirement.

No

Please strike "as a minimum" in R1. By definition, the requirement defines the minimum. Please strike R1.6. RCs already have the authority to act per paragraph 112 of Order 693-A. Since R2 requires the RCs to agree, is the "mutually agreed to" clause in R1.1 necessary? Please strike requirements R4 and R4.1. It is duplicative to R1.1. Conference calls are a form of communication and should be address per R1.1. R5 is confusing. If a reliability issue isn't confirmed, doesn't this mean there is no reliability issue? Isn't this the point of confirming? Additionally, we suggest using validate instead of confirm. As Requirement 1 is currently written, one could interpret the requirement for every Operating Process, Procedure and Plan to address each of the sub-requirements. That is not necessary. The drafting team needs to consider modifying the requirement to make it clear that not every sub-requirement must be addressed in every Operating Process, Procedure, and Plan and to also make it clear that the some sub-requirements may only be appropriately addressed in a Process but not a Plan for instance. Use of the term collectively may resolve this dilemma.

No

Measure 1 appears to add to the requirement. Requirement 1 does not mention anything about System Operators yet the measurement does. The measurement should just be to verify that the RC has have Operating Processes, Procedures, and Plans. The sub-measurements are not measurements at all. There should be the single measurement to verify the Operating Processes, Procedures, and Plans have been developed and address the sub-requirements. This really points out the problem with making the criteria that must be considered in the Operating Processes, Procedures, and Plans sub-requirements in the first place. They aren't requirements of any sort. They represent criteria. The drafting team should consider making them a bulleted list without the Rs, then the drafting team won't feel compelled to write sub-measures that don't measure anything.
No
For R2, the High and Severe VSLs contradict the requirement. We believe all of the "nots" should be removed. We don't agree with the VSLs in R4 since we believe R4 should be struck. The Lower VSL for R6 should not even be a violation unless the impact was negative. If the RC implemented a different mitigation plan and resolved the issue, then the RC was likely correct to disagree.
Yes
Yes
We do agree with moving the requirement. However, the drafting team needs to revisit the wording of the requirement. The new wording is much more confusing. Until we reviewed IRO-016-2, it was not clear at all that R6 in IRO-014 was attempting to mimic R1 and its sub-requirements in IRO-016-2.

Consideration of Comments on Set of Reliability Coordination Standards (Project 2006-06)

The Reliability Coordination Standards Drafting Team (RC SDT) thanks all commenters who submitted comments on the set of Reliability Coordination Standards. These standards were posted for a 45-day public comment period from August 5, 2008 through September 16, 2008. Stakeholders were asked to provide feedback on the standards through a special electronic standard comment form. There were 29 sets of comments, including comments from more than 70 different people from approximately 50 companies representing 8 of the 10 Industry Segments as shown in the table on the following pages.

http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html

The following standards remain within the scope of this project:

- COM-001-2 — Communications
- COM-002-3 — Communication and Coordination
- IRO-001-2 — Reliability Coordination — Responsibilities and Authorities
- IRO-002-2 — Reliability Coordination — Facilities
- IRO-005-1 — Reliability Coordination — Current Day Operations
- IRO-014-2 — Coordination among Reliability Coordinators
- IRO-015-1 — Notifications and Information Exchange between Reliability Coordinators
- IRO-016-1 — Coordination of Real-time Activities between Reliability Coordinators

The RC SDT has revised some of the requirements, measures, violation risk factors and violation severity levels for COM-001, COM-002, and IRO-001, and IRO-014 based on the comments received. A summary of the drafting team's consideration of comments follows:

Requirements, Measures and VSLs in COM-001-2

Requirements: The RC SDT received several comments regarding the intent of the term "telecommunications facilities". For COM-001-2, the RC SDT envisions telecommunications to be voice or message communication between operating personnel. The standard has been renamed "Communications" and the term "telecommunications facilities" was replaced with "interpersonal communications capabilities" throughout the standard to better reflect the intent of the RC SDT.

We also received comments regarding the applicability of the standard that suggested adding the other entities listed in IRO-001 (Transmission Service Provider, Load-serving Entity and Purchasing-Selling Entity). The RC SDT contends that, in order to receive and carry out directives, an entity must be able to communicate with the Reliability Coordinator ...either directly or through other entities (e.g. – a Distribution Provider may receive a directive from the Transmission Operator who received it from the Reliability Coordinator). We have not expanded the applicability as suggested as we feel that this expands the standard beyond the reliability intent. The RC SDT contends that the addition of the Transmission Service Provider, Load-Serving Entity and Purchasing Selling Entity to COM-001 adds no reliability benefit as the interactions with these entities are commercial in nature. It is not necessary nor is it practical, for reliability purposes, for every entity to have normal and back-up interpersonal communications capabilities with every other entity. The SDT did, however add the Transmission Service Provider, Load-serving Entity and Purchasing-Selling Entity to the list of entities in R3 that must use English Language for inter-entity communications.

| Other commenters had concerns with regard to R2 and the intent with regard to length of outages. The requirement was revised as:

R2. Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure (30 minutes or longer) of ~~its their~~ normal ~~interpersonal communications capabilities-telecommunications facilities, and verify the alternate means of telecommunications are functional.~~

The informational (last) sentence of R3 was removed per stakeholder suggestions:

R3. Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Purchasing-Selling Entity, and Distribution Provider shall use English as the language for all inter-entity Bulk Electric System reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. ~~Transmission Operators and Balancing Authorities may use an alternate language for internal operations.~~

Measures: Commenters suggested general as well as specific revisions to the measures. One general comment suggested making the language consistent among the measures regarding evidence. M1-M3 were revised to include the phrase “shall have and provide upon request evidence that ...”.

Several commenters suggested revisions to M3. The RC SDT revised M3 based on the comments received suggesting that the applicability be expanded and added the Generator Operator, Distribution Provider, Transmission Service Provider, Purchasing-selling Entity, and Load-serving Entity to the measure. Several entities commented that M3 did not match R3 which included an explanatory sentence that allowed an entity to use a language other than English for its internal communications. The informational second sentence was removed from Requirement R3, thus eliminating the “disconnect” between the requirement and the measure. All measures were revised as necessary to reflect revisions to requirements.

VSLs: The RC SDT made revisions to the VSL’s based on the comments received and also to reflect revisions to the associated requirements. The SDT received comments that the VSLs for R1 and R2 were based on multiple violations rather than a single violation and revised the VSLs to reflect a single violation, which is one of FERC’s guidelines for VSLs.

Requirements, Measures and VSLs in COM-002-3

The work of the IROL SDT resulted in the retirement of R1 from the standard. The RC SDT received comments recommending expanding the applicability of the standard and separating Requirement R1 into two distinct requirements. The applicability was expanded to include Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity. The requirements were revised to:

R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a directive associated with real-time operational emergency conditions shall require the recipient of the directive to repeat the intent of the directive back; and shall acknowledge the response as correct or repeat the original statement to resolve any misunderstandings. *[Violation Risk Factor: High][Time Horizon: Real-Time]*

R2. Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a directive issued per Requirement R1 shall repeat the intent of the directive back to the issuer of the directive. *[Violation Risk Factor: High][Time Horizon: Real-Time]*

The purpose statement was also revised to reflect the revisions to the standard: “To ensure communications by operating personnel are effective.”

The RC SDT received comments recommending expanding the applicability of the standard and separating Requirement R1 into two distinct requirements. The applicability was expanded to include Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission

Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity. The measures were revised to:

- M1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a directive associated with real-time operational emergency conditions shall have evidence such as voice recordings or transcripts of voice recordings to show that it required the recipient of the directive to repeat the intent of the directive back; and acknowledged the response as correct or repeated the original statement to resolve any misunderstandings.
- M2. Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a directive issued per Requirement R1 shall have evidence such as voice recordings or transcripts of voice recordings to show that it repeated the intent of the directive back to the issuer of the directive.

VSLs: The RC SDT received comments recommending revisions to the VSLs based on revisions to the requirements and measures. The RC SDT did this and created new VSLs for new Requirement R2.

Requirements, Measures and VSLs in IRO-001-2

The RC SDT has received a notable number of comments suggesting edits to the proposed requirements and measures for the draft standard, particularly regarding the phrase “without intentional delay.” The comments do not oppose the objective of the phrase, but often point out the issues of measuring intent and measuring delay time.

To maintain the intent while improving the measurability of the requirement, the SDT proposes to modify the standard as follows: delete the phrase ‘without intentional delay’ and leave the obligation of response and timing an unstated requirement of R1 “The RC shall act or direct actions...”

An RC that requires a given action in a given time will be expected to inform the impacted entities of those actions and time requirements. This would obviate the need for providing a measure for “intent”, but still maintain the reliability intent of the original requirement.

The VSLs were revised to reflect revisions to the requirements as well as the comments of stakeholders. Several comments suggested that there was no fundamental difference between the RC “acting” or “directing actions”. The RC SDT agreed and removed the High VSL for R1 and revised the Severe VSL accordingly. Other commenters suggested removing the High VSL from R2 as the VSL contradicted the requirement. The RC SDT agreed and removed the VSL.

Requirements, Measures and VSLs in IRO-002-2

Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired IRO-002-2 Requirement R1. The team also received concern about eliminating the requirement to monitor frequency. While the Standard Drafting Team (SDT) recognizes the concern raised, the SDT is even more concerned with the subjectivity that any attempt to measure “Monitoring” can provide. It is the SDT’s contention that adherence to reliability standards that require the said monitoring cannot be demonstrated unless the entity is closely monitoring the system parameters. Furthermore, the SDT contends that any requirements that describe the monitoring facilities needed to fulfill fundamental duties should be embedded in entity certification requirements. With IRO-014 and IRO-001 R1 in place, the actual act of monitoring is a secondary task that is inherent in responding to situations or events that could have an adverse impact on reliability. The team declined to delete R2 (Reliability Coordinator veto over analysis tool outages) as it was a specific recommendation from the 2003 Blackout report. This requirement was revised and moved into IRO-001-2 as R6.

Retirement of IRO-005-1

Several commenters had concerns around removing the requirement to monitor frequency (IRO-005-1 R8). The intent of this monitoring activity was incorporated into IRO-002-2, R1. Other commenters had concerns with the removal of other monitoring requirements in the standard. While the Standard Drafting Team (SDT) recognizes the concern raised, the SDT is even more concerned with the subjectivity

associated with any attempt to measure “Monitoring.” It is the SDT’s contention that adherence to reliability standards that require the said monitoring cannot be demonstrated unless the entity is closely monitoring the system parameters. Furthermore, the SDT contends that any requirements that describe the monitoring facilities needed to fulfill fundamental duties should be embedded in entity certification process requirements. With IRO-014 and IRO-001 R1 in place, the actual act of monitoring is a secondary task that is inherent in responding to situations or events that could have an adverse impact on reliability.

Requirements, Measures and VSLs in IRO-014-2

Several commenters expressed concerns with the term “impacted” and suggested replacing this with “other”. The RC SDT believes “impacted” directly relates to the purpose statement. The original wording of “one or more other” is vague and difficult to measure. Using the word “other” presents a similar situation. The RC SDT chose to use the word “impacted” to tighten the requirement and remove ambiguity. The RC SDT does not intend for non-contiguous Reliability Coordinators to have “Reliability Coordinator Agreements”, but to have Procedures, Processes, or Plans with impacted Reliability Coordinators. Other commenters suggested striking the term “as a minimum” in R1 and the RC SDT agrees and has modified R1 accordingly.

Some commenters did not agree with the wording of the two new requirements in IRO-014 that were formerly in IRO-016. The SDT modified and subdivided the requirements into four requirements (R5 – R8) shown below:

- R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify impacted Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]
- R6. Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]
- R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]
- R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan, [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

Several commenters suggested that the High and Severe VSLs for R2 contradicted the requirement. The RC SDT agreed and removed the “nots” from the VSLs. Several commenters had suggested revisions for the VSLs for R6, which was imported from IRO-016. VSLs were changed to support the revised requirements.

IRO-015-2

Stakeholders agree with the proposal to move the requirements into IRO-014-2 and retire IRO-015 as a separate standard.

IRO-016-1

Stakeholders agree with the concept of moving the requirements of IRO-016-1 into IRO-014-2. Some commenters did not agree with the wording of the new requirements in IRO-014 that were formerly in IRO-016. The RC SDT made some revisions to the requirements listed in IRO-014-2. There are now 4 requirements are listed above in IRO-014-2 summary.

Implementation Plan - Proposed Effective Dates

The RC SDT received comments that COM-001-2, R5 should have an effective date immediately upon regulatory approval. The RC SDT agrees and will request an effective date that is the first possible effective date – the first day of the first calendar quarter following applicable regulatory approval – or in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter following Board of Trustees adoption.

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Gerry Adamski, at 609-452-8060 or at gerry.adamski@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.¹

¹ The appeals process is in the Reliability Standards Development Procedures:
<http://www.nerc.com/standards/newstandardsprocess.html>.

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Comments for Set of Reliability Coordination Standards (Project 2006-06)

The Industry Segments are:

- 1 — Transmission Owners
- 2 — RTOs, ISOs
- 3 — Load-serving Entities
- 4 — Transmission-dependent Utilities
- 5 — Electric Generators
- 6 — Electricity Brokers, Aggregators, and Marketers
- 7 — Large Electricity End Users
- 8 — Small Electricity End Users
- 9 — Federal, State, Provincial Regulatory or other Government Entities
- 10 — Regional Reliability Organizations, Regional Entities

Commenter		Organization		Industry Segment									
				1	2	3	4	5	6	7	8	9	10
1.	Kris Manchur	Manitoba Hydro		x		x		x	x				
2.	Guy Zito	NPCC											x
Additional Member		Additional Organization	Region	Segment Selection									
1.	Roger Champagne	Hydro One TransEnergie	NPCC	2									
2.	Lee Pedowicz	NPCC	NPCC	10									
3.	Gerry Dunbar	NPCC	NPCC	10									
3.	Jeffrey V Hackman	Ameren			x		x		x	x			
4.	Dan Rochester	Independent Electricity System Operator - Ontario				x							
5.	Linda Perez (WECC)	Reliability Coordinator Comment Working Group											x
6.	Fred Young	Northern California Power Agency					x						
7.	Denise Roeder	ElectriCities of North Carolina, Inc.				x	x		x				
8.	Karl Bryan	US Army Corps of Engineers, Northwestern Division						x					
9.	Annette Bannon	PPL Supply Group						x	x				
Additional Member		Additional Organization	Region	Segment Selection									

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Commenter		Organization			Industry Segment									
					1	2	3	4	5	6	7	8	9	10
1.	Mark Heimbach	PPL EnergyPlus	RFC	6										
2.			MRO	6										
3.			NPCC	6										
4.			SERC	6										
5.			SPP	6										
6.	John Cummings	PPL EnergyPlus	WECC	6										
7.	Jon Williamson	PPL EnergyPlus	WECC	6										
8.	Tom Lehman	PPL Montana	WECC	5, 6										
9.	Joe Kisela	PPL Generation	RFC	5										
10.			NPCC	5										
11.	David Gladey	PPL Susquehanna	RFC	5										
10.	John Blazekovich (Commonwealth Edison)	#1 Standards Interface Subcommittee/Compliance Elements Drafting												
11.	Terry Bilke (MRO)	MRO NERC SDTandards Review Subcommittee				x								
Additional Member		Additional Organization		Region	Segment Selection									
1.	Neal Balu	WPS	MRO		3, 4, 5, 6									
2.	Carol Gerou	MP	MRO		1, 3, 5, 6									
3.	Jim Haigh	WAPA	MRO		1, 6									
4.	Charles Lawrence	ATC	MRO		1									
5.	Ken Goldsmith	ALTW	MRO		4									
6.	Tom Mielnik	MEC	MRO		1, 3, 5, 6									
7.	Pam Sordet	XCEL	MRO		1, 3, 5, 6									
8.	Dave Rudolph	BEPC	MRO		1, 3, 5, 6									
9.	Eric Rudolph	LES	MRO		1, 3, 5, 6									
10.	Joseph Knight	GRE	MRO		1, 3, 5, 6									
11.	Joe DePoorter	MGE	MRO		3, 4, 5, 6									
12.	Maire Knox	MISO	MRO		2									
13.	Michael Brytowski	MRO	MRO		10									

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Commenter		Organization		Industry Segment									
				1	2	3	4	5	6	7	8	9	10
14.	Larry Brusseau	MRO	MRO	10									
12.	Jim Busbin	Southern Company Transmission		x									
Additional Member	Additional Organization	Region	Segment Selection										
1.	Raymond Vice	Southern Company Services, Inc.	SERC	1									
2.	Mike Hardy	Southern Company Services, Inc.	SERC	1									
3.	Chris Wilson	Southern Company Services, Inc.	SERC	1									
4.	Terry Coggins	Southern Company Services, Inc.	SERC	1									
5.	Dean Ulch	Southern Company Services, Inc.	SERC	1									
6.	J. T. Wood	Southern Company Services, Inc.	SERC	1									
7.	Roman Carter	Southern Company Services, Inc.	SERC	1									
8.	Marc Butts	Southern Company Services, Inc.	SERC	1									
13.	Kathleen Goodman	ISO New England Inc.			x								
14.	Edward Davis	Entergy Services, Inc		x									
15.	Danny Dees	MEAG Power		x		x		x					
16.	Mike Gentry	Salt River Project		x		x		x	x				
17.	Jim Griffith (Southern Company)	SERC OC Standards Review Group		x		x		x					
Additional Member	Additional Organization	Region	Segment Selection										
1.	Alan Jones	Alcoa	SERC	1, 3, 5									
2.	Al McMeekin	SCE&G	SERC	1, 3, 5									
3.	Brett Koelsch	Progress Energy	SERC	1, 3, 5									
4.	Raymond Vice	Southern Co.	SERC	1, 3, 5									
5.	Danny Dees	MEAG	SERC	1, 3, 5									
6.	Raleigh Nobles	Ga System Operations Corp	SERC	1, 3, 5									
7.	Greg Stone	Duke Energy	SERC	1, 3, 5									
8.	Tim Hattaway	PowerSouth	SERC	1, 3, 4, 5									
9.	Jack Kerr	Dominion VP	SERC	1, 3, 5									
10.	Richard McCall	NCEMC	SERC	3, 4									
11.	Jim Case	Entergy	SERC	1, 3, 5									
12.	Joel Wise	TVA	SERC	1, 3, 5, 9									

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Commenter		Organization		Industry Segment									
				1	2	3	4	5	6	7	8	9	10
13.	John Rembold	SIPC	SERC	1, 3, 5									
14.	Lawrence Rodriquez	Entegra Power	SERC	3, 4, 5, 6									
15.	Mike Bryson	PJM	SERC	2									
18.	Jay Seitz	US Bureau of Reclamation						x					
19.	Patrick Brown	PJM Interconnection			x								
Additional Member		Additional Organization	Region	Segment Selection									
1.	William Harm	PJM Interconnection	RFC	2									
2.	Leanne Harrison	PJM Interconnection	RFC	2									
20.	John Blazekovich (Commonwealth Edison)	#2 Standards Interface Subcommittee/Compliance Elements Development Resource Pool											
21.	Timothy C. (TC) Thomas	Progress Energy Carolinas			x		x		x	x			
22.	Sam Ciccone	FirstEnergy			x		x	x	x	x			
Additional Member		Additional Organization	Region	Segment Selection									
1.	Dave Folk	FE	RFC	1, 3, 4, 5, 6									
2.	Doug Hohlbaugh	FE	RFC	1, 3, 4, 5, 6									
3.	Steve Lux	FE	RFC	1, 3, 4, 5, 6									
23.	Denise Koehn	Bonneville Power Administration			x		x		x	x			
Additional Member		Additional Organization	Region	Segment Selection									
1.	Rich Ellison	Transmission Dispatch		WECC									
2.	Jeffrey Cook	Transmission Communications & Grid Modeling		WECC		1							
3.	Robin Chung	Generation Support		WECC		3, 5, 6							
24.	Greg Rowland	Duke Energy			x		x		x	x			
25.	Thad Ness	AEP			x		x		x	x			
26.	Chris de Graffenried	Consolidated Edison Co. of NY, Inc.			x		x			x			
27.	Kevin Koloini	Buckeye Power, Inc.					x	x	x				
28.	Jason Shaver	American Transmission Company			x								
29.	Charles Yeung (SPP)	ISO/RTO Council Standards Review Subcommittee											x

1. Do you agree with the revisions to the Requirements in COM-001-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Summary Consideration: The RC SDT received several comments regarding the intent of the term “telecommunications facilities”. For COM-001-2, the RC SDT envisions telecommunications to be voice or message communication between operating personnel. The standard has been renamed “Communications” and the term “telecommunications facilities” was replaced with “interpersonal communications capabilities” throughout the standard to better reflect the intent of the RC SDT. Based on stakeholder comments, R1 was changed as follows:

R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall operationally test, on a quarterly basis ~~at a minimum,~~ alternative interpersonal telecommunications facilities capabilities used for communicating real-time operating information. to ensure the availability of their use when normal telecommunications facilities fail. If the test is unsuccessful, the entity shall develop a mitigation plan to restore its interpersonal communications capabilities.

We also received comments regarding the applicability of the standard that suggested adding other entities listed in IRO-001. The RC SDT contends that, in order to receive and carry out directives, an entity must be able to communicate with the RC...either directly or through other entities (e.g. – a Distribution Provider may receive the directive from the Transmission Operator who received it from the Reliability Coordinator). We have not expanded the applicability of R1 to include the TSP, LSE and PSE as suggested as we feel that this expands the standard beyond the reliability intent. It is not necessary nor is it practical, for reliability purposes, for every entity to have normal and back-up interpersonal communications capabilities with every other entity. The TSP, LSE and PSE were, however, added to R3 to add these entities to the list of entities that must use the English language when exchanging inter-entity information.

Other commenters had concerns with regard to R2 and the intent with regard to length of outages. The requirement was revised as follows:

R2. Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of the a failure (30 minutes or longer) of its normal interpersonal telecommunications facilities capabilities. ~~-, and shall verify that alternate means of telecommunications are functional.~~

The TSP, LSE and PSE were added to the list of responsible entities and the informational (last) sentence of R3 was removed per stakeholder suggestions:

R3. Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, ~~Transmission Service Provider, Load-Serving Entity, Purchasing-Selling Entity,~~ and Distribution Provider shall use English as the

language for all inter-entity Bulk Electric System (BES) reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected BES. ~~Transmission Operators and Balancing Authorities may use an alternate language for internal operations.~~

Organization	Question 1:	Question 1 Comments:
AEP	No	A precise definition of telecommunications facilities needs to be established in this standard. R2 needs to be clarified regarding impacted utilities. FERC Order 693 suggests that this standard should apply Distribution Providers (DP) along with Generation Operators (GOP). AEP acknowledges that there needs to be some level of coordination and communication between DPs and other function model entities; however, the requirements, as applied to the DP, for telecommunications with the TOP and BA might not address the current communication paths adequately. Today, the DP usually does not communicate with the RTO (performing the BA and/or TOP function), but the DP could either communicate directly or through a joint action agency to the IOU that may serve as the TO (or maybe the TOP). As this draft is written the DPs would be required to have telecommunication facilities with the RTO in this scenario. There will likely be many exceptions to the rule that the requirements and measures create when applied to the DP. We ask that the drafting team consider the applicability, some of the current channels of communications, and options for addressing the FERC comments without creating telecommunication paths that do not make practical sense.
Response: The RC SDT thanks you for your comment. COM-001-2 has been renamed "Communications". The RC SDT envisions COM-001-2 as referring to voice or text communications only. We have revised the term "telecommunications facilities" to "interpersonal communications capabilities" to better reflect the intent. In R2, the phrase, "impacted entities" refers to any entity with whom the TC, TOP or BA has lost interpersonal communications capabilities. The requirements were written to address the differences in any entity's facility needs allowing for adequate flexibility to incorporate cost effective solutions as well as accommodate future technologies (FERC Order 693 directives).		
ElectriCities of North Carolina, Inc.	No	We are a joint action agency registered on behalf of our member municipalities, who are all TDUs, neither own nor operate any Bulk Electric System facilities, and perform no real-time operations or operations planning for the BES. There are currently other standards that already apply to us that require us to have processes and means to communicate with our RC, BA, TOP, etc. The proposed modifications to this standard would now make our members subject to this standard as well, based

Organization	Question 1:	Question 1 Comments:
		on the DP registration designation. Given that, we believe there needs to be additional clarification of specifically what type of "telecommunications facilities" are required to be considered compliant with this standard. Maybe in the past when this standard applied to TOPs, BAs, and RCs, it was intuitive what type of telecommunications facilities they needed to communicate with each other. However, when you bring in small DPs, it doesn't seem so clear. Obviously we already communicate with our TOP and BA, and have done so for years. As written, the standard is ambiguous in terms of what more, if anything, we would have to put in place to satisfy this standard.
Response: The RC SDT thanks you for your comment. COM-001-2 has been renamed "Communications". The RC SDT envisions COM-001-2 as referring to voice or text communications only. We have revised the term "telecommunications facilities" to "interpersonal communications capabilities" to better reflect the intent. The purpose statement is revised as: To ensure that operating entities have adequate interpersonal communication capabilities. The requirement R4 was written to meet a FERC directive with respect to COM-001. The requirement states: Each Distribution Provider and Generation Operator shall demonstrate the existence of its interpersonal communications capabilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information. Compliance with NERC requirements can be achieved through agreements with other entities to meet the intent of the requirement. The RC SDT can not address compliance issues, as this is the scope of NERC Compliance.		
US Army Corps of Engineers, Northwestern Division	No	R3 needs to have the last sentence revised to allow the Generator Operator and Distribution Provider to use an alternate language for internal operations.
Response: The RC SDT thanks you for your comment. The requirement and measure were revised to delete the last sentence as it was not a requirement, but only information.		
US Bureau of Reclamation	No	Purpose Distribution Providers and Generator Operators were added to the applicability; the Purpose should be revised to reflect that.
Response: The RC SDT thanks you for your comment. The Purpose Statement was revised to: To ensure that operating entities have adequate interpersonal communication capabilities.		

Organization	Question 1:	Question 1 Comments:
CU of Springfield	No	City Utilities of Springfield, Missouri (CU) supports the effort of the drafting team to add Distribution Providers and Generator Operators to the "Applicability" section, the change in language regarding testing of alternate telecommunication facilities and the future effort to move COM-001-2 R3 to the new COM-003-1 standard. However, it is still necessary to define all parties that are responsible for having "adequate and reliable telecommunication facilities" and to require them to have both primary and backup telecommunication facilities. Since this standard is designed to address telecommunication facilities, any redundancy that exists should be removed from other standards instead. The proposal from the drafting team to remove all of the language from COM-001-1 R1 will create a gap in responsibility, since none of the standards mentioned in the Implementation Plan specifically require a RC, BA or TOP to have these facilities. It is the opinion of CU that you have defined the parties that need to communicate "Interconnection and operating information" in IRO-001-2, where a BA, TOP, GOP, TSP, LSE, DP and PSE receive and comply with directives from the RC. Therefore to maintain consistency are not all of these entities expected to have "adequate and reliable" telecommunication facilities? CU suggests that COM-001-2 R4 be moved to R1 and standard language changed to say: Purpose: Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Distribution Provider, Load Serving Entity and Purchasing Selling Entity needs adequate and reliable telecommunications facilities internally and with others in the Reliability Coordinator's area, for the exchange of Interconnection and operating information necessary to maintain reliability. R1. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Distribution Provider, Load Serving Entity and Purchasing Selling Entity shall have primary and backup telecommunications facilities for the exchange of Interconnection and operating information. R2. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Distribution Provider, Load Serving Entity and Purchasing Selling Entity shall operationally test, on a quarterly basis at a minimum, alternative telecommunications facilities to ensure the availability of their use when normal telecommunications facilities fail. R3. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Distribution Provider, Load Serving Entity and Purchasing Selling

Organization	Question 1:	Question 1 Comments:
		Entity shall notify impacted entities of the failure of its normal telecommunications facilities, and shall verify that alternate means of telecommunications are functional. R4. Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Distribution Provider, Load Serving Entity and Purchasing Selling Entity shall use English as the language for all inter-entity Bulk Electric System (BES) reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected BES. Transmission Operators and Balancing Authorities may use an alternate language for internal operations. The end result will be a standard that requires all applicable entities to: A. Have primary and backup telecommunication facilities. B. Test the telecommunication facilities. C. Utilize the telecommunication facilities.
Response: The RC SDT thanks you for your comment. Applicability: You are correct with regards to IRO-001 and the entities involved in carrying out directives. The RC SDT contends that, in order to receive and carry out directives, an entity must be able to communicate with the RC...either directly or through other entities (e.g. – a Distribution Provider may receive the directive from the Transmission Operator who received it from the Reliability Coordinator). The RC SDT has changed the name of this standard to “Communications and revised the Purpose Statement to: To ensure that operating entities have adequate interpersonal communication capabilities. We have replaced the term “Telecommunications Facilities” with “interpersonal communications capabilities” to better reflect the intent of the standard. We have not expanded the applicability of R1 or R2 as you suggest as we feel that this expands the standard beyond the reliability intent. It is not necessary nor is it practical, for reliability purposes, for every entity to have normal and back-up interpersonal communications capabilities with every other entity. The SDT did, however, expand the applicability for the requirement to use English language to include the TSP, LSE and PSE in support of your suggestion.		
Northern California Power Agency	No	R3 should include in the last sentence that the Generator Operator and Distribution Provider may use alternate language for internal operations.
Response: The RC SDT thanks you for your comment. The requirement and measure were revised to delete the last sentence since it was informational only and not a requirement.		

Organization	Question 1:	Question 1 Comments:
MRO NERC SDTandards Review Subcommittee	No	The new R2 requirement is too verbose. We suggest that you strike the final clause: "and shall verify that alternate means of telecommunications are functional." It is obviated by the requirement to notify impacted parties. The responsible entity is already implicitly required to verify its alternate means of communication is functional since it is required to notify its impacted parties of the failure of its normal telecommunications. It can't notify its impacted parties if the alternate communications means are not functional. This clause is similar to the old requirement one that the drafting team appropriately struck. We tend to agree that striking R1 makes sense due to the drafting team's reasoning. However, we are not clear why the new R4 is necessary then. If the drafting team does not believe R1 is necessary shouldn't they respond to the FERC directive with the same reason why R4 is not really necessary? The VRF for new requirement 1 should be lower. It does not fit the definition of a medium VRF. A medium VRF requires that a violation of the requirement directly affect the state or capability or the ability to effectively monitor and control. Failure to test does not result in directly affecting the state or capability or the ability to effectively monitor and control. At a minimum, a failure of the alternative communication systems and primary communication systems must occur first. The failure to perform a single test in a given quarter does not mean that primary and alternative communication systems will fail. Thus, testing is really an administrative issue and should thus be a lower VRF. In the Data Retention section, Distribution Provider and Generation Operators should be added. Currently, there are no data retention requirements listed for them. Suggest modifying the language regarding data retention for compliance violations to: "... is found in violation of a requirement, it shall keep information related to the violation until it the Compliance Enforcement Authority finds it compliant."
Response: The RC SDT thanks you for your comments. R2: The RC SDT deleted the final clause as you suggest. R4: This was added because of the FERC directive: Include generator operators and distribution provider as applicable entities and include requirements for their telecommunications. VRF: We concur and have modified the VRF.		

Organization	Question 1:	Question 1 Comments:
Data Retention: We have revised the Data Retention to section to comport with your comment.		
Southern Company Transmission	No	1.1 - In R1, we suggest that "operationally test by way of operator action" should be defined to remove any confusion regarding what the term requires. The word "ensure" needs to be changed to "assure" to more accurately convey the intent of the requirement. We also suggest changing the word "facilities" to "capabilities". 1.2 - R2 is overly broad and should include a reasonable time frame for notification. For example, as currently written, a telecom outage of only one minute for which a notification is not made would be a severe violation. The VSL should be consistent with the language of the requirement. A very short, insignificant telecom outage with no notification could result in a severe violation as the requirement is presently written and VSL's applied. 1.3 - R1, R2 and R3 should be expanded to include the list of entities the RC needs to talk with as included in the Applicability section of IRO-001-2 (RC, TO, BA, GO, DP, TSP, LSE, PSE). These entities should also be included in the purpose statement and R4 and M4 can then be eliminated. 1.4 - In R3, we suggest that the last sentence of R3 should be changed to "entities may use an alternative language for internal operations" rather than allowing only TOs and BAs to have this option.
Response: The RC SDT thanks you for your comment. 1.1: The RC SDT removed the word "operationally" from the requirement. The requirement was revised to remove the "assurance" part as it does not add to the requirement. We have changed to term "telecommunications facilities" to "interpersonal communication capabilities" to better reflect the intent of the standard. 1.2: We have revised the requirement to place time bounds on outages that require notification. The new R2 is: Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure (30 minutes or longer) of its normal interpersonal communications capabilities. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i> 1.3: The RC SDT contends that the addition of the TSP, LSE and PSE to R1 and R2 of COM-001 expands the scope beyond the reliability intent, but has added the TSP, LSE and PSE to the list of entities that must use the English language in R3. 1.4: We have removed the informational (last) sentence as it is not a requirement. Others can use an alternate language, but the entities must agree to do so. This is in the first sentence of the requirement which states "Unless agreed to otherwise..." R3 was revised so that the last		

Organization	Question 1:	Question 1 Comments:
sentence, which was explanatory and did not include any required performance, was deleted.		
Progress Energy Carolinas	No	R1 - The proposed requirement R1 as stated is too broad in reference to "telecommunications facilities". It is unclear as to whether it is intending to specify facilities and equipment which provide VOICE/VERBAL communications, or ELECTRONIC MESSAGING notifications systems, or DATA EXCHANGE links or all of these. Please clarify either within the requirement or within the Glossary of Terms which accompany the full standards set. R2 - The proposed requirement R2 as stated is too broad in reference to "telecommunications facilities". It is unclear as to whether it is intending to specify facilities and equipment which provide VOICE/VERBAL communications, or ELECTRONIC MESSAGING notifications systems, or DATA EXCHANGE links or all of these. Please clarify either within the requirement or within the Glossary of Terms which accompany the full standards set. R4 - The proposed requirement R4 as stated is too broad in reference to "telecommunications facilities". It is unclear as to whether it is intending to specify facilities and equipment which provide VOICE/VERBAL communications, or ELECTRONIC MESSAGING notifications systems, or DATA EXCHANGE links or all of these. Please clarify either within the requirement or within the Glossary of Terms which accompany the full standards set.
Response: The RC SDT thanks you for your comment. COM-001-2 has been renamed "Communications". The RC SDT envisions COM-001-2 as referring to voice or message communications only. We have revised the term "telecommunications facilities" to "interpersonal communications capabilities" throughout the standard to better reflect the intent.		
NPCC	No	There is inconsistency between R3 and M3. In R3, there is a provision for agreement between entities (RC, TOP, BA, GOP, DP) to use a language other than English in their communications. In M3, that option is not presented. M3 should reflect what is written in R3.
Response: The RC SDT thanks you for your comment. The provision that you mention was removed from the requirement since it is not a requirement, but an informational statement. The English language Requirement begins with the phrase "Unless agreed to otherwise...". This allows for the use of other languages where agreed to.		
ISO New England Inc.	No	ISO New England does not support the removal of Requirement 1. Also, we believe Requirement 3 is written such that it may pose an unnecessary requirement on the

Organization	Question 1:	Question 1 Comments:
		Hydro Quebec area given the terminology "inter-entity" and support further clarification.
Response: The RC SDT thanks you for your comment. The majority of commenters agreed with the removal of R1. The last sentence of the requirement 3 was deleted as it was an informational statement only. The English language Requirement begins with the phrase "Unless agreed to otherwise..." This allows for the use of other languages where agreed to.		
FirstEnergy	No	Purpose - The purpose does not include the GOP and DP entities. It may be better if the purpose was written more generally as "To ensure adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information necessary to maintain BES reliability". R1 - This requirement makes no distinction between data and voice communications facilities and assumes a designated primary and backup facility configuration such that the backup communications systems are not used regularly. This may be an accurate assumption for data communications; however voice communications may be different. Today many organizations use voice communications systems that allow the system to choose the communication path each time a call is placed. This design ensures that all communications paths are tested regularly in day-to-day use. However, the design of these systems makes it difficult, if not impossible, to substantiate that a functional test of the circuitry has been performed. This requirement should be broken into two requirements. The first should cover data circuitry and the second should cover voice circuitry. This will allow the drafting team to address the inherent differences in these two methods of communications. Lastly, the requirements need to be much more specific concerning the criticality of the facilities to be tested to improve the measurability of the standard. The drafting team dropped the phrase "for the exchange of Interconnection and operating data" from the standard requirement. This deletion appears to open the application of this standard to virtually every communication path used by an RC, BA, TOP whether or not it is used for communicating real-time operating information or not. We do not believe this was the intention of the drafting team and suggest this phrase be reinserted or another one added that limits applicability to only those communication paths that support the real-time reliability of the bulk electric system. R2 - It is not clear who the "impacted entities" would be in this requirement. The SDT should consider specifying these entities. R3 - The last sentence of this requirement should be deleted. It is not a requirement, it does not add clarity, and the first sentence is very specific as to the communications covered by the requirement. R4 - This requirement makes no distinction between data and voice communications facilities and

Organization	Question 1:	Question 1 Comments:
		assumes a designated primary and backup facility configuration such that the backup communications systems are not used regularly. This may be an accurate assumption for data communications; however voice communications may be different. Today many organizations use voice communications systems that allow the system to choose the communication path each time a call is placed. This design ensures that all communications paths are tested regularly in day-to-day use. However, the design of these systems makes it difficult, if not impossible, to substantiate that a functional test of the circuitry has been performed. This requirement should be broken into two requirements. The first should cover data circuitry and the second should cover voice circuitry. This will allow the drafting team to address the inherent differences in these two methods of communication.
Response: The RC SDT thanks you for your comment. Purpose: To better reflect the intent of the standard, we have modified the Purpose Statement to: To ensure that operating entities have adequate interpersonal communication capabilities. R1: The standard has been revised to remove the term “telecommunications facilities” and replace it with “interpersonal communications capabilities”. This reflects the intent of the standard, which is to have voice and message communication capabilities. R1 has been revised as: Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall test, on a quarterly basis, alternative interpersonal communications capabilities used for communicating real-time operating information. If the test is unsuccessful, the entity shall develop a mitigation plan to restore its interpersonal communications capabilities. <i>[Violation Risk Factor: Lower][Time Horizon: Real-time Operations]</i> R2: The term “impacted entities” indicates those entities with which you have lost interpersonal communications capabilities. R2 has been revised to: Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure (30 minutes or longer) of its normal interpersonal communications capabilities. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i> R3: We concur and have deleted the sentence. R4: COM-001-2 only covers voice and message communications and R4 has no provision for primary / alternate capabilities.		
Duke Energy	No	Purpose - The purpose statement does not read very well. It either needs another sentence or changes to the current sentence. The purpose of the standard is to assure proper communications, not to suggest entities need proper communications as currently written. Suggest changing to, “To

Organization	Question 1:	Question 1 Comments:
		assure each Reliability Coordinator, Transmission Operator and Balancing Authority develops and maintains”. Requirement R1 - What is the definition of "alternative telecommunications facilities"? Is there another requirement somewhere to have alternative telecommunications facilities — or is this a new requirement being introduced by this standard? What is the relationship, if any, between "alternative telecommunications facilities" and EOP-008-1? What is the requirement for maintaining and testing "alternative telecommunications facilities"; what does “operationally test” mean Just because an alternative facility works when it is tested does not mean it will work during an actual failure of the primary system. Furthermore, what do we do if the “test” fails — are we still compliant? The word “ensure” needs to be changed to “assure”. Requirement R2 - What does "impacted entity" mean? Requirement R3 - Why can't others use alternate language — this limits alternate language to just TOPs and BAs internal operations. TOs, GOPs, and others may want to use alternate language internally. Need to define language to be used with and between other relationships — BA to PSE, as an example. Is this a reliability issue or a certification issue? Simply state that: “Entities may use alternative language for internal operations”. This will allow any entity to use alternative language for internal operations. The inclusion of TSPs, LSEs, and PSEs in IRO-001-2 indicates the need to include these functions in the COM-001-2 applicability and requirements concerning the use of English as the approved language. Requirement R4 - Remove R4 and add DP and GO, as well as all of the other entities listed in IRO-001-2, to R1 thru R3.
		Response: The RC SDT thanks you for your comment. Purpose: To better reflect the intent of the standard, we have modified the Purpose Statement to: To ensure that operating entities have adequate interpersonal communication capabilities. R1: “Alternative telecommunications facilities” was used in place of “redundant”. Many entities have multiple “primary facilities” which could be construed as redundant. The use of “alternative” is intended to indicate at least one primary and one other facility. R2: The term “impacted entities” indicates those entities with which you have lost communications capabilities. Based on other’s comments, R2 has been revised to: Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of

Organization	Question 1:	Question 1 Comments:
		a failure (30 minutes or longer) of its normal interpersonal communications capabilities. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i> R3: The second sentence was removed as it was a statement and not a requirement. Others can use an alternate language, but the entities must agree to do so. This is in the first sentence of the requirement which states "Unless agreed to otherwise..." R4: The DP and GOP were added to this standard per a FERC directive (paragraph 509 of Order 693). Putting these entities in R1-R3 would add requirements not envisioned by the directive and provide no additional reliability benefit. The RC SDT contends that the addition of the TSP, LSE and PSE (from IRO-001) to COM-001 R1 and R2 expands the scope beyond the reliability intent, but has added the TSP, LSE and PSE to the list of entities that must use the English language in R3.
ISO/RTO Council Standards Review Subcommittee	Yes and No	We suggest that a definition of telecommunications be written by the drafting team because it is not clear what all telecommunications is intended to be included. Does this requirement apply to data, voice, rtus, networks, etc? For requirement R2, we suggest that you strike the final clause: "and shall verify that alternate means of telecommunications are functional." It is obviated by the requirement to notify impacted parties. The responsible entity is already implicitly required to verify its alternate means of communication is functional since it is required to notify its impacted parties of the failure of its normal telecommunications. It can't notify its impacted parties if the alternate communications means are not functional. The VRF for new requirement 1 should be lower. It does not fit the definition of a medium VRF. A medium VRF requires that a violation of the requirement directly affect the state or capability or the ability to effectively monitor and control. Failure to test does not result in directly affecting the state or capability or the ability to effectively monitor and control. At a minimum, a failure of the alternative communication systems and primary communication systems must occur first. The failure to perform a single test in a given quarter does not mean that primary and alternative communication systems will fail. Thus, testing is really an administrative issue and should thus be a lower VRF. In the Data Retention section, Distribution Provider and Generation Operators should be added. Currently, there are no data retention requirements listed for them. Suggest modifying the language regarding data retention for compliance violations to: "...is found in violation of a requirement, it shall keep information related to the violation until it the Compliance Enforcement Authority finds it compliant."

Organization	Question 1:	Question 1 Comments:
Response: The RC SDT thanks you for your comment. The intent of this standard is reflected in the revised purpose statement: To ensure that operating entities have adequate interpersonal communication capabilities. COM-001-2 only deals with voice or message communications. We have renamed the standard to “Communications” and replaced the term “telecommunications facilities” with “interpersonal communications capabilities” throughout the standard. R2: We have revised R2 as you suggest. R2 has been revised to: Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure (30 minutes or longer) of its normal interpersonal communications capabilities. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i> VRF: We concur and have modified the VRF. Data Retention: We have revised the Data Retention as you suggested.		
SERC OC Standards Review Group	Yes and No	1.1 - In R1, we suggest that "operationally test" should be defined to remove any confusion regarding what the term requires. The word "ensure" needs to be changed to "assure" to more accurately convey the intent of the requirement. We also suggest changing the word "facilities" to "capabilities". 1.2 - R2 is overly broad and should include a reasonable time frame for notification. For example, as currently written, a telecom outage of only one minute for which a notification is not made would be a severe violation. 1.3 - R1, R2 and R3 should be expanded to include the list of entities the RC needs to talk with as included in the Applicability section of IRO-001-2 (RC, TO, BA, GO, DP, TSP, LSE, PSE). These entities should also be included in the purpose statement and R4 and M4 can then be eliminated. 1.4 - In R3, we suggest that the last sentence of R3 should be changed to "entities may use an alternative language for internal operations" rather than allowing only TOs and BAs to have this option.
Response: The RC SDT thanks you for your comment. 1.1: The RC SDT removed the word “operationally” from the requirement. The requirement was revised remove the “assurance” part as it does not add to the requirement. We have changed to term “facilities” to “capabilities” as you suggest.		

Organization	Question 1:	Question 1 Comments:
		1.2: We have revised the requirement to place time bounds on outages that require notification. The new R2 is: Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure (30 minutes or longer) of its normal interpersonal communications capabilities. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i> 1.3: The RC SDT contends that the addition of the TSP, LSE and PSE to COM-001 expands the scope beyond the reliability intent, but has added the TSP, LSE and PSE to the list of entities that must use the English language in R3. 1.4: We have removed the informational (last) sentence as it is not a requirement. Others can use an alternate language, but the entities must agree to do so. This is in the first sentence of the requirement which states "Unless agreed to otherwise..."
Buckeye Power, Inc.	Yes and No	What constitutes "telecommunications facilities"?
		Response: The RC SDT thanks you for your comment. COM-001-2 deals with voice or message communications only and has been renamed "Communications. We have replaced the phrase "telecommunications facilities" with "interpersonal communications capabilities" throughout the standard to better reflect the intent. The purpose statement has been revised to To ensure that operating entities have adequate interpersonal communication capabilities.
American Transmission Company	Yes and No	If some language is clarified, we support the revisions. R2 states that "Each TO shall notify impacted entities of the failure of its normal telecommunications facilities". If a phone line goes down and an alternate phone line is used, it is an excessive requirement to notify the impacted entities when there is no impact upon communication or the BES. The wording should be clear that notification is only required if an alternate means of communication is necessary. A defined timeframe for notification should be added to the requirement. It is possible that the loss of telecommunication faculties can occur without the loss of a control center. So, the redundancy with EOP-008 to R4 should be clarified.
		Response: The RC SDT thanks you for your comment. The RC SDT believes that entities should contact others when their normal communication capability is lost. For example, the normal phone line could be cut and someone trying to contact that entity may only get a busy signal and have no idea that alternate communications is necessary. We have revised the requirement to place time bounds on outages that require notification as you suggest. The new R2 is: Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of

Organization	Question 1:	Question 1 Comments:
a failure (30 minutes or longer) of its normal interpersonal communications capabilities. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i> Based on these revisions, we do not believe further clarification with regards to EOP-008 is necessary.		
PJM Interconnection	Yes	We agree with the revisions, but recommend adding applicability to Distribution Providers and Generator Operators for data retention requirements.
Response: The RC SDT thanks you for your comment. The data retention requirements have been revised as you suggested.		
Entergy Services, Inc	Yes	The drafting team should consider expanding the second sentence of R3 to apply to internal communications of any affected entity not just BAs and TOPs.
Response: The RC SDT thanks you for your comment. We concur with your sentiment and the second sentence has been removed as it was not a requirement, but an informational statement. Use of an alternate language by any entity is allowed under the requirement which begins with the phrase: "Unless agreed to otherwise..." The requirement has been revised to: R3. Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Purchasing-Selling Entity, and Distribution Provider shall use English as the language for all inter-entity Bulk Electric System (BES) reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected BES. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i>		
Salt River Project	Yes	
Manitoba Hydro	Yes	
Ameren	Yes	
Independent Electricity System Operator - Ontario	Yes	
Reliability Coordinator	Yes	

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 1:	Question 1 Comments:
Comment Working Group		
PPL Supply Group	Yes	
Bonneville Power Administration	Yes	

2. Do you agree with the revisions to the Measures in COM-001-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Summary Consideration: Commenters suggested general as well as specific revisions to the measures. One general comment suggested making the language consistent among the measures regarding evidence. M1-M3 were revised to include the phrase “shall have and provide upon request evidence that ...”.

The revisions to M1 are shown below:

- M1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have and provide upon request, evidence that could include, but is not limited to dated test records, operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, it ~~operationally~~ tested, on a quarterly basis ~~at a minimum,~~ alternative interpersonal telecommunications facilities capabilities used for communicating real-time operating information. ~~to ensure the availability of their use when normal telecommunications facilities fail.~~ If the test was unsuccessful, the entity shall have and provide upon request evidence that it developed a mitigation plan to restore the interpersonal communications capabilities.

Several commenters suggested revisions to M3. The RC SDT revised M3 based on the comments received suggesting that the applicability be expanded to include Generator Operators, Transmission Service Providers, Load-Serving Entities, Purchasing-Selling Entities, and Distribution Providers. Several entities commented that M3 did not match R3 which included an explanatory sentence that allowed an entity to use a language other than English for its internal communications. The informational second sentence was removed from Requirement R3, thus eliminating the “disconnect” between the requirement and the measure.

The revisions to M3 are shown below:

- M3. ~~The Each~~ Reliability Coordinator, Transmission Operator or Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Purchasing-Selling Entity, and Distribution Provider shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, that will be used to determine that personnel used English as the language for all inter-entity BES reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected BES. If a language other than English is used, each party shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, of agreement to use the alternate language.

M4 was revised based on stakeholder comments as follows:

M4. Each Distribution Provider and Generation Operator shall demonstrate the existence of ~~has its tele~~ interpersonal communications ~~facilities~~ capabilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information.

All measures were revised as necessary to reflect revisions to requirements.

Organization	Question 2:	Question 2 Comments:
NPCC	No	There is inconsistency between R3 and M3. In R3, there is a provision for agreement between entities (RC, TOP, BA, GOP, DP) to use a language other than English in their communications. In M3, that option is not presented. M3 should reflect what is written in R3.
Response: The RC SDT thanks you for your comment. The informational second sentence was removed from the requirement so there is no longer a disconnect between the requirement and the measure.		
CU of Springfield	No	CU suggests that COM-001-2 M4 be moved to M1 and language in the measures changed to: M1. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Distribution Provider, Load Serving Entity and Purchasing Selling Entity shall have evidence of primary and backup telecommunication facilities. M2. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Distribution Provider, Load Serving Entity and Purchasing Selling Entity shall provide evidence that it operationally tested, on a quarterly basis at a minimum, alternative telecommunications facilities to ensure the availability of their use when normal telecommunications facilities fail. M3. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Distribution Provider, Load Serving Entity and Purchasing Selling Entity shall provide evidence that it notified impacted entities of failure of their normal telecommunications facilities, and verified the alternate means of telecommunications were functional. M4. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Distribution Provider, Load Serving Entity and Purchasing Selling Entity shall have and provide upon request evidence that could include, but is not limited to operator

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 2:	Question 2 Comments:
		logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, that will be used to determine that personnel used English as the language for all inter-entity BES reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected BES.
Response: The RC SDT thanks you for your comment. We have revised the requirements for COM-001 based on the comments received from all stakeholders. We also revised the measures to reflect the new verbiage of the requirements. We have replaced the term "Telecommunications Facilities" with "interpersonal communications capabilities" to better reflect the intent of the standard. The RC SDT contends that the addition of the TSP, LSE and PSE to COM-001 to R1 and R2 expands the scope beyond the reliability intent, but has added the TSP, LSE and PSE to the list of entities that must use the English language in R3. It is not necessary nor is it practical, for reliability purposes, for every entity to have normal and back-up interpersonal communications capabilities with every other entity.		
Independent Electricity System Operator - Ontario	No	M3: The evidence to show that concurrence is in place to allow communication using a language other than English is missing. The Measure as written merely asks for evidence that communication in a different language has occurred.
Response: The RC SDT thanks you for your comment. The informational second sentence was removed from the requirement so there is no longer a requirement for evidence regarding this.		
Reliability Coordinator Comment Working Group	No	On Measure 3 need to remove the word "all" in reference to voice logs. Measure needs to include evidence of concurrence for using a language other than English
Response: The RC SDT thanks you for your comment. The informational second sentence was removed from the requirement so there is no longer a requirement for evidence regarding this.		
Northern California Power Agency	No	M3 should include Generator Operator and Distribution Provider in the applicability.
Response: The RC SDT thanks you for your comment. The measure has been revised to include the Generator Operator and Distribution Provider.		

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Organization	Question 2:	Question 2 Comments:
ElectriCities of North Carolina, Inc.	No	See comments on Question 1
Response: Please see response to question 1.		
US Army Corps of Engineers, Northwestern Division	No	M3 needs to include the GO and DP in its requirement for inter-utility communications in English.
Response: The RC SDT thanks you for your comment. The measure has been revised to include the Generator Operator and Distribution Provider.		
MRO NERC SDTandards Review Subcommittee	No	M4 does not appear to be worded as a measurement. If R4 is kept, we suggest the following modification: "The Distribution Provider and Generation Operator shall demonstrate the existence of its telecommunication systems identified in R4."
Response: The RC SDT thanks you for your comment. We have revised M4 per your suggestion.		
Southern Company Transmission	No	2.1 - A general comment regards the production of evidence - such language should be standardized as "have and provide upon request" and the authorized requestors identified. This comment should apply to all standards. 2.2 - M2 is overly broad and should include a reasonable time frame for notification. For example, as currently written, a telecom outage of only one minute for which a notification is not made would be a severe violation. 2.3 - The Drafting Team should coordinate the data retention time frame with the requirement measures for R1. DPs and GOs should also be included in the measures requirements.
Response: The RC SDT thanks you for your comment. 2.1 - The measures for this standard have all been revised per your comment. 2.2 – The requirement for this measure has been modified to reflect time frames for notification as well as a length of time applicable to the outage. The measure has been revised accordingly.		

Organization	Question 2:	Question 2 Comments:
2.3 - The Data Retention section for this standard has been revised to comport with NERC Compliance guidelines. DP and GOP have been added to the measure.		
ISO New England Inc.	No	See answer to #1.
Response: Please see response to question 1.		
Salt River Project	No	M3 should include providing evidence of concurrence to use a language other than English. This will better align the measure with the VSL language.
Response: The RC SDT thanks you for your comment. We have revised the measure by adding the following sentence: If a language other than English is used, both parties shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, of agreement to use the alternate language.		
SERC OC Standards Review Group	Yes and No	2.1 - A general comment regards the production of evidence - such language should be standardized as "have and provide upon request" and the authorized requestors identified. This comment should apply to all standards. 2.2 - M2 is overly broad and should include a reasonable time frame for notification. For example, as currently written, a telecom outage of only one minute for which a notification is not made would be a severe violation. 2.3 - The Drafting Team should coordinate the data retention time frame with the requirement measures for R1. DPs and GOs should also be included in the measures requirements
Response: The RC SDT thanks you for your comment. 2.1 - The measures for this standard have all been revised per your comment. 2.2 – The requirement for this measure has been modified to reflect time frames for notification as well as a length of time applicable to the outage. The measure has been revised accordingly. 2.3 - The Data Retention section for this standard has been revised to comport with NERC Compliance guidelines. DP and GOP have been added to the measure.		

Organization	Question 2:	Question 2 Comments:
Progress Energy Carolinas	No	M1 - The proposed measure M1 as stated is too broad in reference to "telecommunications facilities". It is unclear as to whether it is intending to specify facilities and equipment which provide VOICE/VERBAL communications, or ELECTRONIC MESSAGING notifications systems, or DATA EXCHANGE links or all of these. Please clarify either within the requirement or within the Glossary of Terms which accompany the full standards set. M2 - The proposed measure M2 as stated is too broad in reference to "telecommunications facilities". It is unclear as to whether it is intending to specify facilities and equipment which provide VOICE/VERBAL communications, or ELECTRONIC MESSAGING notifications systems, or DATA EXCHANGE links or all of these. Please clarify either within the requirement or within the Glossary of Terms which accompany the full standards set. M4 - The proposed measure M4 as stated is too broad in reference to "telecommunications facilities". It is unclear as to whether it is intending to specify facilities and equipment which provide VOICE/VERBAL communications, or ELECTRONIC MESSAGING notifications systems, or DATA EXCHANGE links or all of these. Please clarify either within the requirement or within the Glossary of Terms which accompany the full standards set.
Response: The RC SDT thanks you for your comment. COM-001-2 has been renamed "Communications". The RC SDT envisions COM-001-2 as referring to voice or text communications only. We have revised the term "telecommunications facilities" to "interpersonal communications capabilities" to better reflect the intent.		
FirstEnergy	No	The measures should be modified per our suggested modifications in question 1.
Response: The RC SDT thanks you for your comment. The measures were revised based on the revisions to requirements that resulted from stakeholder comments.		
Duke Energy	No	General comments - Not using consistent language regarding "provide evidence" and "shall have and provide upon request evidence". Also need to add corresponding requirement number after each measure. Measure M1 - Just because an alternate facility works when it is tested does not mean it will work during an actual failure of the primary system. - what do we do if the "test" fails — are we complaint? Clarify that the requirement and measure is to "test" not "to test successfully". We may test and find that something does not work as expected.

Organization	Question 2:	Question 2 Comments:
Response: The RC SDT thanks you for your comment. We have modified the “evidence” language for consistency. Each measure corresponds to the measure with the same number. There is a one-to-one relationship between requirements and measures – however the SDT did add the requirement numbers to ensure this is clear to all stakeholders. M1: We have added the following sentence to R1 and M1. R1: If the test is unsuccessful, the entity shall develop a mitigation plan to restore its interpersonal communications capabilities. M1: If the test was unsuccessful, the entity shall have and provide upon request evidence that it developed a mitigation plan to restore the interpersonal communications capabilities.		
AEP	No	M2 needs to be clarified regarding impacted functions.
Response: The RC SDT thanks you for your comment. The requirement, as written, has sufficient clarity regarding the impacted entities.		
American Transmission Company	No	M2 should be changed to reflect the comments noted in Question 1 for R2.
Response: The RC SDT thanks you for your comment. The RC SDT believes that entities should contact others when their normal communication capability is lost. For example, the normal phone line could be cut and someone trying to contact that entity may only get a busy signal and have no idea that alternate communications is necessary. We have revised the requirement to place time bounds on outages that require notification. The new R2 is: Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure (30 minutes or longer) of its normal interpersonal communications capabilities. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i> The measure reflects the new requirement.		
ISO/RTO Council Standards Review Subcommittee	Yes and No	M3: The evidence to show that concurrence is in place to allow communication using a language other than English is missing. The Measure as written merely asks for evidence that communication in a different language has occurred.
Response: The RC SDT thanks you for your comment. The measure has been revised as: M1: The Reliability Coordinator, Transmission Operator or Balancing Authority shall have and provide upon request evidence that could include,		

Organization	Question 2:	Question 2 Comments:
but is not limited to dated test records, operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, that will be used to determine that personnel used English as the language for all inter-entity Bulk Electric System reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. If a language other than English is used, both parties shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, of agreement to use the alternate language.		
PJM Interconnection	Yes	M4 should be revised to reflect that each Distribution Provider and Generation Operator has evidence demonstrating the functionality of telecommunications facilities with the TOP and BA for the exchange of interconnection and operating information.
Response: The RC SDT thanks you for your comment. The measure was modified as: Each Distribution Provider and Generation Operator shall demonstrate the existence of its interpersonal communications capabilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information.		
Buckeye Power, Inc.	Yes and No	Abstain
US Bureau of Reclamation	Yes	
Bonneville Power Administration	Yes	
Manitoba Hydro	Yes	
Ameren	Yes	
PPL Supply Group	Yes	
Entergy Services, Inc	Yes	

3. Do you agree with the Violation Severity Levels proposed in COM-001-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Summary Consideration: The RC SDT made revisions to the VSLs based on the comments received and also to reflect revisions to the associated requirements. We received comments that the VSLs for R1 and R2 were based on multiple violations, which do not support FERC's Guideline 4 for VSLs - Guideline 4 requires that a VSL should be based on a single violation. We agreed and revised the VSLs to reflect a single violation.

Organization	Question 3:	Question 3 Comments:
Independent Electricity System Operator - Ontario	No	R1: Suggest to revise the conditions for all levels to read "failed to operationally test the alternative communication facilities within the last???" R2: The second part under Severe is not needed since failing to notify any impacted entities would imply no communication to the affected entities anyway. If verification of the functionality of the alternate means of telecommunications is also critical even without communicating to the affect entities, then the second condition should be an "OR". R3: Failure to having concurrence to use a language other than English for communications between and among operating personnel responsible for real-time operations by itself does not constitute a violate of any requirements; it is the absence of such a concurrence AND having used a language other than English that would constitute a violation. Suggest to revise this condition.
Response: The RC SDT thanks you for your comment. We have revised the VSLs per your suggestions and comments from other stakeholders, and revisions made to the wording of the associated requirement. We have revised the VSLs per your suggestions and the revisions made to the associated requirement We have revised the VSLs per your suggestions.		
CU of Springfield	No	Revise to reflect proposed changes above
Response: The RC SDT thanks you for your comment. The Requirement, Measures and VSLs have been revised per your and other		

Organization	Question 3:	Question 3 Comments:
stakeholders' comments.		
ElectriCities of North Carolina, Inc.	No	Depends of what is meant by "telecommunications facilities"
Response: The RC SDT thanks you for your comment. We have clarified the requirements and measures to use the term "interpersonal communications capabilities" rather than "telecommunications facilities".		
MRO NERC SDTandards Review Subcommittee	No	The VSLs as defined for Requirement 1 appear to violate Guideline 4 that the Commission established in their "Order on Violation Severity Levels Proposed by the Electric Reliability Organization". Guideline 4 requires that a VSL should be based on a single violation. The VSLs as defined accumulate the number of consecutive quarters. This would imply that a single violation could last more than a year and that the compliance auditor could not determine sanctions until the entity becomes compliant or year has passed. A single violation appears to be the failure to test in a single quarter. This requirement is binary in nature in that it is either met or it isn't. We suggest that only a lower VSL should be defined as: "The RC, TOP, or BA failed to test the backup telecommunication facilities for a single calendar quarter." The Lower VSL for R2 is not possible. The act of notifying all impacted entities of the failure of their primary telecommunication system requires the use of the alternative telecommunications systems which is a form of verifying that the alternative telecommunications facilities are functional. The drafting team should consider applying the numeric performance category of the VSL Development Guideline Criteria for R2.
Response: The RC SDT thanks you for your comment. R1: We have revised the VSLs per the guideline and the revised requirement. R2: We have revised the requirement to have time constraints for the length of an outage as well as a timeframe for notification. The VSL has been revised to reflect the revised requirement.		
PJM Interconnection	No	Recommend the following VSLs for R1: Proposed Lower VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on at least one occasion.

Organization	Question 3:	Question 3 Comments:
		Proposed Moderate VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on two separate occasions. Proposed High VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on three separate occasions. Proposed Severe VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on more than three separate occasions. Recommend the following VSLs for R2: Proposed Lower VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on at least one occasion. Proposed Moderate VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on two separate occasions. Proposed High VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on three separate occasions. Proposed Severe VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator failed to operationally test alternative telecommunications every three months on more than three separate occasions. Recommend the following VSLs for R4: Proposed High VSL: The Responsible Entity failed to establish telecommunications with either their Balancing Authority or Transmission Operator for the exchange of Interconnection and operating information. Proposed Severe VSL: The Responsible Entity failed to establish telecommunications with their Balancing Authority and Transmission Operator for the exchange of Interconnection and operating information.
		Response: The RC SDT thanks you for your comment.

Organization	Question 3:	Question 3 Comments:
R1: The proposed VSLs reflect multiple violations of the requirement. Each VSL must be written for a single violation (failure to test quarterly). R2: The proposed VSLs reflect multiple violations of the requirement and are a duplication of the VSLs proposed for R1, not for R2. R4: We have revised the VSLs per your suggestion.		
FirstEnergy	No	The VSL should be modified per our suggested modifications in question 1.R1 VSL - The statement in the VSL that the responsible entity did not "operationally test" is too broad. It should be more specific with the language used in the requirement.
Response: The RC SDT thanks you for your comment. The requirement, measure and VSLs have been revised per stakeholder comments and the phrase, "operationally test" is no longer used in the standard.		
Duke Energy	No	VSL for Requirement R1 - The VSL for R1 seems to imply that an operational test needs to have been performed in the last 90 days — this is read in conjunction with the data retention requirements. Need to clarify in the requirement how ?quarter basis? is defined - is it the calendar quarter, or a rolling 90 days? In addition, the VSLs for Requirement R1 appear to violate NERC guidelines, since the Moderate, High and Severe VSLs are based upon cumulative violations of the Lower VSL.
Response: The RC SDT thanks you for your comment. The data retention was changed from three months to three years. The VSLs were revised to reflect the guidelines as you suggested. There are now 2 VSLs.		
ISO/RTO Council Standards Review Subcommittee	No	The VSLs as defined for Requirement 1 appear to violate Guideline 4 that the Commission established in their "Order on Violation Severity Levels Proposed by the Electric Reliability Organization". Guideline 4 requires that a VSL should be based on a single violation. The VSLs as defined accumulate the number of consecutive quarters. This would imply that a single violation could last more than a year and that the compliance auditor could not determine sanctions until the entity becomes compliant or year has passed. A single violation appears to be the failure to test in a single quarter. This requirement is binary in nature in that it is either met or it isn't. We suggest that only a lower VSL should be defined as: "The RC, TOP, or BA failed to test the backup telecommunication facilities for a single calendar quarter." The Lower VSL for R2 is not possible. The act of notifying all impacted entities of the failure of their primary telecommunication system requires the use of the alternative telecommunications systems which is a form of verifying that the alternative telecommunications facilities are functional. The

Organization	Question 3:	Question 3 Comments:
		drafting team should consider applying the numeric performance category of the VSL Development Guideline Criteria for R2. (i) R1: Suggest to revise the conditions for all levels to read "...failed to operationally test the alternative communication facilities within the last....." (ii) R2: The second part under Severe is not needed since failing to notify any impacted entities would imply no communication to the affected entities anyway. If verification of the functionality of the alternate means of telecommunications is also critical even without communicating to the affect entities, then the second condition should be an "OR". (iii) R3: Failure to having concurrence to use a language other than English for communications between and among operating personnel responsible for real-time operations by itself does not constitute a violate of any requirements; it is the absence of such a concurrence AND having used a language other than English that would constitute a violation. Suggest to revise this condition.
Response: The RC SDT thanks you for your comment. R1: We have revised the requirement to have a provision to test as well as a provision to develop a mitigation plan when a test fails. The VSLs reflect the revised requirement. R2: (i) We have revised the requirement to have a provision to test as well as a provision to develop a mitigation plan when a test fails. The VSLs reflect the revised requirement. The second part of the VSL was removed. The VSL was revised to: The responsible entity failed to provide evidence of concurrence to use a language other than English for communications between and among operating personnel responsible for the real-time generation control or operation of the interconnected Bulk Electric System when a language other than English was used.		
SERC OC Standards Review Group	Yes and No	3.1 - The expanded list of entities recommended in comment 1.3 and 1.4 need to be included the VSLs

Organization	Question 3:	Question 3 Comments:
Response: The RC SDT thanks you for your comment. Please see response to comment 1.3 and 1.4.		
Buckeye Power, Inc.	Yes and No	abstain
Southern Company Transmission	Yes	3.1 - The expanded list of entities recommended in comment 1.3 and 1.4 need to be included the VSLs 3.2 - The Severe VSL for R2 should be corrected. Add the word 'to' as follows: "...and failed to verify the..."
Response: The RC SDT thanks you for your comment. 3.1 - Please see response to comment 1.3 and 1.4. 3.2 - The VSLs were revised based on revisions to the requirement.		
American Transmission Company	Yes	Based upon revisions to Question 1.
Response: The RC SDT thanks you for your comment. The VSLs were revised to reflect changes to the requirements.		
Bonneville Power Administration	Yes	
AEP	Yes	
Manitoba Hydro	Yes	
NPCC	Yes	
Ameren	Yes	
Reliability	Yes	

Organization	Question 3:	Question 3 Comments:
Coordinator Comment Working Group		
Northern California Power Agency	Yes	
Entergy Services, Inc	Yes	
Salt River Project	Yes	
US Bureau of Reclamation	Yes	

4. Do you agree with the revisions to the Requirements in COM-002-3 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Summary Consideration: The work of the IROL SDT resulted in the retirement of R1 from the standard. The RC SDT received comments recommending expanding the applicability of the standard and separating Requirement R2 (now R1) into two distinct requirements. The applicability was expanded to include Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity. The requirements were revised to:

- R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a verbal directive associated with real-time operational emergency conditions shall ~~issue directives in a clear, concise, and definitive manner; shall ensure~~require the recipient of the verbal directive to repeat the intent of the directive back ~~information back correctly~~; and shall acknowledge the response as correct or repeat the original statement to resolve any misunderstandings.
- R2. Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a directive issued per Requirement R1 shall repeat the intent of the directive back to the issuer of the directive

The purpose statement was also revised to reflect the revisions to the standard:

~~To ensure Balancing Authorities, Transmission Operators, and Generator Operators have adequate communications and that these communications capabilities are staffed and available for addressing a real time emergency condition.~~ To ensure emergency communications ~~by~~ between operating personnel are effective.

Organization	Question 4:	Question 4 Comments:
Southern Company Transmission	No	4.1 - We agree with the recommendation to retire COM-002-3 when COM-003-1 is approved; however we suggest the following changes should be made for the interim applicability of COM-002-3: 4.2 - The Purpose statement should be revised to re-align with the revisions in the Standard. 4.3 - The applicability of COM-002-3 should be consistent with the applicability of IRO-001-2. 4.4 - The words "clear, concise, and definitive manner" in R1 are ambiguous and impossible to

Organization	Question 4:	Question 4 Comments:
		measure. We suggest they be replaced with "the RC shall direct". 4.5 - An additional requirement, R2, should be added that requires the Operator to repeat the information back correctly (i.e., separate this requirement from R1). 4.6 - Grammatical changes are suggested. The revised requirement reads as follows: " To ensure Balancing Authorities, Transmission Operators, and Generator Operators have adequate communications; to ensure that these communication capabilities are staffed and available for addressing a real-time emergency condition; and to ensure effective communications by operating personnel." 4.7 - At the Data Retention section, the reference to 'Requirement 3, Measure 3' should be consistent with the modified standard. The revised standard only has one requirement. 4.8 - The use of calendar days in the Data Retention section is inconsistent with related standards where 'months' are used.
Response: The RC SDT thanks you for your comments. 4.2 - We have revised the purpose statement to: To ensure emergency communications between operating personnel are effective. 4.3 – We have changed the applicability of COM-002 to match that of IRO-001. 4.4 and 4.5 - We have separated the requirement into two requirements to ensure that the requirements are measurable and distinct. We concur with your comments and have revised the requirements to: R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a verbal directive associated with real-time operational emergency conditions shall require the recipient of the verbal directive to repeat the intent of the directive back; and shall acknowledge the response as correct or repeat the original statement to resolve any misunderstandings. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i> R2. Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a verbal directive issued per Requirement R1, shall repeat the intent of the directive back to the issuer of the directive. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i> 4.6 - We have revised the purpose statement to: To ensure emergency communications between operating personnel are effective.		

Organization	Question 4:	Question 4 Comments:
4.7 and 4.8 – We have updated the data retention section with the latest compliance template information.		
ISO New England Inc.	No	ISO New England believes it is inefficient to have a (temporary) Standard with only one Requirement and recommend including this Requirement in COM-001, with COM-001 renamed to "Communications."
Response: The RC SDT thanks you for your comments. Based on other stakeholder feedback, we have added applicable entities and another requirement for those entities. This standard will be retired upon adoption of COM-003-1.		
US Bureau of Reclamation	No	Purpose: Since Generator Operators were deleted from the applicability; the Purpose should be revised to reflect that and include Reliability Coordinators. The language is somewhat redundant, recommend it be simplified to "To ensure Balancing Authorities, Reliability Coordinators, and Transmission Operators communicate in an effective manner."
Response The RC SDT thanks you for your comments. Several entities were added to the applicability and the purpose statement was revised to: To ensure emergency communications between operating personnel are effective.		
FirstEnergy	No	Purpose - The GOP is still shown in the purpose statement although it was removed from the applicability. Also, it may be better if the purpose was written more generally as "To ensure adequate communications capabilities for addressing real-time emergency conditions and ensure communications by operating personnel are effective to maintain BES reliability". Applicability - In the SDT's document "Scope of Work Assigned to the Reliability Coordination Standard Drafting Team", the team decided to not include the FERC directive to include the DP in the applicability with the following reasoning "The proposed revisions do not include the DP entity because they are not applicable." We would like clarification on this. R1 - It does not appear that the implementation plan addresses the FERC direction to consider comments from Santa Clara, FirstEnergy, and Six Cities per 693 par. 539 regarding staffing requirements. Santa Clara asks that these requirements apply "only to operating staff available on site at all times or includes repair personnel who are available only on an on-call basis". FirstEnergy asks that the "term [staffed] should not require a physical presence at all facilities at all times because some units, such as peaking units, are not staffed 24 hours a day". FirstEnergy also suggest "because nuclear units are already subject to communications requirements in their operating

Organization	Question 4:	Question 4 Comments:
		procedures, their compliance with NRC operating procedures should be deemed in compliance with the NERC Reliability Standards". Six Cities "states that, to avoid unnecessary staffing burdens, particularly for smaller entities, the Commission should direct NERC to clarify COM-002-2 by providing that identification of an emergency contact person on call to respond to real-time emergency conditions will constitute adequate compliance". R1 - Just as an FYI, with regard to the proposed replacement requirement statement in the implementation plan: "TOP-005-1, R1 and R3 require adequate telecommunications for BAs and TOPs to provide each other with operating data as well as providing data to the RC", per recently stakeholder approved ballots, R1 of TOP-005-1 has been retired and now covered in new standard IRO-010-1.R1.1 - The existing requirement includes "through predetermined communication paths of any condition that could threaten the reliability of its area or when firm load shedding is anticipated". The proposed replacement requirements do not address the need for "predetermined communication paths".
Response: The RC SDT thanks you for your comments. Purpose: Several entities were added to the applicability and the purpose statement was revised to: To ensure emergency communications between operating personnel are effective. Applicability: The applicability was expanded to include Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity. R1: The RC SDT considered these comments when developing the proposed COM-001-2 specification requirements. We have revised the requirement to indicate that directives being issued relate to real-time operating emergencies. We do not feel that this would place an undue burden on any entity with respect to staffing as the requirement makes no mention of staffing. R1 FYI: Thank you for the FYI.		
Duke Energy	No	Requirement R1 - As defined by Merriam Webster, the use of the word "ensure" implies virtual guarantee <the government has ensured the safety of the refugees>; while the use of the alternative word "assure" implies the removal of doubt and suspense from a person's mind. We suggest that "assure" is more appropriate than "ensure" in this context in the standards. The use of words like "clear, concise, and definitive manner" is subject to interpretation. This same language is used in the VSLs. Depending on the interpretation of this phrase, an entity could be found to be in a "Severe" violation level. The issuer of the directive should not be subject to non-compliance if the recipient of

Organization	Question 4:	Question 4 Comments:
		the directive refuses to repeat back. Need to add a requirement, measure, and VSL that clarifies that the recipient of a directive is obliged to perform their portion of a repeat-back. The inclusion of TSPs, LSEs, and PSEs in IRO-001-2 indicates the need to include these functions in the COM-002-3 requirement concerning repeat-backs. What is a "directive"? The regional compliance processes are having difficulty in auditing this existing standard due to lack of clarity of what constitutes a directive. "Directive" should be defined as being associated with real-time operational emergency conditions, and not ordinary day-to-day communications. Otherwise a VRF of High is not warranted.
Response: The RC SDT thanks you for your comments. We concur with your comments and have revised the requirements to: R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a verbal directive associated with real-time operational emergency conditions shall require the recipient of the verbal directive to repeat the intent of the directive back; and shall acknowledge the response as correct or repeat the original statement to resolve any misunderstandings. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i> R2. Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a verbal directive issued per Requirement R1, shall repeat the intent of the directive back to the issuer of the directive. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i>		
Northern California Power Agency	Yes and No	Remove Generator Operator from the Purpose Statement. The re-written standard no longer applies to GOP
Response: The RC SDT thanks you for your comments. The applicability was expanded to include Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity. We have revised the purpose statement to: "To ensure emergency communications between operating personnel are effective[ML1]."		
SERC OC Standards Review Group	Yes and No	4.1 - We agree with the recommendation to retire COM-002-3 when COM-003-1 is approved; however we suggest the following changes should be made for the interim applicability of COM-002-3: 4.2 - The Purpose statement should be revised to re-align with the revisions in the Standard. 4.3 - The applicability of COM-002-3 should be consistent with the applicability of IRO-001-2. 4.4 - The words "clear, concise, and definitive manner" in R1 are ambiguous and impossible to

Organization	Question 4:	Question 4 Comments:
		measure. We suggest they be replaced with "the RC shall direct". 4.5 - An additional requirement, R2, should be added that requires the Operator to repeat the information back correctly (i.e., separate this requirement from R1).
Response: The RC SDT thanks you for your comments. 4.2 - We have revised the purpose statement to: To ensure emergency communications between operating personnel are effective. 4.3 – We have changed the applicability of COM-002 to match that of IRO-001. 4.4 and 4.5 - We have separated the requirement into two requirements to ensure that the requirements are measurable and distinct. We concur with your comments and have revised the requirements to: R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a verbal directive associated with real-time operational emergency conditions shall require the recipient of the verbal directive to repeat the intent of the directive back; and shall acknowledge the response as correct or repeat the original statement to resolve any misunderstandings. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i> R2. Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a verbal directive issued per Requirement R1, shall repeat the intent of the directive back to the issuer of the directive. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i>		
Buckeye Power, Inc.	Yes and No	Abstain
PJM Interconnection	Yes	We note that this requirement really is "3-part communication" and will be moved to the new communications standard, COM-003-1.
Response: The RC SDT thanks you for your comments. As envisioned, the 3-part communication requirements in this standard are temporary – they will be retired when COM-003-1 becomes effective.		
CU of Springfield	Yes	CU supports moving R1 to COM-003 and retiring COM-002.
Response: The RC SDT thanks you for your comment. As envisioned, the 3-part communication requirements in this standard are temporary – they will be retired when COM-003-1 becomes effective.		

Organization	Question 4:	Question 4 Comments:
PPL Supply Group	Yes	PPL agrees with the changes to COM-002-3. However, for clarity PPL suggests that Generator Operator should be removed from the purpose statement of this standard.
Response: The RC SDT thanks you for your comments. The applicability was expanded to include Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity. We have revised the purpose statement to: To ensure emergency communications between operating personnel are effective.		
Manitoba Hydro	Yes	
Bonneville Power Administration	Yes	
AEP	Yes	
American Transmission Company	Yes	
ISO/RTO Council Standards Review Subcommittee	Yes	
NPCC	Yes	
Ameren	Yes	
Independent Electricity System Operator - Ontario	Yes	

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 4:	Question 4 Comments:
Reliability Coordinator Comment Working Group	Yes	
MRO NERC SDStandards Review Subcommittee	Yes	
Entergy Services, Inc	Yes	
Salt River Project	Yes	

5. Do you agree with the revisions to the Measures in COM-002-3 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Summary Consideration: The RC SDT received comments recommending expanding the applicability of the standard and separating Requirement R1 into two distinct requirements. The applicability was expanded to include Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity. The requirements and measures were revised to:

R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a verbal directive associated with real-time operational emergency conditions shall ~~issue directives in a clear, concise, and definitive manner; shall ensure~~ require the recipient of the verbal directive to repeat the information intent of the directive back correctly; and shall acknowledge the response as correct or repeat the original statement to resolve any misunderstandings. *[Violation Risk Factor: High][Time Horizon: Real-Time]*

R2. Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a verbal directive issued per Requirement R1, shall repeat the intent of the directive back to the issuer of the directive. [Violation Risk Factor: High][Time Horizon: Real-Time]

M1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a verbal directive associated with real-time operational emergency conditions shall have evidence such as voice recordings or transcripts of voice recordings to show that it ~~required issued directives in a clear, concise, and definitive manner; ensured~~ the recipient of the verbal directive to repeated the information intent of the directive back correctly; and acknowledged the response as correct or repeated the original statement to resolve any misunderstandings.

M2. Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a verbal directive issued per Requirement R1 shall have evidence such as voice recordings or transcripts of voice recordings to show that it repeated the intent of the directive back to the issuer of the directive.

Organization	Question 5:	Question 5 Comments:
Southern Company	No	5.1 - The measures need to be revised to match the new requirements.

Organization	Question 5:	Question 5 Comments:
Transmission		
Response: The RC SDT thanks you for your comment. The measures have been revised to reflect revisions to the requirements.		
SERC OC Standards Review Group	No	5.1 - The measures need to be revised to match the new requirements.
Response: The RC SDT thanks you for your comment. The measures have been revised to reflect revisions to the requirements.		
ISO New England Inc.	No	See response to Q#4
Response: The RC SDT thanks you for your comment. Please see response to Q4.		
FirstEnergy	No	The measures should be modified if our comments in question 4 result in changes to the proposed requirements.
Response: The RC SDT thanks you for your comment. The measures have been revised to reflect revisions to the requirements.		
Duke Energy	No	The use of words like “clear, concise, and definitive manner” is subject to interpretation. The issuer of the directive should not be subject to non-compliance if the recipient of the directive refuses to repeat back. Need to add a requirement, measure, and VSL that clarifies that the recipient of a directive is obliged to perform their portion of a repeat-back.
Response: The RC SDT thanks you for your comments. We concur with you comments – the phrase, “clear, concise, and definitive” was removed from the standard and the requirement was subdivided so that there is a separate requirement that obligates the recipients to repeat the intent of the directive. Measures and VSLs were revised to reflect the modifications to the requirements. The new measures are: Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a verbal directive associated with real-time operational emergency conditions shall have evidence such as voice recordings or transcripts of voice recordings to show that it required the recipient of the verbal directive to repeat the intent of the directive back; and acknowledged the response as correct or repeated the original statement to resolve any misunderstandings. Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving		

Organization	Question 5:	Question 5 Comments:
Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a verbal directive issued per Requirement R1 shall have evidence such as voice recordings or transcripts of voice recordings		
American Transmission Company	Yes and No	As long as the measurement of compliance does not include proving the negative, that no directives were issued.
Response: The RC SDT thanks you for your comment.		
Buckeye Power, Inc.	Yes and No	Abstain
CU of Springfield	Yes	CU supports moving M1 to COM-003 and retiring COM-002.
Response: The RC SDT thanks you for your comment.		
Manitoba Hydro	Yes	
NPCC	Yes	
Ameren	Yes	
Independent Electricity System Operator - Ontario	Yes	
Reliability Coordinator Comment Working Group	Yes	
Northern California Power Agency	Yes	

Organization	Question 5:	Question 5 Comments:
MRO NERC SDStandards Review Subcommittee	Yes	
Salt River Project	Yes	
US Bureau of Reclamation	Yes	
PJM Interconnection	Yes	
Bonneville Power Administration	Yes	
AEP	Yes	
ISO/RTO Council Standards Review Subcommittee	Yes	

6. Do you agree with the Violation Severity Levels proposed in COM-002-3 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Summary Consideration: The RC SDT received comments recommending revisions to the VSLs based on revisions to the requirements and measures. The RC SDT did this and created new VSLs for new Requirement R2. The revised VSLs are:

Requirement	Lower	Moderate	High	Severe
R1	N/A	The responsible entity ~~provided a clear~~ issued a verbal directive ~~in a clear, concise and definitive manner~~ associated with real-time operating emergency conditions and required the recipient to repeat the ~~directive~~ intent of the directive, but did not acknowledge the recipient was correct in the repeated directive <u>OR failed to repeat the intent of the original statement to resolve any misunderstandings.</u>	The responsible entity ~~provided a clear~~ issued a verbal directive associated with real-time operating emergency conditions ~~in a clear, concise and definitive manner~~ , but did not require the recipient to repeat the intent of the directive.	<u>The responsible entity issued a verbal directive associated with real-time operating emergency conditions and required the recipient to repeat the intent of the directive, but did not acknowledge the recipient was correct in the repeated directive AND failed to repeat the intent of the original statement to resolve any misunderstandings..</u> ~~The responsible entity failed to provide a clear directive in a clear, concise and definitive manner when required.~~
<u>R2</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>The responsible entity that is the recipient of a verbal directive issued per Requirement R1 failed to repeat the intent of the directive back to the issuer of the directive.</u>

Organization	Question 6:	Question 6 Comments:
Southern Company Transmission	No	6.1 - The severity levels need to be revised to match the new requirements.
Response: The RC SDT thanks you for your comment. The VSLs were revised based on revisions to the requirements.		
SERC OC Standards Review Group	No	6.1 - The severity levels need to be revised to match the new requirements
Response: The RC SDT thanks you for your comment. The VSLs were revised based on revisions to the requirements.		
PJM Interconnection	No	The word "clear" is redundantly used in the High and Severe columns. Recommend that "Moderate" should read: "The Responsible Entity provided a directive in a clear, concise and definitive manner, but did not require the recipient to repeat the directive back to the originator." Recommend that "High" should read: "The Responsible Entity failed to issue a directive in a clear, concise and definitive manner while ensuring the recipient of the directive repeated the information back correctly with acknowledgment by the originator that the response was correct." Recommend that "Severe" should read: "The Responsible Entity failed on more than one occasion to issue a directive in a clear, concise and definitive manner while ensuring the recipient of the directive repeated the information back correctly with acknowledgment by the originator that the response was correct."
Response: The RC SDT thanks you for your comment. We have removed the language "clear, concise and definitive manner" from the requirements, measures and VSLs. Based on the requirements, the VSLs were revised as shown above in the Summary Consideration section. We do not agree with your suggestion on the Severe VSL regarding the number of occasions. The requirement is a stand alone which requires the entity to perform it each time.		
FirstEnergy	No	The VSL should be modified if our comments in question 4 result in changes to the proposed requirements.

Organization	Question 6:	Question 6 Comments:
Response: The RC SDT thanks you for your comment. The VSLs were revised based on revisions to the requirements.		
Duke Energy	No	The use of words like “clear, concise, and definitive manner” is subject to interpretation. The issuer of the directive should not be subject to non-compliance if the recipient of the directive refuses to repeat back. Need to add a requirement, measure, and VSL that clarifies that the recipient of a directive is obliged to perform their portion of a repeat-back.
Response: The RC SDT thanks you for your comment. We concur with your comments. The words “clear, concise, and definitive manner” have been removed from the requirement, measure and VSLs. A separate requirement has been added per your suggestion.		
American Transmission Company	No	R1-High VSL-If the directive was followed and there was no threat to the BES, then a lack of repetition of the directive does not constitute a "high" VSL. Suggest that this be a low or moderate VSL.
Response: The RC SDT thanks you for your comment. We have revised the requirements, measures and VSLs to reflect that these directives are those that are issued for real-time operating emergency conditions.		
Buckeye Power, Inc.	Yes and No	abstain
Manitoba Hydro	Yes	
NPCC	Yes	
CU of Springfield	Yes	
Ameren	Yes	
Independent Electricity System Operator - Ontario	Yes	
Reliability Coordinator	Yes	

Organization	Question 6:	Question 6 Comments:
Comment Working Group		
Northern California Power Agency	Yes	
MRO NERC SDStandards Review Subcommittee	Yes	
Entergy Services, Inc	Yes	
Salt River Project	Yes	
US Bureau of Reclamation	Yes	
Bonneville Power Administration	Yes	
AEP	Yes	
ISO/RTO Council Standards Review Subcommittee	Yes	

7. Do you agree with the revisions to the Requirements in IRO-001-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Summary Consideration: The RC SDT has received a notable number of comments suggesting edits to the proposed requirements and measures for the draft standard, particularly regarding the phrase “without intentional delay.” The comments do not oppose the objective of the phrase, but often point out the issues of measuring intent and measuring time delay.

To maintain the intent while improving the measurability of the requirement, the SDT proposes to modify the standard as follows: delete the phrase ‘without intentional delay’ and leave the obligation of response and timing an unstated requirement of R1 “The RC shall act or direct actions...”

R2 was modified as shown below – note that the phrase, “without intentional delay” was removed from all requirements, measures and VSLs:

R2. Each Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers, and Purchasing-Selling Entities shall ~~act without intentional delay to~~ comply with its Reliability Coordinator's directives unless such actions would violate safety, equipment, or regulatory or statutory requirements.

An RC that requires a given action in a given time will be expected to inform the impacted entities of those actions and time requirements. This revision would obviate the need for providing a measure for “intent”, while still maintaining the reliability intent of the original requirement.

The SDT proposes to re-post the standard to obtain stakeholder feedback on the suggested revisions

Organization	Question 7:	Question 7 Comments:
Manitoba Hydro	No	I do not agree with the way IRO-001-2 R1 is written. In the present form the requirement may infer that directing action is not an action. It may also infer that the RC is only required to do "act "or "direct actions" but not both. The way it is written also leads to problems with the VSLs. Perhaps R1 can be edited along the lines of: R1. The Reliability Coordinator shall act to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts. When required, the actions initiated by the Reliability Coordinator will include, but is not limited to, directing the actions to be taken by Transmission

Organization	Question 7:	Question 7 Comments:
		Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area. I agree with the other Requirements in IRO-001-2 with the exception of the "High" Violation Risk Factor assigned to IRO-001-2 requirement R5. This should be a "Medium" VRF at the most. If the emergency has been mitigated, and the entities are not aware, they will still be operating to restrictions, which means the grid is operating well within limits. Not notifying the entities that the problem has been mitigated may have some financial implications but it should not place the grid at risk.
Response: The RC SDT thanks you for your comment. The recommended language change is what the requirement means. The SDT did not modify the original language as they say the same thing. The RC SDT agrees and modified the VRF for R5 to medium.		
Independent Electricity System Operator - Ontario	No	R2: the phrase "act without intentional delay" is not necessary since the urgency of taking any actions as directed by the RC's are generally understood to be conveyed in the RC's directives. R3: Given R2 requires the responsible entities to comply with the RC directives, the part that says "immediately confirm the ability to comply with the directive or" is not needed. R3 should simply require the responsible entities to notify the RC upon recognition of the inability to perform the directive. The VRF for R5 should not be High. Failure to notify others when potential threats to system reliability have been mitigated does not constitute a high risk to the interconnected system. We suggest it be reduced to a Medium (i.e., that it affects control of the BES).
Response: The RC SDT thanks you for your comment. The RC SDT agrees to remove this phrase. The majority of commenters found this to be unnecessary. Agreed, the RC SDT modified R3 to remove "immediately confirm the ability to comply with the directive or" The RC SDT agrees and modified the VRF for R5 to medium.		
MRO NERC SDTandards Review	No	New requirement R2 should omit act without intentional delay. The desired outcome is for the responsible entity to comply with the RC directive. Adding act without intentional delay only confuses

Organization	Question 7:	Question 7 Comments:
Subcommittee		the situation and adds questions. What is an intentional delay? The word act implies that the requirement is met simply if the responsible entity attempted to meet the directive but was unable to do so. That is already considered in with the clause that begins "unless such actions would violate ...". Thus, the word act is not necessary. The word immediately should be removed from the new R3. This attempts to time frame the response of the responsible entity and remove the judgment from the compliance auditor. We agree with the concept of doing this but in reality it only confuses the issue and the compliance auditor will likely apply his judgment regarding what immediate is anyway. Additionally, the requirement attempts to separate the act of confirming that the responsible entity can take the action from notifying the RC that the entity can't take the action. This is not logical. What RC is going to request a responsible entity to take action that would violate safety, equipment, statutory, or regulatory requirements? The RC should already be aware of those requirements and likely won't direct actions that violate them. Thus, the likely scenario is that the responsible entity will attempt to take action and discover that equipment is not function properly and thus notify the RC. We suggest striking the "shall immediately confirm the ability to comply with the directive or" from the requirement. This part of the requirement is not needed because the responsible entity is already obligated to follow the RCs directive (see order 693.) Thus, the assumption is that the order will be followed unless it can't be followed because it will violated safety, equipment, statutory, or regulatory requirements. Requirements R4 and R5 are unnecessary. New R1 requires the RC to direct actions to be taken by the TOP, BA, GOP, TSP, LSE, DP and PSE to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts. The RC can't direct these actions without notifying all impacted TOPs and BAs. They would also have to notify them when actions are no longer necessary.
Response: The RC SDT thanks you for your comment. The RC SDT agrees to remove this phrase. The majority of commenters found this to be unnecessary. The RC SDT agrees. We have modified R3 to remove "immediately" and "confirm the ability to comply with the directive or". The RC SDT does not agree with regard to R4 and R5, as some impacted entities may not need to take action or be issued directives but would benefit from the situational awareness associated with knowing the status of operating issues.		
Southern Company	No	7.1 - Applicability 4.2 - Transmission Operator should be plural.

Organization	Question 7:	Question 7 Comments:
Transmission		7.2 - The revised definition of "Adverse Reliability Impacts" (R1) should be included at the top of Standard IRO-001-2, per Glossary of Terms Used in Standards: All defined terms used in reliability standards shall be defined in the glossary. Definitions may be approved as part of a standard action or as a separate action. All definitions must be approved in accordance with the standards process. 7.3 - In R2 insert the word "its" before Reliability Coordinator. 7.4 - In R3, replace "immediately" with "without intentional delay", replace "ability" with "intent", replace "or" with "and" and replace "the" with "its" before Reliability Coordinator.
Response: The RC SDT thanks you for your comment. 7.1 agreed, The RC SDT modified the applicability section. 7.2 The revision to the definition will be placed in the correct location on the next posting and will be balloted along with the standard revisions. 7.3 The RC SDT agrees and modified R2, the expectation is the entity's RC will issue the directives, not a different RC. 7.4 R3 has been modified and changed "the" with "its" before RC. Note that based on comments from other stakeholders, the phrase, "immediately confirm the ability to comply" has been omitted from the revised requirement.		
ISO New England Inc.	Yes and No	We believe the word "threat" should be replaced with "events" in Requirements 4 and 5.
Response: The RC SDT thanks you for your comment. The RC SDT chose the term "threat with Adverse Reliability Impacts" to convey the concept that action may be taken to prevent an event when an RC identified a potential threat. This will help better ensure reliability by mitigating threats rather than waiting for an event to occur.		
Entergy Services, Inc	No	PER-003 R1 does not specifically address delegated functions; therefore, this requirement is not redundant with IRO-001 R6 without changes to PER-003 to specifically deal with employees performing delegated functions.
Response: The RC SDT thanks you for your comment. The RC SDT references the NERC ROP in the Implementation plan which address your delegation concern. - Per NERC ROP appendix 5, Organization Registration and Certification Manual v3.3 Sec IV and V: The applicant retains the responsibility for all delegated tasks. The applicant shall identify to the review team all tasks that have been delegated		

Organization	Question 7:	Question 7 Comments:
to another entity prior to the on-site visit. The review team shall conduct at least one on-site visit to the applicant's facilities. This may also apply to the facilities of entities responsible for delegated tasks. During the visit, the review team will: a. Review with the applicant the data collected through the questionnaires; b. Interview the operations and management personnel; c. Inspect the facilities and equipment; d. Request a demonstration of all tools identified in the certification standard; e. Review all necessary documents and data including all agreements, processes, and procedures identified in the certification standard; f. Review certification documents and projected system operator work schedules; and g. Review any additional documentation that is needed to support the completed questionnaire or inquiries arising during the site-visit.		
MEAG Power	No	Directives that are mandatory under R2 of IRO-001-2 should have boundaries consistent with the proper role of an RC. For example, if an RC directs an LSE with a 15% planning reserve margin to execute purchase power agreements until its reserve margin is at least 20% and the LSE refuses, then the LSE may have violated this standard. Other examples of improper RC directives are directives to increase coal inventories, buy firm fuel transportation rights, reconductor transmission lines, purchase spare equipment, etc. Granted entities may be able to conjure up a regulatory or statutory basis for refusing many improper RC directives but in some instances there may be no permissible grounds to refuse. The appropriate solution is to modify the standard to ensure that improper directives are never mandatory in the first place. Specifically, NERC is urged to state that RC directives are mandatory only if they pertain to specific categories such as: switching orders to reconfigure the BES, orders to postpone scheduled outages of BES equipment, orders to change generator output, orders to curtail transactions or orders to curtail load.
Response: The RC SDT thanks you for your comment. It is envisioned by the RC SDT that such RC directives consist of real-time and same-day operating actions that prevent or mitigate events that may or will cause Adverse Reliability impacts.		
FirstEnergy	No	R3 - should be a sub requirement of R2. These two requirements are sequential in nature and should be measured at the same time. The VRFs and Time Horizons are the same for both requirements lending to their combination into a requirement with a sub requirement. In the VSL for R2, an entity is being penalized with a high severity level for not completely following an RC directive even though it violated safety, equipment, statutory, or regulatory requirements. Measuring R2 and R3 at the same

Organization	Question 7:	Question 7 Comments:
		time allows for the process to complete prior to the measurement taking place. R3 - The "or" between "Distribution Provider" and "Purchasing-Selling Entity" should be replaced with an "and". R4 - Should be revised by adding the phrase "of the expected or actual threat" to the end of the requirement to add clarity. Existing R7 requirement - This requirement is proposed for retirement because it is redundant with IRO-014-1 R1. However, it is not clear how the existing requirement to "have clear, comprehensive coordination agreements with adjacent RCs to ensure that SOL or IROL violation mitigation requiring actions in adjacent RC areas are coordinated" is covered in IRO-014-1 R1. IRO-014-1 R1 requires agreements for coordination of actions between RCs to support Interconnection reliability, but it does not specifically require "clear" and "comprehensive" agreements to mitigate SOL or IROL violations. IRO-014-1 only vaguely covers the existing requirement R7 of IRO-001-1.
Response: The RC SDT thanks you for your comment. The intent of the drafting team is to have distinct requirements that are measured independently. Having one as a subrequirement will not allow that to occur. The RC SDT revised the "or" to an "and". R4, The recommended language change is what the requirement means. The RC SDT did not modify the original language as they say the same thing. R7, The industry comments do not support being more specific in IRO-014-1 R1 in order to retire IRO-001-1 R7.		
SERC OC Standards Review Group	Yes and No	7.1 - Applicability 4.2 - Transmission Operator should be plural. 7.2 - The revised definition of "Adverse Reliability Impacts" (R1) should be included at the top of Standard IRO-001-2, per Glossary of Terms Used in Standards: All defined terms used in reliability standards shall be defined in the glossary. Definitions may be approved as part of a standard action or as a separate action. All definitions must be approved in accordance with the standards process. 7.3 - In R2 insert the word "its" before Reliability Coordinator 7.4 - In R3, replace "immediately" with "without intentional delay", replace "ability" with "intent", replace "or" with "and" and replace "the" with "its" before Reliability Coordinator.

Organization	Question 7:	Question 7 Comments:
Response: The RC SDT thanks you for your comment. 7.1 The RC SDT agrees and will modify the applicability section. 7.2 The revision to the definition will be placed in the correct location on the next posting and will be balloted along with the standard revisions. 7.3 Agreed, The RC SDT modified R2, the expectation is the entities RC will issue the directives, not a different RC. 7.4 R3 has been modified and changed “the” with “its” before RC. Note that based on comments from other stakeholders, the phrase, “immediately confirm the ability to comply” has been omitted from the revised requirement.		
US Bureau of Reclamation	No	R4. and R5. Both of these Requirements use the phrase “without intentional delay” to describe the urgency of the notification to impacted entities. In both requirements we recommend the language be changed from “notify, without intentional delay” to “immediately notify”.
Response: The RC SDT thanks you for your comment. We have removed the phrase from the requirements.		
American Transmission Company	No	R2 refers to "intentional delay". The determination of intent should be left to the VSL portion of the standard, not the requirement portion.
Response: The RC SDT thanks you for your comment. The RC SDT has removed “without intentional delay” from the proposed requirement.		
Consolidated Edison Co. of NY, Inc.	Yes and No	Wording in question: R.2/M.2 Each Load-Serving Entity, or Purchasing-Selling Entity shall have evidence that it acted without intentional delay to comply with the Reliability Coordinator's directives.R.3/M.3 Each — Load-Serving Entity, or Purchasing-Selling Entity shall have evidence that it confirmed its ability to comply with the Reliability Coordinator's directives. [1] Question: Is this wording absolutely necessary? And then, is it sufficient, if needed? Comment: First, we would question whether there is a specific need to include this wording. Is the IRO-001 Reliability Standard sufficient without it? [2] Question: Is this wording unambiguous? Comment: The wording seems somewhat vague and ambiguous. Analysis: The wording appears to establish performance standards (“without intentional delay”, “shall immediately confirm”) and evidentiary requirements (“evidence that it acted” or “evidence that it confirmed”), but without using pre-existing defined terms, establishing new defined

Organization	Question 7:	Question 7 Comments:
		terms, or defining these terms as used in context. [3] Intentional vs. Unintentional, Valid Intentional vs. Inappropriate Intentional? How does one differentiate between intentional and unintentional delay? When is and how much delay is valid or inappropriate? Isn't some intentional delay necessary to ensure that the other parts of the requirement being are met, e.g., — unless such actions would violate safety, equipment, or regulatory or statutory requirements?? Mightn't some acceptable amount of valid intentional delay be necessary to insure that any such RC directive and entity action would not in fact violate these safety, equipment, or regulatory or statutory requirements? [4] What is the timeliness standard? How are the terms “without delay” and “immediately conform” defined? What standard commercial measures would apply, e.g., “reasonably efforts” vs. “best efforts”? Are these terms measured in units of time (seconds or minutes) or in units of performance quality? Does a poorly considered “immediate” reply meet the standard, while a well considered reply, which is intentionally delayed, yet still appropriate, fail to meet this standard? Is that the best outcome? [5] What is this Evidentiary Standard? Is the sought-after “evidence” sufficiently well defined, e.g., phone logs, computer e-mail, control center computer logs, hand-written operator journals, etc.? What form of evidence is necessary and sufficient to demonstrate that the entity met this evidentiary standard? How is failure to meet this uncertain standard measured, judged and penalized?
Response: The RC SDT thanks you for your comment. The RC SDT has removed the phrases “immediately” and “without intentional delay” from the proposed requirements.		
Duke Energy	No	Requirement R1 - What happens if the RC failed to recognize that such an event was happening as opposed to failed to take action? Is this intended to cover both scenarios? The term “Adverse Reliability Impacts” is being changed and is listed in the associated Implementation Plan. The revision development of this definition needs to go thru Due Process. The inclusion of TSPs, LSEs, and PSEs here indicates the need to include these functions in the COM-001-2 requirements concerning the use of English as the approved language. In addition, this also indicates the need for all of these listed entities to be included in COM-002-3 requirements concerning repeat-backs. The RC, TOP, and BA should not be placed in a possible non-complaint state because the counter party refuses a repeat-back AND these requirements are not applicable to the counter party.

Organization	Question 7:	Question 7 Comments:
		Requirement R2 - The language in the Moderate VSL of R2 recognizes another potential reason for delay in execution of a directive. Requirement 2 of the Standards needs to be modified to also recognize this potential. Requirements R2 and R3 - Clarify that entities are obligated to take action and confirm directives only from their Reliability Coordinators, not from any Reliability Coordinator. Requirements R2, R3, R4, R5 - Inconsistent use of "timing" words in the standards — "without intentional delay" and "immediately". Suggest deleting these words due to the difficulty of determining compliance. Requirement R4 - The term "Adverse Reliability Impacts?" is being changed and is listed in the associated Implementation Plan. The revision of this definition needs to go through Due Process. Requirement R5 - The VRF should be "Lower" instead of "High" since the notification is that the threat has been mitigated. Also, the term "Adverse Reliability Impacts" is being changed and is listed in the associated Implementation Plan. The revision of this definition needs to go through Due Process.
Response: The RC SDT thanks you for your comment. R1 Both scenarios are envisioned by the requirement. The proposed revision to the definition will be balloted along with the standard revision. & R4, &R5. The TSPs, LSEs, and PSEs have been added to COM-001 and COM-002 as you suggest. R2, already included in R2 "unless such actions would violate safety, equipment, or regulatory or statutory requirements." R2, R3, The RC SDT modified R2, R3 to identify "its" RC. The phrases "immediately" and "without intentional delay" have been removed from the standard. R4 The revision to the definition will be placed in the correct location on the next posting and will be balloted along with the standard revisions. R5, The RC SDT modified the VRF for R5 to medium based on other industry comments.		
Buckeye Power, Inc.	Yes and No	abstain
ISO/RTO Council Standards Review Subcommittee	Yes and No	New requirement R2 should omit act without intentional delay. Use of intentional implies willful disregard for compliance for the requirement. Intention should not be addressed as part of the compliance with the requirement but rather through the enforcement process once the compliance auditor has identified a violation.

Organization	Question 7:	Question 7 Comments:
		The word immediately should be removed from the new R3. This attempts to time frame the response of the responsible entity and remove the judgment from the compliance auditor. We agree with the concept of doing this but in reality it only confuses the issue and the compliance auditor will likely apply his judgment regarding what immediate is anyway. Additionally, the requirement attempts to separate the act of confirming that the responsible entity can take the action from notifying the RC that the entity can't take the action. This is not logical. What RC is going to request a responsible entity to take action that would violate safety, equipment, statutory, or regulatory requirements? The RC should already be aware of those requirements and likely won't direct actions that violate them. Thus, the likely scenario is that the responsible entity will attempt to take action and discover that equipment is not functioning properly and thus notify the RC. We suggest striking the "shall immediately confirm the ability to comply with the directive or" from the requirement. This part of the requirement is not needed because the responsible entity is already obligated to follow the RCs directive (see order 693.) Thus, the assumption is that the order will be followed unless it can't be followed because it will violate safety, equipment, statutory, or regulatory requirements. Requirements R4 and R5 are unnecessary. New R1 requires the RC to direct actions to be taken by the TOP, BA, GOP, TSP, LSE, DP and PSE to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts. The RC can't direct these actions without notifying all impacted TOPs and BAs. They would also have to notify them when actions are no longer necessary. The VRF for R5 should not be High. Failure to notify others when potential threats to system reliability have been mitigated does not constitute a high risk to the interconnected system. We suggest it be reduced to a Medium (i.e., that it affects control of the BES).
Response: The RC SDT thanks you for your comment. The RC SDT has removed the phrases "immediately" and "without intentional delay" from the proposed requirements. The RC SDT modified R3 based on industry comments and the phrase, "shall immediately confirm the ability to comply with the directive or" was removed from the requirement. The RC SDT does not agree with regard to R4 and R5, as some impacted entities may not need to take action or be issued directives but would benefit from the situational awareness associated with knowing the status of operating issues. The RC SDT modified the VRF for R5 to medium based on industry comments.		
CU Springfield	Yes	CU supports the effort to consolidate redundant requirements in the standards.

Organization	Question 7:	Question 7 Comments:
Response: The RC SDT thanks you for your comment.		
PJM Interconnection	Yes	
Salt River Project	Yes	
NPCC	Yes	
Ameren	Yes	
Reliability Coordinator Comment Working Group	Yes	
Northern California Power Agency	Yes	
Bonneville Power Administration	Yes	
AEP	Yes	

8. Do you agree with the revisions to the Measures in IRO-001-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Summary Consideration:

The RC SDT has received a notable number of comments suggesting edits to the proposed requirements and measures for the draft standard, particularly regarding the phrase “without intentional delay.” The comments do not oppose the objective of the phrase, but often point out the issues of measuring intent and measuring time delay.

To maintain the intent while improving the measurability of the requirement, the SDT proposes to modify the standard as follows: delete the phrase ‘without intentional delay’ and leave the obligation of response and timing an unstated requirement of R1 “The RC shall act or direct actions...”

An RC that requires a given action in a given time will be expected to inform the impacted entities of those actions and time requirements. This revision would obviate the need for providing a measure for “intent”, while still maintaining the reliability intent of the original requirement.

The SDT proposes to re-post the standard to obtain stakeholder feedback on the suggested revisions.

Organization	Question 8:	Question 8 Comments:
CU of Springfield	No	M2 and M3 should include Distribution Provider as one of the entities to comply with directives from the Reliability Coordinator.
Response: The RC SDT thanks you for your comment. The SDT will correct the oversight.		
Independent Electricity System Operator - Ontario	No	Wording in some of the Measures needs to be revised to reflect changes to R2 and/or R3, if our proposed changes are accepted. Also, we suggest the Requirement numbers be referenced in the Measures.
Response: The RC SDT thanks you for your comment. The SDT has revised the R2 and R3 and the associated measures per stakeholder comments. We have also added the associated requirement number to each measure.		

Organization	Question 8:	Question 8 Comments:
Reliability Coordinator Comment Working Group	No	Measures do not align with VSLs (see question 9)
Response: The RC SDT thanks you for your comment. We will ensure that the VSLs and measures align.		
MRO NERC SDTandards Review Subcommittee	No	Some compliance auditors have been taking the need for evidence to the extreme. We have encountered actual situations where if a measure states evidence shall be provided for requirements that are event based, the compliance auditor expected evidence even if no event occurred. For example, some RCs rarely issue directives. As M1 is written, some compliance auditors would require the RC to provide evidence that no reliability directives were issued. This is not possible. We suggest modifying the measurement to: Each Reliability Coordinator shall have evidence that it acted, or issued directives, to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts within its Reliability Coordinator Area if needed. If there were no directives issues (assuming there are no complaints or evidence to the contrary of the need to issue a directive), no evidence is necessary."
Response: The RC SDT thanks you for your comment. The RC SDT agrees with the principle (i.e. should not have to prove a negative to an auditor). This issue should be addressed with NERC or Regional Compliance personnel. The RC SDT has the obligation to draft measures based on the requirements. The measure (M1) for R1 accomplishes that as written.		
Southern Company Transmission	No	8.1 - In M2 and M3, Add Distribution Provider. 8.2 - In M2 add "intentional" between "without" and "delay". 8.3 - In M3 replace "ability" with "intent", replace "or" with "and" and replace "the" with "its" before Reliability Coordinator's and Reliability Coordinator. 8.4 - In M5, change "has" to "had".
Response: The RC SDT thanks you for your comment. We have added DP to the measures M2 and M3. We have removed the phrases "immediately" and "without intentional delay" from the measures. The RC SDT has left the word "inability" in the measure to mirror the requirement. We have made the other revisions that you suggested.		

Organization	Question 8:	Question 8 Comments:
MEAG Power	No	The M2 measure should not mandate compliance with RC directives that are improper as defined in my response to question 7.
Response: The RC SDT thanks you for your comment. It is envisioned by the RC SDT that RC directives consist of real-time and same-day operating actions that prevent or mitigate events that may or will cause Adverse Reliability impacts.		
SERC OC Standards Review Group	Yes and No	8.1 - In M2 and M3, Add Distribution Provider. 8.2 - In M2 add "intentional" between "without" and "delay". 8.3 - In M3 replace "ability" with "intent", replace "or" with "and" and replace "the" with "its" before Reliability Coordinator's and Reliability Coordinator. 8.4 - In M5, change "has" to "had".
Response: The RC SDT thanks you for your comment. We have added DP to the measures M2 and M3. We have removed the phrases "immediately" and "without intentional delay" from the measures. The RC SDT has left the word "inability" in the measure to mirror the requirement. We have made the other revisions that you suggested.		
US Bureau of Reclamation	No	M4. and M5. In both Measures, recommend "without intentional delay" be changed as described above for R4. and R5.
Response: The RC SDT thanks you for your comment. Based on stakeholder comments, we have removed "without intentional delay" from the requirement and measure.		
Progress Energy Carolinas		
FirstEnergy	No	M2 - The word "intentional" should be added between "without" and "delay".
Response: The RC SDT thanks you for your comment. Based on stakeholder comments, we have removed the phrase "without intentional delay" from the requirement and measure.		
Duke Energy	No	Measures M2, M4 and M5 use the terms "without delay" and "without intentional delay". Suggest deleting these words due to the difficulty of determining compliance. The term "Adverse Reliability

Organization	Question 8:	Question 8 Comments:
		Impacts" is being changed and is listed in the associated Implementation Plan. The revision of this definition needs to go through Due Process.
Response: The RC SDT thanks you for your comment. We have removed the phrases "immediately" and "without intentional delay" from the measures. The proposed definition has been added to the standard and will be posted with the proposed revisions to the standard.		
Consolidated Edison Co. of NY, Inc.	Yes and No	[Comments repeated for Measures] Wording in question:R.2/M.2 Each Load-Serving Entity, or Purchasing-Selling Entity shall have evidence that it acted without intentional delay to comply with the Reliability Coordinator's directives.R.3/M.3 Each Load-Serving Entity, or Purchasing-Selling Entity shall have evidence that it confirmed its ability to comply with the Reliability Coordinator's directives. [1] Question: Is this wording absolutely necessary? And then, is it sufficient, if needed? Comment: First, we would question whether there is a specific need to include this wording. Is the IRO-001 Reliability Standard sufficient without it? [2] Question: Is this wording unambiguous? Comment: The wording seems somewhat vague and ambiguous. Analysis: The wording appears to establish performance standards ("without intentional delay", "shall immediately confirm") and evidentiary requirements ("evidence that it acted" or "evidence that it confirmed"), but without using pre-existing defined terms, establishing new defined terms, or defining these terms as used in context. [3] Intentional vs. Unintentional, Valid Intentional vs. Inappropriate Intentional? How does one differentiate between intentional and unintentional delay? When is and how much delay is valid or inappropriate? Isn't some intentional delay necessary to ensure that the other parts of the requirement being are met, e.g., unless such actions would violate safety, equipment, or regulatory or statutory requirements?? Mightn't some acceptable amount of valid intentional delay be necessary to insure that any such RC directive and entity action would not in fact violate these safety, equipment, or regulatory or statutory requirements? [4] What is the timeliness standard? How are the terms "without delay" and "immediately conform" defined? What standard commercial measures would apply, e.g., "reasonably efforts" vs. "best efforts"? Are these terms measured in units of time (seconds or minutes) or in units of performance quality? Does a poorly considered "immediate" reply meet the standard, while a well considered reply, which is intentionally delayed, yet still appropriate, fail to meet this standard? Is that the best

Organization	Question 8:	Question 8 Comments:
		outcome? [5] What is this Evidentiary Standard? Is the sought-after "evidence" sufficiently well defined, e.g., phone logs, computer e-mail, control center computer logs, hand-written operator journals, etc.? What form of evidence is necessary and sufficient to demonstrate that the entity met this evidentiary standard? How is failure to meet this uncertain standard measured, judged and penalized?
Response: The RC SDT thanks you for your comment. We have removed the phrases "immediately" and "without intentional delay" from the measures.		
Buckeye Power, Inc.	Yes and No	abstain
American Transmission Company	Yes	If some language is changed, we support the revisions. R2 has language in it that should be added to M4 to be consistent. In M2, we propose adding language "unless such actions would violate safety, statutory or regulatory requirements."
Response: The RC SDT thanks you for your comment. The suggested change has been made.		
Manitoba Hydro	Yes	
NPCC	Yes	
Ameren	Yes	
Northern California Power Agency	Yes	
Entergy Services, Inc	Yes	
Salt River Project	Yes	

Organization	Question 8:	Question 8 Comments:
PJM Interconnection	Yes	
Bonneville Power Administration	Yes	
AEP	Yes	

9. Do you agree with the Violation Severity Levels proposed in IRO-001-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Summary Consideration: The VSLs were revised to reflect revisions to the requirements as well as the comments of stakeholders. Several comments suggested that there was no fundamental difference between the RC “acting” or “directing actions”. The RC SDT agreed and removed the High VSL for R1 and revised the Severe VSL accordingly. Other commenters suggested removing the High VSL from R2 as the VSL contradicted the requirement. The RC SDT agreed and removed the VSL. All of the revised VSLs are in the table below.

Requirement	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	N/A	N/A	N/A	The Reliability Coordinator failed to act or direct actions to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts
R2	N/A	N/A	N/A	The responsible entity failed to follow the Reliability Coordinator directive and it would not have violated the safety, equipment, statutory or regulatory requirements. ~~The responsible entity did not follow the Reliability Coordinators directive per requirement 2.~~
R3	N/A	N/A	N/A	The responsible entity failed to inform ~~the~~ its Reliability Coordinator upon recognition of ~~the~~ its inability to perform the directive.

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R4	The Reliability Coordinator ~~who~~ identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area <u>and</u> failed to issue an alert to one, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.	The Reliability Coordinator ~~who~~ identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area <u>and</u> failed to issue an alert to two, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.	The Reliability Coordinator ~~who~~ identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area <u>and</u> failed to issue an alert to three or more, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.	The Reliability Coordinator ~~who~~ identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area <u>and</u> failed to issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.
R5	The Reliability Coordinator <u>issued an alert</u> ~~failed to notify entities of a transmission problem~~ <u>but failed</u> to notify one, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.	The Reliability Coordinator <u>issued an alert to notify entities of a transmission problem</u> <u>but</u> failed to notify two, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.	The Reliability Coordinator <u>issued an alert to notify entities of a transmission problem</u> <u>but</u> failed to notify three or more, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.	The Reliability Coordinator <u>issued an alert to notify entities of a transmission problem</u> <u>but</u> failed to notify all impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.
R6	N/A	N/A	N/A	The Reliability Coordinator failed to provide its ~~Operating~~ <u>operating Personnel</u> ~~personnel~~ with the authority to veto planned outages of its own analysis tools.

Organization	Question 9:	Question 9 Comments:
Manitoba Hydro	No	IRO-001-2 R1 VSLs: You can not split "shall act" and "or direct actions" into separate VSLs. They are one and same. If the RC directs action then they have acted. If the RC failed to direct action or have failed to other wise act then they have failed to act appropriately. Perhaps the VSLs can be drafted along the lines of the following: IRO-001-2 R1 High VSL... The Reliability Coordinator's action was incomplete in that it failed to demonstrate a specific action to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts. IRO-001-2 R1 Severe VSL... The Reliability Coordinator failed to act to prevent or mitigate the magnitude or duration of

Organization	Question 9:	Question 9 Comments:
		Adverse Reliability Impacts. IRO-001-2 R2 VSLs: (1) Entities may be justified in an intentional delay in responding to an RC directive. A justified intentional delay may be due to equipment problems, a generator's ramp rate or system voltage adjustments prior to large system reconfiguration or large transmission loading changes. (2) An entity cannot be faulted for not following an RC directive because to do so would violate safety, equipment, regulatory or statutory requirements. Perhaps the VSLs can be drafted along the lines of the following: Moderate VSL... should be deleted. High VSL... The responsible entity followed the Reliability Coordinator's directive but with an unjustified delay. Severe VSL... no edits required. IRO-001-2 R5 VSLs: Perhaps the VSLs can be drafted along the lines of the following to reflect to what degree the RC missed the mark: Lower VSL... The Reliability Coordinator failed to notify <25% of its impacted Transmission Operators and Balancing Authorities when the transmission system problem had been mitigated. Moderate VSL... The Reliability Coordinator failed to notify >24% but <50% of its impacted Transmission Operators and Balancing Authorities when the transmission system problem had been mitigated. High VSL... The Reliability Coordinator failed to notify >49% but <75% of its impacted Transmission Operators and Balancing Authorities when the transmission system problem had been mitigated. Severe VSL... The Reliability Coordinator failed to notify >74% of its impacted Transmission Operators and Balancing Authorities when the transmission system problem had been mitigated.
Response: The RC SDT thanks you for your comment. R1: The RC SDT agrees with you regarding "act" and direct actions. Based on your and other stakeholders' comments, we have removed the High VSL and revised the severe VSL. R2: 1. The SDT removed the "intentional delay" wording. 2. We concur with your statement. The RC SDT believes that the revised requirement is a binary and thus only requires one VSL. We have removed the High VSL and revised the severe VSL to: The responsible entity failed to follow the Reliability Coordinator directive and it would not have violated the safety, equipment, statutory or regulatory requirements. R5: The RC SDT developed a revised set of VSLs that are graded in a way that gives consideration to the number of impacted entities since some entities will have a very small number of entities to contact, and using percentages may not be effective.		
Independent Electricity System	No	R1: There should not be any distinction made between an RC acting and an RC directing others to act. Failure to mitigate adverse reliability impacts is a severe violation of the requirement. We therefore suggest to revise the High and Severe levels as: High if the RC did not act or direct actions to prevent an Adverse Reliability Impact; Severe if the RC did not act or

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 9:	Question 9 Comments:
Operator - Ontario		direct actions to mitigate the magnitude or duration of an existing Adverse Reliability Impact. R2: The High VSL seems contradictory to the requirement, which already has provision of not fully complying with the RC directives due to safety, equipment, or regulatory or statutory requirements. R3: We have proposed some wording change to R3, which if adopted, would precipitate a need to revise the VSLs for R3 accordingly. (iv) R4 and R5: The VSLs for these two requirements could be graded by assessing the number and/or timing of notifying the affected entities.
Response: The RC SDT thanks you for your comment. The RC SDT agrees with you regarding "act" and "direct actions". Based on yours and other stakeholders' comments, we have removed the High VSL and revised the severe VSL. We agree and have removed the High VSL. R3. The requirement was revised and the Lower VSL removed. R4 and R5: We concur and have expanded the VSLs to include notification of a varying number of entities.		
Reliability Coordinator Comment Working Group	No	R1 talks about "shall act or direct actions to be taken". High VSL - failure to act. Severe VSL - failure to act and direct. Does "act" mean any action taken short of issuing a directive? Change Severe VSL to failure to act or direct and eliminate the High VSL all together. R2 delay in issuing a directive due to equipment problems should be included in the moderate VSL and the body of the requirement and in the measure. The High VSL should be removed because not following the directive for equipment failure is allowed per R2. R5 - Severe VSL should be changed to moderate VSL since the problem has been mitigated and the system is stable and it does not adversely impact reliability. M3 talks about the ability of reliability entities to meet a directive. What constitutes evidence that confirms you are able to immediately comply with the directive? If the entity agrees to the directive and then is unable to comply due to events outside of their control, such as a CT not starting, do they meet the measure? If the entity, based on the circumstances at the time of the directive, agrees to comply in good faith are they compliant? The Lower VSL should be made N/A because it is not practical for an entity to immediately confirm they are able to meet the directive in all cases.
Response: The RC SDT thanks you for your comment.		

Organization	Question 9:	Question 9 Comments:
R1 - The RC SDT agrees with you regarding "act" and "direct actions" and has removed the High VSL and revised the Severe VSL. R2 - Based on your and other stakeholders' comments, we have removed the High VSL and revised the severe VSL. R5: The VSL relates to how badly an entity missed the requirement, not the threat to reliability (this is the VRF). The requirement is to notify "all". The RC SDT has developed a revised set of graded VSLs for this requirement. M3. The requirement was revised to remove words such as "immediately" and intentional delay: R3. Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity shall inform its Reliability Coordinator upon recognition of its inability to perform a directive. The measure was revised to reflect the new requirement which addresses your concerns. The Lower VSL was revised to N/A.		
MRO NERC SDTandards Review Subcommittee	No	The R1 High and Severe VSL appear to differ only by the inclusion of directing actions in Severe. From a practical perspective, what is the difference between directing actions and acting? We don't believe there is any. The actions are the result of the RC authority whether the RC takes the actions themselves or directs someone else to. We suggest a better alternative for the VSL levels would be for the High level to reflect that the RC did not act or direct actions to prevent an Adverse Reliability Impact and Severe would be that the RC did not act or direct actions to mitigate the magnitude or duration of an existing Adverse Reliability Impact. The moderate VSL for R2 is not practical and too subjective. What constitutes a delay? What if the responsible entity takes five minutes to determine how to carry out the action or if their equipment currently is capable of carrying out the action? Is this a delay? We suggest striking this Moderate VSL. The High VSL does not agree with the requirement. It considers the inability to fully follow an RC directive due to a violation of the safety, equipment, statutory, or regulatory requirements a violation. This is in direct conflict with the requirement. We suggest that the High VSL should be struck. We suggest the Severe VSL should be that the responsible entity failed to follow the RC directive and it would not have violated the safety, equipment, statutory or regulatory requirements. Currently, the Severe category does not allow that the responsible entity may not be able to carry out the directive due to the violation of safety, equipment, statutory, or regulatory requirements. In question 7, we request that the drafting team strike part of requirement 3. The striking of that portion of requirement 3 obviates the lower VSL. In paragraph 27 of the ORDER ON VIOLATION SEVERITY LEVELS PROPOSED BY THE ELECTRIC RELIABILITY ORGANIZATION, the Commission expresses "that, as a general rule, gradated Violation Severity Levels, wherever possible, would be preferable to binary Violation Severity Levels". Given that it is possible to define gradated VSLs for R4 and R5, we suggest that the drafting team should consider applying the numeric performance category of the Violation Severity Levels Development Guidelines Criteria based on the number of impacted TOPs and BAs that were notified.
Response: The RC SDT thanks you for your comment.		

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 9:	Question 9 Comments:
R1: The RC SDT agrees with you regarding "act" and "direct actions". Based on your and other stakeholders' comments, we have removed the High VSL and revised the severe VSL to include failure to "act or direct actions". R2: We have removed the "intentional delay" verbiage and subsequently removed the Moderate VSL. We agree with you regarding the High VSL and have removed it from the table. The Severe VSL was revised per your suggestion. R3: The requirement was revised and the Lower VSL removed. R4 and R5: We concur and have expanded the VSLs to include notification of a varying number of entities.		
Southern Company Transmission	No	9.1 - R1 is a binary requirement and should have only a severe VSL. The RC either acts or he doesn't - If he fails to act, he fails to direct and mitigate the problem by default. 9.2 - R2 VSLs need to be rewritten to recognize that some directives may not be followed because of safety, regulatory or statutory requirements. 9.3 - Remove the Lower severity level in R3 to conform to changes in R3 and M3.
Response: The RC SDT thanks you for your comment. R1: The RC SDT agrees with you regarding "act" and "direct actions". Based on your and other stakeholders' comments, we have removed the High VSL and revised the severe VSL. This is now treated as a binary requirement with just one VSL. R2: We agree and have removed the High VSL and revised the severe VSL to: The responsible entity failed to follow the Reliability Coordinator directive and it would not have violated the safety, equipment, statutory or regulatory requirements. R3: The requirement was revised and the Lower VSL removed.		
Entergy Services, Inc	No	The VSL for R2 does not seem consistent with the language in the requirement. It is not clear why the entity should be subject to a high VSL if the entity did not comply with an RC directive due to safety or regulatory prohibition, and made the RC aware of same.
Response: The RC SDT thanks you for your comment. Please see Summary Consideration above. The High VSL for R2 was removed.		
Salt River Project	No	R1 states the RC must act OR direct. The R1 VSLs attempt to distinguish between act and direct. The requirement allows for either action. I suggest that the High VSL be removed and replaced by an N/A. The Severe VSL should be amended so that the words "act and direct" are replaced by the words "act OR direct" as is consistent with the requirement and the measure. R2: The moderate VSL introduces the phrase "equipment problems" for the first time in the Standard. "Equipment Problems" needs to be included in the Requirement, R2, and defined in the Measure for

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 9:	Question 9 Comments:
		R2.R5: The Severe VSL needs to be moved to the Moderate category. This condition does not constitute an Adverse Reliability Impact that severely threatens the BES.
Response: The RC SDT thanks you for your comment. R1: The RC SDT agrees with you regarding “act” and “direct actions”. Based on your and other stakeholders’ comments, we have removed the High VSL and revised the severe VSL to use the phrase, “act or direct.” R2. The moderate VSL was removed. R5: The VSL relates to how badly an entity missed the requirement, not the threat to reliability (this is the VRF). The requirement is to notify “all”. The RC SDT believes it has developed appropriate VSLs for this requirement.		
FirstEnergy	No	R2 VSL - The Severe VSL should include after the word directive: “that would not violate safety, equipment, statutory or regulatory requirements”.
Response: The RC SDT thanks you for your comment. We agree with your premise, but the suggested wording of the VSL appears cumbersome. The VSL has been revised to: The responsible entity did not follow the Reliability Coordinator’s directive per Requirement R2.		
Duke Energy	No	The language in R1 of the VSL is not consistent with the requirements and measures in the standard. The VSL needs to recognize that the RC may EITHER act or give direction to others to act. The term “Adverse Reliability Impacts” is being changed and is listed in the associated Implementation Plan. The revision of this definition needs to go through Due Process. The language in R2 of the VSL places an entity in Moderate or High violation level even if failure is “allowed” in the standard; i.e. failure to act is due to violation of safety, regulatory, statutory requirements. The language in R2 of the VSL recognizes another potential reason for delay in execution of a directive. Requirement R2 of the Standard needs to be modified to also recognize this potential.
Response: The RC SDT thanks you for your comment. R1: The RC SDT agrees with you regarding “act” and “direct actions”. Based on your and other stakeholders’ comments, we have removed the High VSL and revised the severe VSL to use the phrase, “act or direct.” The proposed revision to the term, “Adverse Reliability Impact” will be posted for stakeholder comment with the next version of the standard. R2. We agree and have removed the Moderate and High VSLs and revised the Severe VSL to :		

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 9:	Question 9 Comments:
The responsible entity failed to follow the Reliability Coordinator directive and it would not have violated the safety, equipment, statutory or regulatory requirements. The requirement already addresses equipment.		
American Transmission Company	No	VSLs for R2 and R3 are not appropriate. In order to assess a situation we may not be able to immediately inform the RC of our ability to comply with the directive. The high VSL for R2 currently states that if we do not follow the directive because of safety, statutory or regulatory requirements, it is a high VSL. An entity should not be penalized for not breaking the law.
Response: The RC SDT thanks you for your comment. R2: We agree and have removed the Moderate and high VSLs. R3. The requirement was revised to remove the “immediately” verbiage and the VSLs were revised accordingly – the Lower VSL was removed.		
ISO/RTO Council Standards Review Subcommittee	No	The R1 High and Severe VSL appear to differ only by the inclusion of directing actions in Severe. From a practical perspective, what is the difference between directing actions and acting? We don't believe there is any. The actions are the result of the RC authority whether the RC takes the actions themselves or directs someone else to. We suggest a better alternative for the VSL levels would be for the High level to reflect that the RC did not act or direct actions to prevent an Adverse Reliability Impact and Severe would be that the RC did not act or direct actions to mitigate the magnitude or duration of an existing Adverse Reliability Impact. The moderate VSL for R2 is not practical and too subjective. What constitutes a delay? What if the responsible entity takes five minutes to determine how to carry out the action or if their equipment currently is capable of carrying out the action? Is this a delay? We suggest striking this Moderate VSL. The High VSL does not agree with the requirement. It considers the inability to fully follow an RC directive due to a violation of the safety, equipment, statutory, or regulatory requirements a violation. This is in direct conflict with the requirement. We suggest that the High VSL should be struck. We suggest the Severe VSL should be that the responsible entity failed to follow the RC directive and it would not have violated the safety, equipment, statutory or regulatory requirements. Currently, the Severe category does not allow that the responsible entity may not be able to carry out the directive due to the violation of safety, equipment, statutory, or regulatory requirements. In question 7, we request that the drafting team strike part of requirement 3. The striking of that portion of requirement 3 obviates the lower VSL. In paragraph 27 of the ORDER ON VIOLATION SEVERITY LEVELS PROPOSED BY THE ELECTRIC RELIABILITY ORGANIZATION, the Commission expresses “that, as a general rule, graduated Violation Severity Levels, wherever possible, would be preferable to binary Violation Severity Levels”. Given that it is possible to define graduated VSLs for R4 and R5, we suggest that the drafting team should consider applying the numeric performance category of the Violation Severity Levels Development Guidelines Criteria based on the number of impacted TOPs and BAs that were notified.

Organization	Question 9:	Question 9 Comments:
Response: The RC SDT thanks you for your comment. R1: The RC SDT agrees with you regarding “act” and “direct actions”. Based on your and other stakeholders’ comments, we have removed the High VSL and revised the severe VSL to use the phrase, “act or direct.” R2. We agree and have removed the Moderate and High VSLs and revised the Severe VSL to : The responsible entity failed to follow the Reliability Coordinator directive and it would not have violated the safety, equipment, statutory or regulatory requirements. R3. The requirement was revised and the Lower VSL removed. R4 and R5: We concur and have expanded the VSLs to include notification of a varying number of entities.		
SERC OC Standards Review Group	Yes and No	9.1 - R1 is a binary requirement and should have only a severe VSL. The RC either acts or he doesn't - If he fails to act, he fails to direct and mitigate the problem by default. 9.2 - R2 VSLs need to be rewritten to recognize that some directives may not be followed because of safety, regulatory or statutory requirements. 9.3 - Remove the Lower severity level in R3 to conform to changes in R3 and M3.
Response: The RC SDT thanks you for your comment. R1: The RC SDT agrees with you regarding “act” and “direct actions”. Based on your and other stakeholders’ comments, we have removed the High VSL and revised the severe VSL to use the phrase, “act or direct.” R2. We agree and have removed the High VSL and revised the Severe VSL to: The responsible entity failed to follow the Reliability Coordinator directive and it would not have violated the safety, equipment, statutory or regulatory requirements.. R3. The requirement was revised and the Lower VSL removed.		
Consolidated Edison Co. of NY, Inc.	Yes and No	Agreement uncertain, subject to further clarification of Requirements and Measures performance standards and definitions (see our comments on Requirements and Measures). Without clearer definitions, e.g., for "immediate," or any allowance for appropriate intentional delay, it is not entirely clear that the VSLs comport with the ultimate meaning, intent and needed wording to be incorporated into the Requirements and Measures. Why would failure to fully comply, when precluded by conditions specifically allowed in the standard, necessarily be a problem, so long as the RC received timely notice, however defined?
Response: The RC SDT thanks you for your comment. The SDT removed the word, “immediate” and the phrase, “without intentional delay” from the standard.		

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Organization	Question 9:	Question 9 Comments:
Buckeye Power, Inc.	Yes and No	abstain
Northern California Power Agency	Yes	
CU of Springfield	Yes	
NPCC	Yes	
Ameren	Yes	
US Bureau of Reclamation	Yes	
PJM Interconnection	Yes	
Bonneville Power Administration	Yes	
AEP	Yes	

10. Do you agree with the revisions to the Requirements in IRO-002-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Summary Consideration: The last proposed version of IRO-002-2 had two requirements – R1 required the Reliability Coordinator to request data from other entities; R2 required the Reliability Coordinator to provide its operating personnel with authority to veto planned outages of analysis tools.

Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees' approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired IRO-002 Requirement R1 and eliminated the need for the proposed R2.

The team received comments expressing concern about eliminating the requirement to monitor frequency which had been in an earlier approved version of IRO-002. While the Standard Drafting Team (SDT) recognizes the concern raised, the SDT is even more concerned with the subjectivity that any attempt to measure "Monitoring" can provide. It is the SDT's contention that adherence to reliability standards that require the said monitoring cannot be demonstrated unless the entity is closely monitoring the system parameters. Furthermore, the SDT contends that any requirements that describe the monitoring facilities needed to fulfill fundamental duties should be embedded in Certification Requirements. With IRO-014 and IRO-001 R1 in place, the actual act of monitoring is a secondary task that is inherent in responding to situations or events that could have an adverse impact on reliability. The team retained the remaining requirement (Reliability Coordinator's authority to veto analysis tool outages) as it was a specific recommendation from the 2003 Blackout report. This requirement was revised and moved into IRO-001-2, R6.

R6. Each Reliability Coordinator shall ~~have~~provide its operating personnel with the authority to veto planned outages to its own analysis tools, ~~including final approvals for planned maintenance.~~ [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]

Organization	Question 10:	Question 10 Comments:
Independent Electricity System Operator - Ontario	No	two. R1: There is a duplicating requirement in TOP-005 R1.1. Suggest to eliminate one of the We do not agree with eliminating all of R5 to R8. There is a fundamental need for RCs to

Organization	Question 10:	Question 10 Comments:
		monitor its area, and even some portion of its adjacent areas to be aware of situations that require preventive and mitigating actions. While arguments can be made that requiring RCs to prevent and mitigate adverse reliability impacts would imply monitoring, the latter is a fundamental duty of any RCs to ensure system reliability. If monitoring is not explicitly stated as a requirement, then the same argument may be extended to training and operational facilities. We do not agree with the drafting team's conclusion that it is not practical to measure real-time monitoring. Measuring can be illustrated, for example, by a compliance audit to review system logs and assess the extent to which an RC follows and assesses system conditions.
Response: R1: The RC SDT thanks you for your comment. Several NERC drafting teams are working on related standards. The RTO SDT just posted changes to TOP-005 that will retire that standard upon approval. Therefore, there will be no redundancy because TOP-005 R1.1 will be removed. Monitoring: While the Standard Drafting Team (SDT) recognizes the concern raised, the SDT is even more concerned with the subjectivity that any attempt to measure "Monitoring" can provide. It is the SDT's contention that adherence to reliability standards that require the said monitoring cannot be demonstrated unless the entity is closely monitoring the system parameters. Furthermore, the SDT contends that any requirements that describe the monitoring facilities needed to fulfill fundamental duties should be embedded in Certification Requirements. With IRO-014 and IRO-001 R1 in place, the actual act of monitoring is a secondary task that is inherent in responding to situations or events that could have an adverse impact on reliability.		
Reliability Coordinator Comment Working Group	No	For R1, this should be 2 separate requirements and measures. R1 should have a methodology for determining what data is needed and then a R2 should be a requirement to request this data from the reliability entities.
Response: The RC SDT appreciates your comments. Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired R1.		
MRO NERC SDStandards Review Subcommittee	No	New Requirement R1 is duplicate to the requirement TOP-005-1 R1.1. If the drafting team can't delete TOP-005-1 R1.1, they should notify other appropriate drafting teams of the need to remove the requirement. We do not agree with eliminating requirements R5, R6, R7, and R8 in their entirety. The requirements as they are written are problematic. However, we do believe that there is a need for a basic

Organization	Question 10:	Question 10 Comments:
		requirement to monitor the system. The requirements should be that the RC should compare actual system flows to SOLs and IROLs. While some will argue SOLs are not the responsibility of the RC, failure to monitor SOLs could cause the RC to miss unknown IROLs since an SOL can become an IROL. Several SOL violations in a given area also can be indicative of a broader system problem the RC should be addressing. We also do not agree with the drafting team's conclusion that it is not practical to measure real-time monitoring. It is very easy to measure. As an example, a compliance auditor could select a day and an SOL or IROL and ask for the system flows from that day or hour etc. This is generally easy for any RC to produce with today's data archiving software. We believe that there should be a requirement that the RC have a state estimator and real-time contingency analysis as well (RTCA). The drafting team needs to be careful in the construction of these requirements to make them practical and measurable. For instance, making the requirement to have a state estimator and RTCA is measurable in that the compliance auditor can verify their existence but this is not stringent enough because they may only run once a week. At the same time, if we create a requirement that SE and RTCA must run every 5 minutes, we could inadvertently create a requirement that any missing 5 minute run of RTCA and SE could be construed as a violation. There also needs to be a requirement that there is a real-time assessment of voltage as well. New Requirement R2 is no longer needed as a result of paragraph 112 in Order 693-A. Since the RC's "authority to issue directives arises out of the Commission's approval of Reliability Standards" the RC already has veto authority or will have once R1 IRO-001-2 is approved. This requirement obligates the RC to take actions or direct actions to prevent Adverse Reliability Impacts. Veto outages of equipment and analysis tools would fall into this category even if the RC couldn't say for certain that an Adverse Reliability Impact was going to occur but rather they are concerned one could occur due to heavy loads for example.
Response: The RC SDT appreciates your comments. The RTO SDT has recently posted the proposed retirement of TOP-005. This eliminates the redundancy with R1. The RC SDT appreciates your comments and recognizes that NERC standards historically have included requirements to ensure that each entity is acting responsibly in the portion of the Interconnect over which it has authority. The IRO-014, as proposed by this team, requires RCs to act in coordinated fashion to protect the Interconnection. With IRO-014 and IRO-001 R1 in place, the actual act of monitoring is a secondary task that is inherent in responding to situations or events that could have an adverse impact on reliability. The RC must respond to these situations proactively in order to prevent separation or cascading events. The RC SDT agrees philosophically with your comment regarding the redundancy of Requirement R2, however, this issue was enumerated in		

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 10:	Question 10 Comments:
the report on the 2003 Blackout as a key improvement. The team believes that, while this is redundant as you stated, it is too soon to remove it from standards. At some point in the future after the industry assimilates the set of changes currently proposed, this requirement could be proposed for deletion.		
Southern Company Transmission	No	10.1 - We propose that R1 and R2 should be moved to the RC Certification Procedure and this standard retired. If this standard is not retired then we recommend Comments 10.2 and 10.3.10.2 - At Requirement R2, the RC is given 'veto' authority. Is a standard an appropriate place to give this type of authority? 10.3 - The revised Purpose basically provides that the RC will have access to information and control of analysis tools. What is the correlation of information/control to veto authority/approval of planned maintenance?
Response: The RC SDT appreciates your comments. Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired R1. R2. This is a Blackout recommendation and therefore is appropriate within a standard. We revised the wording to indicate that the RC will provide its Operating Personnel the authority. This clarified the intent of the requirement. This requirement will also be moved into IRO-001-2, R6. 10.3 This standard will be retired making the purpose statement moot.		
ISO New England Inc.	Yes and No	Suggest changing with word "request" to "document" in Requirement 1.
Response: The RC SDT appreciates your comments. Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired R1.		
Entergy Services, Inc	No	IRO-002-1 R9, the deleted language of the second sentence is not adequately covered by the language in EOP-008-0 R1, unless those outages are tied to the loss of a control center. EOP-008-0 is in the process of being revised and this language could be included in the revision, but it isn't adequately addressed by the version 0 standard.

Organization	Question 10:	Question 10 Comments:
Response: The RC SDT appreciates your comments. The RC SDT took this comment into consideration when making revisions to this requirement as well as to COM-001-2 regarding specifications. The data specification required in IRO-010 should address mitigation plans for analysis tool outages and proposed COM-001 specifications should include mitigation plans for communications outages.		
US Bureau of Reclamation	No	R2. This requirement provides authority to the Reliability Coordinator to veto planned outages and approve planned maintenance to “analysis tools”. It is not clear in this standard what these “analysis tools” are. Per FERC Order 693, NERC was to identify a minimum set of analysis tools and the task was assigned to the Real-Time Tools Best Practices Task Force. Until the tools are identified, it is premature to insert a placeholder in a mandatory standard; this also applies to the violation severity levels table.
Response: The RC SDT appreciates your comments. The Reliability Coordinator has a set of tools in use to monitor and analyze its area as well as to provide a wide area view. These tools may include a SCADA system, state estimator and contingency analysis programs. It is the responsibility of the Reliability Coordinator to ensure that these tools are operational or that a plan or procedure is in place to mitigate their outages. The Real-time Tools Best Practices Task Force work has resulted in the inception of a new standard development project. It is scheduled to begin in 2009.		
FirstEnergy	No	R2 - As written, this requirement does not clearly define the scope of the authority of the Reliability Coordinator over analysis tools. Is it the intent of the drafting team to give the RC authority over analysis tools owned and operated by the RC. Is it the intent of the drafting team to give the RC authority over the analysis tools owned and operated by the BA, TOP, GOP, etc.? Are the tools intended to be the real-time (EMS) or the off-line engineering planning analysis tools or any analysis tool used in real-time. Does this include the analysis tools used by field personnel? This requirement should be revised to specify exactly the analysis tools under the authority of the Reliability Coordinator.
Response: The RC SDT thanks you for your comment. The intent of the requirement is to have veto authority over its own tools. The requirement is revised to: R2. Each Reliability Coordinator shall provide its Operating Personnel with the authority to veto planned outages to its own analysis tools. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] The intended tools are any tools that the Reliability Coordinator needs to perform its reliability functions.		

Organization	Question 10:	Question 10 Comments:
Duke Energy	No	Requirement R1 - This requirement is in the wrong standard — this is a Facilities standard. This requirement belongs in another standard. Question: Is there a requirement in another standard that compels the TOPS, BAs, etc to provide the requested data? Requirement R2 - Need to clarify whose analysis tools (I assume it is the RCs analysis tools, not the analysis tools of another entity) and planned maintenance to what — is it tools, facilities, transmission, generation, etc. Depending on the answer above, this requirement is in the wrong standard — this is a Facilities standard. This requirement belongs in another standard. Question: Where is the Requirement for the RC to have analysis tools? It appears that the Requirement the RC has analysis tools have been removed in the revisions to the standard.
Response: The RC SDT thanks you for your comment. Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired R1 and does compel entities to provide data to the Reliability Coordinator For R2, the intent of the requirement is to have veto authority over its own tools. The requirement is revised to: R2. Each Reliability Coordinator shall provide its Operating Personnel with the authority to veto planned outages to its own analysis tools. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] The intended tools are any tools that the Reliability Coordinator needs to perform its reliability functions.		
ISO/RTO Council Standards Review Subcommittee	No	New Requirement R2 is no longer needed as a result of paragraph 112 in Order 693-A. Since the RC's "authority to issue directives arises out of the Commission's approval of Reliability Standards" the RC already has veto authority or will have once R1 IRO-001-2 is approved. This requirement obligates the RC to take actions or direct actions to prevent Adverse Reliability Impacts. Veto outages of equipment and analysis tools would fall into this category even if the RC couldn't say for certain that an Adverse Reliability Impact was going to occur but rather they are concerned one could occur due to heavy loads for example.
Response: The RC SDT agrees philosophically with your comment regarding the redundancy of Requirement R2, however, this issue was enumerated in the report on the 2003 Blackout as a key improvement. The team believes that, while this is redundant as you stated, it is too soon to remove it from standards. At some point in the future after the industry assimilates the set of changes currently proposed, this requirement could be proposed for deletion.		
SERC OC	Yes and No	10.1 - We propose that R1 and R2 should be moved to the RC Certification Procedure and this

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 10:	Question 10 Comments:
Standards Review Group		standard retired.
Response: The RC SDT appreciates your comments. Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired R1. For R2, the intent of the requirement is to have veto authority over its own tools. The requirement is revised and moved into IRO-001-2, R6: R2. Each Reliability Coordinator shall provide its Operating Personnel with the authority to veto planned outages to its own analysis tools. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] This will retire IRO-002-1.		
Buckeye Power, Inc.	Yes and No	Abstain
PJM Interconnection	Yes	
Manitoba Hydro	Yes	
NPCC	Yes	
Ameren	Yes	
Northern California Power Agency	Yes	
Salt River Project	Yes	
Bonneville Power Administration	Yes	

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Organization	Question 10:	Question 10 Comments:
AEP	Yes	
American Transmission Company		Abstain.

11. Do you agree with the revisions to the Measures in IRO-002-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Summary Consideration: Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired R1 and M1.

For R2, the intent of the requirement is to have veto authority over its own tools. The requirement and measure have been revised based on stakeholder comment and moved into IRO-001-2 as Requirement R6. The revisions made are shown below:

R6. Each Reliability Coordinator shall ~~have~~ provide its operating personnel with the authority to veto planned outages to its own analysis tools ~~including final approvals for planned maintenance~~. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]

M6. Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a documented procedure or equivalent evidence that will be used to confirm that the Reliability Coordinator has provided its operating personnel with the authority to veto planned outages ~~to of its own~~ analysis tools, ~~including final approvals for planned maintenance as specified in Requirement 2.~~

Organization	Question 11:	Question 11 Comments:
Independent Electricity System Operator - Ontario	No	M1: We suggest to change the word "letter" to "documented request" If our recommendations to retain some of R5 to R9, some measures will need to be provided.
Response: The RC SDT thanks you for your comments. Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired R1 and M1. As stated in our response to your comments in Question 10, we do not intend to retain R5 through R9.		
MRO NERC SDTandards Review	No	Measure 1 should not focus on a letter as evidence. A more appropriate measure would be a data specification document and actual verification that data has been received. The letter or equivalent is only needed if data has not been supplied. Demonstration of the actual receipt the data would be

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 11:	Question 11 Comments:
Subcommittee		easy. Requirement 2 is not needed and thus Measure 2 is not needed per paragraph 112 of Order 693-A. Additional measures are needed to address the proposed requirements in question 10.
Response: The RC SDT thanks you for your comments. Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired R1 and M1. The RC SDT did not agree to remove R2 in response to your comments in Question 10.		
Southern Company Transmission	No	11.1 - Moving R1 and R2 to the RC Certification Procedure will eliminate measurement requirements.
Response: The RC SDT thanks you for your comments. See our response to your comments in Question 10.		
Salt River Project	No	R1: The Requirement and VSLs mention that the RC will determine it's data needs. Yet the Measure for R1 does not mention this, it only mentions the RC requesting the data from it's member entities. This Measure needs to include a measure for how the RC determines it's data needs.
Response: The RC SDT appreciates your comments. Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired R1 and M1.		
US Bureau of Reclamation	No	M2 again "analysis tools" have not been identified.
Response: The RC SDT appreciates your comments. See our response to your comments on Question 10.		
FirstEnergy	No	The measures should be modified per our suggested modifications in question 10.
Response: The RC SDT thanks you for your comments. The requirements were not modified. See our response to your comments on Question 10.		
Duke Energy	No	See response to Question #12 above. If the requirements are moved to another standard, the measures aren't needed here.

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 11:	Question 11 Comments:
Response: The RC SDT thanks you for your comments. We believe that “#12” in this comment was a typo and that you intended it to read “Q10”. See our response to your comments on Question 10.		
ISO/RTO Council Standards Review Subcommittee	No	Measure 1 should not focus on a letter as evidence. A more appropriate measure would be a data specification document and actual verification that data has been received. The letter or equivalent is only needed if data has not been supplied. Demonstration of the actual receipt the data would be easy.
Response: The RC SDT thanks you for your comments. Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired R1 and M1.		
Buckeye Power, Inc.	Yes and No	abstain
SERC OC Standards Review Group	Yes and No	11.1 - Moving R1 and R2 to the RC Certification Procedure will eliminate measurement requirements.
Response: The RC SDT thanks you for your comments. See our response to your comments in Question 10.		
Reliability Coordinator Comment Working Group	Yes	add measures for R1 & R2 see question 10
Response: The RC SDT appreciates your suggestion. See our response to Question 10.		
Entergy Services, Inc	Yes	
PJM Interconnection	Yes	
AEP	Yes	

Organization	Question 11:	Question 11 Comments:
Bonneville Power Administration	Yes	
Manitoba Hydro	Yes	
NPCC	Yes	
Ameren	Yes	
Northern California Power Agency	Yes	
American Transmission Company		Abstain.

12. Do you agree with the Violation Severity Levels proposed in IRO-002-2 as shown in the posted Standard and Implementation Plan?
If not, please explain in the comment area.

Summary Consideration: Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired R1 and M1. The RC SDT has revised R2 and M2 and moved them to IRO-001-2, as Requirement R6 and Measure M6. The VSLs have been revised to reflect the modifications made to the requirement and measure and in response to stakeholders who indicated this is a “binary” requirement.

R6	~~Reliability Coordinator has approval rights for planned outages of analysis tools but does not have approval rights for maintenance on analysis tools.~~	N/A	N/A	Reliability Coordinator failed to provide its operating personnel with the authority to veto ~~approval is not required for planned maintenance or~~ planned outages of its own analysis tools.

Organization	Question 12:	Question 12 Comments:
Independent Electricity System Operator - Ontario	No	R1: The wording for Low VSL is contradictory (e.g. it determined and requested in the first part but did not request in the second part). Suggest to revise it. R1: We suggest to grade the VSLs according to the extent to which the percentage of data specification and/or the number of entities not requested. R2: The RC either has the right or it doesn't, and hence it's a binary requirement. The VSL should be developed accordingly. Further, the wording for the Severe VSL does not correspond to the requirement and measure. The condition should simply be that the Reliability Coordinator failed to demonstrate that it had the authority to veto planned outages to analysis tools, including final approvals for planned maintenance.
Response: The RC SDT thanks you for your comment. Please see Summary Consideration above. The first requirement was retired as part		

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 12:	Question 12 Comments:
of the IROL project. The lower VSL was removed as proposed for the second requirement.		
Southern Company Transmission	No	12.1 - Moving R1 and R2 to the RC Certification Procedure will eliminate VSL requirements.
Response: The RC SDT thanks you for your comment. Please see Summary Consideration above. R1 was retired – and R2 was moved into IRO-001 as Requirement R6. The VSLs for R6 are still needed.		
US Bureau of Reclamation	No	Until the tools are identified, it is premature to insert a placeholder in a mandatory standard; this also applies to the violation severity levels table.
Response: The RC SDT thanks you for your comment. Please see Summary Consideration above. As envisioned, the intent is to protect the analysis tools used by real time operating personnel – and not all companies have the same set of tools, so the SDT will not name specific tools in this standard. The intent is to give the real time operating personnel control over the availability of their tools so that the real time operating personnel will always know if their tools are “unavailable” due to maintenance. Names of specific tools are not needed to enforce the intent of this requirement.		
MRO NERC SDStandards Review Subcommittee	No	For R1, the lower VSL contradicts itself. It states that RC demonstrated that it determined its data requirements and requested that data and then follows with that it didn't request that data. The second option in the Lower VSL category is not practical and a compliance auditor would not be in a position to determine this. In fact, if the administrative data is not requested, other administrative requirements for reporting would be violated. Additionally, it does not make sense that an RC would determine its data needs and then omit data for administrative reporting. Further, is it the compliance auditor's job to judge if the data the RC requests is sufficient or is it his job to see that the RC has met the requirement to define the data? The remaining VSLs imply that the RC may define only partial data requirements. This does not seem likely. Why would the RC do this? This VSL appears to add to the requirement by making it appear that the compliance auditor is to judge the completeness of the data requirement. This violates Guideline 3 of the FERC ORDER ON VIOLATION SEVERITY LEVELS PROPOSED BY THE ELECTRIC RELIABILITY ORGANIZATION. Practically, it would not be enforceable anyway. It would require the RC to admit that they did not include administrative data in their data requirements. It is doubtful this would happen because the RC likely believes they prepared a complete data requirement document.

Organization	Question 12:	Question 12 Comments:
		We suggest that the VSLs should be: Severe: The RC did not determine it data requirements or the RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be demonstrated for greater than 75 to 100% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs. High: The RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be demonstrated for greater than 50 and less than or equal to 75% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs. Medium: The RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be demonstrated for greater than 25% and less than or equal to 50% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs. Lower: The RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be demonstrated for greater than 0% and less than or equal to 25% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs. R2 VSLs are not needed or paragraph 112 of Order 693-A. The Severe VSL contradicts the requirement.
Response: The RC SDT thanks you for your comment. Please see Summary Consideration above. The first requirement was retired as part of the IROL project. For R2, based on your comments and the comments of others, the VSLs were modified – the lower was removed and the requirement was treated as binary with just a Severe VSL rephrased to more closely match the language in the revised requirement.		
FirstEnergy	No	The VSL should be modified per our suggested modifications in question 10.
Response: The RC SDT thanks you for your comment. Please see Summary Consideration above.		
Duke Energy	No	R1 VSL - As a general comment, this VSL is unclear and would be difficult to audit. This VSL uses subjective terms like “material impact” and “minimal impact”. These terms are not used in the associated requirement or measure and should be removed from the VSL. This VSL uses terms like “majority, but not all”; “some, but less than a majority” which provides an opportunity for

Organization	Question 12:	Question 12 Comments:
		a subjective review by Compliance as to what a complete listing of data requirements should be. This term is not used in the Requirements or Measures and should be removed from the VSL. This VSL introduces a concept, data the RC needs for ?? administrative purposes, such as data reporting ??. This concept is not included in the Requirements or Measures portions of the Standard and should be removed from the VSL. This VSL should be written to simply assess whether the RC has made determination of what its data needs are and whether those needs have been communicated to the entities in the footprint. R2 VSL - This VSL clarifies the questions posed above regarding what the RC needs approval rights over. R2 needs to be modified to include this clarity. This VSL needs to clarify that the RC approval rights are for the RC's tools, not tools of other entities. The Severe level of this VSL needs to be re-written along the lines of: The RC does not have approval rights for planned maintenance or outages to its analysis tools.
Response: The RC SDT thanks you for your comment. Please see Summary Consideration above. The first requirement was retired as part of the IROL project. For R2, based on your comments and the comments of others, the requirement, measure and VSLs were all modified – the lower was removed and the requirement was treated as binary with just a Severe VSL rephrased to more closely match the language in the revised requirement.		
ISO/RTO Council Standards Review Subcommittee	No	For R1, the lower VSL contradicts itself. It states that RC demonstrated that it determined its data requirements and requested that data and then follows with that it didn't request that data. The second option in the Lower VSL category is not practical and a compliance auditor would not be in a position to determine this. In fact, if the administrative data is not requested, other administrative requirements for reporting would be violated. Additionally, it does not make sense that an RC would determine its data needs and then omit data for administrative reporting. Further, is it the compliance auditor's job to judge if the data the RC requests is sufficient or is it his job to see that the RC has met the requirement to define the data? The remaining VSLs imply that the RC may define only partial data requirements. This does not seem likely. Why would the RC do this? This VSL appears to add to the requirement by making it appear that the compliance auditor is to judge the completeness of the data requirement. This violates Guideline 3 of the FERC ORDER ON VIOLATION SEVERITY LEVELS PROPOSED BY THE ELECTRIC RELIABILITY ORGANIZATION. Practically, it would not be enforceable anyway. It would require the RC to admit that they did not include administrative data in their data requirements. It is doubtful this would happen because the RC likely believes they prepared a complete data requirement document.

Organization	Question 12:	Question 12 Comments:
		We suggest that the VSLs should be: Severe: The RC did not determine its data requirements or the RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be demonstrated for greater than 75 to 100% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs. High: The RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be demonstrated for greater than 50 and less than or equal to 75% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs. Medium: The RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be demonstrated for greater than 25% and less than or equal to 50% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs. Lower: The RC could not demonstrate it requested the necessary data if actual receipt of the necessary data can't be demonstrated for greater than 0% and less than or equal to 25% of the TOPs, BA, TO, GO, GOPs, LSEs and adjacent RCs. R2 VSLs are not needed per paragraph 112 of Order 693-A. The Severe VSL contradicts the requirement.
Response: The RC SDT thanks you for your comment. Please see Summary Consideration above. The first requirement was retired as part of the IROL project. For R2, based on your comments and the comments of others, the requirement, measure and VSLs were all modified – the lower was removed and the requirement was treated as binary with just a Severe VSL rephrased to more closely match the language in the revised requirement.		
SERC OC Standards Review Group	Yes and No	12.1 - Moving R1 and R2 to the RC Certification Procedure will eliminate VSL requirements.
Response: The RC SDT thanks you for your comment. Please see Summary Consideration above. R1 was retired – and R2 was moved into IRO-001 as Requirement R6. The VSLs for R6 are still needed.		

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 12:	Question 12 Comments:
Buckeye Power, Inc.	Yes and No	abstain
Manitoba Hydro	Yes	
NPCC	Yes	
CU of Springfield	Yes	
Ameren	Yes	
Reliability Coordinator Comment Working Group	Yes	
Northern California Power Agency	Yes	
Entergy Services, Inc	Yes	
Salt River Project	Yes	
AEP	Yes	
PJM Interconnection	Yes	
Bonneville Power Administration	Yes	
American Transmission Company		Abstain.

13. Do you agree with the revisions to IRO-005-1 as shown in the posted Standard and Implementation Plan? The RC SDT is recommending retiring or moving all of the requirements and retiring this standard. If not, please explain in the comment area.

Summary Consideration: Several commenters had concerns around removing the requirement to monitor frequency. Other commenters had concerns with the removal of other monitoring requirements in the standard. While the Standard Drafting Team (SDT) recognizes the concerns raised, the SDT is even more concerned with the subjectivity that any attempt to measure “Monitoring” can provide. It is the SDT’s contention that adherence to reliability standards that require the said monitoring cannot be demonstrated unless the entity is closely monitoring the system parameters. Furthermore, the SDT contends that any requirements that describe the monitoring facilities needed to fulfill fundamental duties should be embedded in organization certification process requirements. With IRO-014 and IRO-001 R1 in place, the actual act of monitoring is a secondary task that is inherent in assessing and responding to situations or events that could have an adverse impact on reliability.

Organization	Question 13:	Question 13 Comments:
Independent Electricity System Operator - Ontario	No	R1: We not agree with removing this requirement for the same reason given for the proposal to remove R5 to R8 from IRO-002 (see comments on 10 (ii), above). R8: We do not agree with completely removing this requirement, especially that part that requires an RC to monitor system frequency. While DCS and CPS are largely a BA's responsibility, the RC is the last line of defense for abnormal system performance and needs to monitor its BAs' performance including their ability to address large frequency deviations, and direct or take corrective actions as needed including requesting emergency assistance on the BAs' behalf and directing load shedding. R9: The second part of this requirement needs to be retained. IRO-004 covers operational planning, not current day operations. Coordinating pending generator and transmission facility outages is an essential and necessary task by the RC to ensure reliability. R11: The RC needs to monitor ACE, detect and identify the cause of any abnormal ACE, and direct its BAs to take necessary actions to return ACE to within a normal range. R13: We do not agree with removing the latter part of R13. The FAC standards cover the methodology used in calculating SOLs and IROLs. Regardless of how these limits are calculated, in practice there always exists the possibility that different entities come up with SOLs/IROLs, especially of the inter-ties, that could be different. Operating to the lowest SOLs/IROLs when more than one set

Organization	Question 13:	Question 13 Comments:
		exists is a necessary requirement for reliable operation.
Response: The RC SDT thanks you for your comment. I While the Standard Drafting Team (SDT) recognizes the concern raised, the SDT is even more concerned with the subjectivity that any attempt to measure "Monitoring" can provide. It is the SDT contention that adherence to reliability standards that require the said monitoring cannot be demonstrated unless the entity is closely monitoring the system parameters. Furthermore, the SDT contends that any requirements that describe the monitoring facilities needed to fulfill fundamental duties should be embedded in organization certification process Requirements. With IRO-014 and IRO-001 R1 in place, the actual act of monitoring is a secondary task that is inherent in responding to situations or events that could have an adverse impact on reliability. li With IRO-014 and IRO-001 R1 in place, the actual act of monitoring is a secondary task that is inherent in assessing and responding to situations or events that could have an adverse impact on reliability. lii The RC SDT proposes retiring this requirement as it is redundant with TOP-003 and IRO-004 (all requirements) for next day requirements. The RC has the authority to coordinate pending outages in real-time through IRO-001-2, R1 (proposed). Iv The SDT feels that there are better avenues to ensure BAs operate within established and acceptable thresholds as described in the BAL-001 and BAL-002 standards. Current standards projects are addressing revisions to the BAL set of standards. V The SDT believes this requirement is redundant with FAC-014. FAC-014 states the requirement for developing and sharing SOL and IROL between the RC, PA, TP and TOP in both the planning and operating time frames.		
American Transmission Company	No	The accountability and monitoring addressed in this Standard is still required. The drafting team's intent was that the ability to monitor is part of the certification process. However, certification is to Standards, and if there is not a Standard which addresses this issue, then an entity cannot certify to it.
Response: The RC SDT thanks you for your comment. While the Standard Drafting Team (SDT) recognizes the concerns raised, the SDT is even more concerned with the subjectivity that any attempt to measure "Monitoring" can provide. It is the SDT's contention that adherence to reliability standards that require the said monitoring cannot be demonstrated unless the entity is closely monitoring the system parameters. Furthermore, the SDT contends that any requirements that describe the monitoring facilities needed to fulfill fundamental duties should be embedded in organization certification process Requirements. With IRO-014 and IRO-001 R1 in place, the actual act of monitoring is a secondary task that is inherent in responding to situations or events that could have an adverse impact on reliability.		
MRO NERC SDTandards	No	R1 includes many requirements for monitoring the system that are important, measurable and should be retained. Monitoring is too critical to operating the system to completely eliminate these

Organization	Question 13:	Question 13 Comments:
Review Subcommittee		requirements. R4, R8 and R11 are problematic as currently written. However, there have been actual instances of a large BA intentionally operating short hundreds of MWs of energy. I believe this occurred during the summer of 1999. Thus, the RC should be monitoring the BAs ACE and directing the BA to correct it if it becomes too large. It is not necessary or even useful for the RC to monitor the BA CPS performance.
Response: The RC SDT thanks you for your comment. The SDT feels that there are better avenues to ensure BAs operate within established and acceptable thresholds as described in the BAL-001 and BAL-002 standards. If a BA chooses to operate off schedule then the BAL standards need to be revisited and tightened up. This is being done in the current projects addressing the BAL standards. Monitoring capability can be objectively measured and is essential to real-time operations – however real-time monitoring is a supporting activity and is only one of several processes used to support operation within defined parameters. Monitoring capability should be assessed during the entity registration certification process and should not be a requirement. Note that certification is aimed at verifying that an entity has the “capability” of operating reliably. With IRO-014 and IRO-001 R1 in place, the actual act of monitoring is a secondary task that is inherent in assessing and responding to situations or events that could have an adverse impact on reliability.		
Ameren	Yes and No	While we agree that most of the requirements are redundancies that properly belong elsewhere, we are concerned that Requirement 4 and Requirement 8 are not properly represented elsewhere and should not be retired until they re-surface in another standard explicitly. We believe it is still very important for an RC to monitor their respective BAs reserves and CPS performance. Likewise in R8, while the frequency monitoring is a BA function, we think that it is important enough to also be included as an RC function explicitly.
Response: The RC SDT thanks you for your comment. The SAR for this project included eliminating redundancies within the standards. In the Implementation Plan for this standard, we show the redundancy between this requirement, R4, and EOP-002-2. (please see pages 6-8 of the Implementation Plan). While the Standard Drafting Team (SDT) recognizes the concern raised, the SDT is even more concerned with the subjectivity that any attempt to measure “Monitoring” can provide. It is the SDT’s contention that adherence to reliability standards that require the said monitoring cannot be demonstrated unless the entity is closely monitoring the system parameters. Furthermore, the SDT contends that any requirements that describe the monitoring facilities needed to fulfill fundamental duties should be embedded in organization certification process Requirements. With IRO-014 and IRO-001 R1 in place, the actual act of monitoring is a secondary task that is inherent in responding to situations or events that could have an adverse impact on reliability.		
Buckeye Power,	Yes and No	Abstain

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 13:	Question 13 Comments:
Inc.		
CU Springfield	Yes	CU supports the retirement of this standard.
Response: The RC SDT thanks you for your comment.		
Southern Company Transmission	Yes	13.1 - We agree with retiring this standard.
Response: The RC SDT thanks you for your comment.		
SERC OC Standards Review Group	Yes	13.1 - We agree with retiring this standard
Response: The RC SDT thanks you for your comment.		
ISO New England Inc.	Yes	
Entergy Services, Inc	Yes	
Reliability Coordinator Comment Working Group	Yes	
Northern California Power Agency	Yes	
US Army Corps of	Yes	

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 13:	Question 13 Comments:
Engineers, Northwestern Division		
Salt River Project	Yes	
US Bureau of Reclamation	Yes	
PJM Interconnection	Yes	
FirstEnergy	Yes	
Bonneville Power Administration	Yes	
Duke Energy	Yes	
AEP	Yes	
Manitoba Hydro	Yes	
NPCC	Yes	

14. Do you agree with the revisions to the Requirements in IRO-014-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Summary Consideration: Several commenters expressed concerns with the term “impacted” and suggested replacing this with “other”. The RC SDT believes “impacted” directly relates to the purpose statement. The original wording of “one or more other” is vague and difficult to measure. Using the word “other” presents a similar situation. The RC SDT chose to use the word “impacted” to tighten the requirement and remove ambiguity. The RC SDT does not intend for non-contiguous reliability coordinators to have “RC agreements”, but to have Procedures, Processes, or Plans with impacted reliability coordinators. Other commenters suggested striking the term “as a minimum” in R1 and the RC SDT agrees and has modified R1 accordingly. Some commenters did not agree with the wording of the new requirements in IRO-014 that were formerly in IRO-016. The RC SDT reviewed the Implementation Plan for IRO-016 and its requirements and made some revisions to the requirements listed in IRO-014-2. The requirement that was transferred from IRO-016 has been translated into 4 requirements in IRO-014:

R5. ~~When an expected or actual reliability issue is detected, the~~Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify impacted Reliability Coordinators. ~~confirm the existence of the issue with the impacted Reliability Coordinators.~~

R6. ~~In the event that the issue cannot be confirmed, e~~Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators.

R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists.

~~R6~~R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when ~~When an expected or actual reliability issue exists and~~ the impacted Reliability Coordinators cannot agree on a mitigation plan, ~~all impacted Reliability Coordinators shall implement the mitigation plan developed by the Reliability Coordinator who has the reliability issue.~~

Organization	Question 14:	Question 14 Comments:
Independent Electricity System	No	We suggest to replace the word "impacted" with "other" since there is a preconception that the concerned RC makes an assessment of which other RCs are impacted by the coordinated actions,

Organization	Question 14:	Question 14 Comments:
Operator - Ontario		which may not be the perspective of the other RCs who may in fact be impacted by any coordinated actions among other RCs.
Response: The RC SDT thanks you for your comment. The RC SDT believes "impacted" directly relates to the purpose statement. The original wording of "one or more other" is vague and difficult to measure. Using the word "other" presents a similar situation. The RCSDT chose to use the word "impacted" to tighten the requirement and remove ambiguity. Additionally, R1.1 reconciles the preconception of the Reliability Coordinator making an assessment: R1.1 Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators.		
MRO NERC SDTandards Review Subcommittee	No	Please strike "as a minimum" in R1. By definition, the requirement defines the minimum. Please strike R1.6. RCs already have the authority to act per paragraph 112 of Order 693-A. Since R2 requires the RCs to agree, is the "mutually agreed to" clause in R1.1 necessary? Please strike requirements R4 and R4.1. It is duplicative to R1.1. Conference calls are a form of communication and should be address per R1.1. R5 is confusing. If a reliability issue isn't confirmed, doesn't this mean there is no reliability issue? Isn't this the point of confirming? Additionally, we suggest using validate instead of confirm. R6 appears to be a rewrite of requirements R1, R2 and their sub-requirements in IRO-016. We agree that those requirements do need to be written more succinctly or removed altogether. However, R6 does not accomplish the goal and only confuses that matter further. The reason the RCs may not be able to agree on a mitigation plan is that RC with the reliability issue may be requesting mitigations that the other RCs believe may cause them reliability issues. This requirement appears to suggest that the solution to a disagreement on the mitigation plan is cut and dried. Generally, the reason the disagreement arises is due to one RC not fully understanding the impact of their actions on another RC. The bottom line is that the RCs may have disagreements and there is no way to require a solution in these types of situations. Please revise R6 to require using the mitigation plan developed by the Reliability Coordinator who has the reliability issue provided that the mitigation plan does not cause a reliability issue in the other region. As Requirement 1 is currently written, one could interpret the requirement for every Operating Process, Procedure and Plan to address each of the sub-requirements. That is not necessary. The

Organization	Question 14:	Question 14 Comments:
		drafting team needs to consider modifying the requirement to make it clear that not every sub-requirement must be addressed in every Operating Process, Procedure, and Plan and to also make it clear that the some sub-requirements may only be appropriately addressed in a Process but not a Plan for instance.
		Response: The RC SDT thanks you for your comment. R1: The RC SDT agrees with striking “as a minimum” and the requirement is modified accordingly. The RC SDT believes that the term “collectively” addresses the interpretation of R1 (your last comment). R1.6: The RC SDT disagrees with the MRO interpretation of 693-A and believes R1.6 reinforces the Commission’s determination in paragraph 112 of 693-A which clarifies the reliability coordinator’s authority stating “...authority to issue directives arises out of the Commission’s approval of Reliability Standards that mandate compliance with such directives.” R1.1: R1.1 provides the conditions under which the RC’s will communicate or notify each other. R2 deals with actions that are to be taken beyond notifications. R4 and R4.1: The RC SDT disagrees with the duplicity. R1.1 is a sub-requirement of R1 which requires the reliability coordinator “to have” procedures, processes, or plans, and R4 requires “participation.” R5 & R6: Some commenters did not agree with the wording of the new requirements in IRO-014 that were formerly in IRO-016. The RC SDT reviewed the Implementation Plan for IRO-016 and its requirements and made some revisions to the requirements listed in IRO-014-2. There are now 4 requirements: R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify impacted Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R6. Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators, [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan, [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

Organization	Question 14:	Question 14 Comments:
Southern Company Transmission	No	14.1 - R1 and R2 - The word "impacted" tends to broaden the requirements to have procedures, processes and plans in place with each RC within the RC's Interconnection. We suggest the phrasing should be tightened up to convey the original meaning that the team intended. For example, does the team intend for the FRCC RC to have an agreement with the PJM or MISO RC? 14.2 - We suggest bringing R6 under R1 as subrequirement R1.7 and rewrite it as follows: R1 - The Dispute Resolution process will be followed when the Reliability Coordinator issuing a mitigation plan and the Reliability Coordinator(s) receiving a mitigation plan disagree on the proper steps to be taken. 14.3 - We suggest deleting R4.1 and adding a second sentence to R4: The frequency of these communications shall be at least weekly. 14.4 - R4: The word "impacted" makes it sound like these calls are only to be made when problems are expected or are occurring. If this requirement is intended more for operational awareness calls (such as the daily SERC RC call), then the word "impacted" needs to be changed to "contiguous" or a similar term. 14.5 - We suggest rewriting R5 to read: In the event that a reliability issue cannot be confirmed, each Reliability Coordinator shall operate as though the problem exists. 14.6 - At Requirement R1, the use of the phrase "as a minimum" seems to add some flexibility for development of procedures, processes and plans. A negative consequence is that it introduces more ambiguity. The recommendation is to strike the phrase. 14.7 - At Requirement R1.6, consider the following: "Authority to act to prevent and mitigate instances 'that have the potential to cause' Adverse Reliability Impacts to other Reliability Coordinator Areas."
Response: The RC SDT thanks you for your comments. 14.1: The RC SDT believes "impacted" directly relates to the purpose statement. The original wording of "one or more other" is vague and difficult to measure. Using the word "other" presents a similar situation. The RCSDT chose to use the word "impacted" to tighten the requirement and remove ambiguity. The RC SDT does not intend for non-contiguous reliability coordinators to have "RC agreements", but to have Procedures, Processes, or Plans with impacted reliability coordinators. 14.2: The RC SDT respectfully disagrees with your comment. R6 requires implementation ("shall implement") and R1 is a "shall have" requirement; keeping these separate provides clarity of related measures. The Dispute Resolution process is more administrative in nature regarding compliance, certification, audit processes, or contracts.		

Organization	Question 14:	Question 14 Comments:
		14.3: The RC SDT deleted 4.1 modified R4 to: "The RC shall participate in agreed upon conference calls at least weekly and other communication forums with impacted Reliability Coordinators." 14.4: The RC SDT chose the word "impacted" after much discussion. Impacted has the implication that the RC is immediately impacted or the RC may be impacted by a future situation. We feel that the requirement for weekly calls addresses your concern. 14.5: R5 & R6: Some commenters did not agree with the wording of the new requirements in IRO-014 that were formerly in IRO-016. The RC SDT made some revisions to the requirements listed in IRO-014-2. There are now 4 requirements: R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify impacted Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R6. Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators, [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan, [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] 14.6: The RC SDT agrees with striking "as a minimum" and the requirement is modified accordingly. 14.7: The RC SDT believes that if a reliability coordinator acts to prevent or mitigate instances the "potential to cause" already exists.
ISO New England Inc.	Yes and No	As Requirement 1 is currently written, one could interpret the requirement for every Operating Process, Procedure and Plan to address each of the sub-requirements. That is not necessary. The drafting team needs to consider modifying the requirement to make it clear that not every sub-requirement must be addressed in every Operating Process, Procedure, and Plan and to also make it clear that the some sub-requirements may only be appropriately addressed in a Process but not a Plan for instance. Use of the term collectively may resolve this dilemma.
Response: The RC SDT thanks you for your comment. The RC SDT agrees that the term "collectively" addresses your interpretation and it is already included in R1.		

Organization	Question 14:	Question 14 Comments:
FirstEnergy	No	R1 - Should be revised as follows to improve readability and clarity: R1.3 - Add "Exchanging" before "Planned" R1.4 - Add "Control of voltage" at the beginning of the requirement and delete "for voltage control" at the end of the requirement. Add a new R1.7 as follows: "A process for resolution of the disagreement covered by R6 of this standard."
Response: The RC SDT thanks you for your comment. R1.3: The RC SDT believes adding the term "Exchanging" before "Planned" is redundant with "... exchange of information" stated in R1. R1.4: The RC SDT modified R1.4 to read as "Control of voltage including the coordination of reactive resources." R1.7: R6: To address the process for resolution of disagreements, the RC SDT proposes the 4 requirements: R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify impacted Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R6. Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators, [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan, [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]		
Duke Energy	No	R1 and R2 - The word "impacted" tends to broaden the requirements to have procedures, processes and plans in place with each RC within the RC's Interconnection. We suggest the phrasing should be tightened up to convey the original meaning that the team intended. For example, does the team intend for the FRCC RC to have an agreement with the PJM or MISO RC? We suggest bringing R6 under R1 as subrequirement R1.7 and rewrite it as follows:

Organization	Question 14:	Question 14 Comments:
		R1 - The Dispute Resolution process will be followed when the Reliability Coordinator issuing a mitigation plan and the Reliability Coordinator(s) receiving a mitigation plan disagree on the proper steps to be taken. We suggest deleting R4.1 and adding a second sentence to R4: The frequency of these communications shall be at least weekly. R4: The word "impacted" makes it sound like these calls are only to be made when problems are expected or are occurring. If this requirement is intended more for operational awareness calls (such as the daily SERC RC call), then the word "impacted" needs to be changed to "contiguous". We suggest rewriting R5 to read: In the event that an operating issue cannot be confirmed, each Reliability Coordinator shall operate as though the problem exists.
Response: The RC SDT thanks you for your comment. R1 and R2: The RC SDT believes "impacted" directly relates to the purpose statement. The original wording of "one or more other" is vague and difficult to measure. Using the word "other" presents a similar situation. The RC SDT chose to use the word "impacted" to tighten the requirement and remove ambiguity. The RC SDT does not intend for non-contiguous reliability coordinators to have "RC agreements", but to have Procedures, Processes, or Plans with impacted reliability coordinators. To address your comments on the process for resolution of disagreements and R5, the RC SDT proposes the 4 requirements: R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify impacted Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R6. Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators, [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan, [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R4: The RC SDT deleted 4.1 modified R4 to: "The RC shall participate in agreed upon conference calls, at least weekly, and other communication forums with impacted Reliability Coordinators." The RC SDT chose the word "impacted" after much discussion. Impacted has the implication that the RC is immediately impacted or the RC may be impacted by a future situation. We feel that the requirement for weekly		

Organization	Question 14:	Question 14 Comments:
calls addresses your concern		
ISO/RTO Council Standards Review Subcommittee	No	Please strike "as a minimum" in R1. By definition, the requirement defines the minimum. Please strike R1.6. RCs already have the authority to act per paragraph 112 of Order 693-A. Since R2 requires the RCs to agree, is the "mutually agreed to" clause in R1.1 necessary? Please strike requirements R4 and R4.1. It is duplicative to R1.1. Conference calls are a form of communication and should be address per R1.1. R5 is confusing. If a reliability issue isn't confirmed, doesn't this mean there is no reliability issue? Isn't this the point of confirming? Additionally, we suggest using validate instead of confirm. As Requirement 1 is currently written, one could interpret the requirement for every Operating Process, Procedure and Plan to address each of the sub-requirements. That is not necessary. The drafting team needs to consider modifying the requirement to make it clear that not every sub-requirement must be addressed in every Operating Process, Procedure, and Plan and to also make it clear that the some sub-requirements may only be appropriately addressed in a Process but not a Plan for instance. Use of the term collectively may resolve this dilemma.
Response: The RC SDT thanks you for your comment. R1: The RC SDT agrees with striking "as a minimum" and the requirement is modified accordingly. The RC SDT believes that the term "collectively" addresses your interpretation of R1. R1.6: The RC SDT disagrees with your interpretation of 693-A, and believes R1.6 reinforces the Commission's determination in paragraph 112 of 693-A which clarifies the reliability coordinator's authority stating "...authority to issue directives arises out of the Commission's approval of Reliability Standards that mandate compliance with such directives." R1.1: The RC SDT believes "mutually agreed to" reinforces R2. R4 and R4.1: The RC SDT disagrees with the duplicity. R1.1 is a sub-requirement of R1 which requires the reliability coordinator "to have" procedures, processes, or plans, and R4 requires "participation." R5: The RC SDT proposes the 4 requirements for clarity: R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify impacted Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R6. Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators, [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day		

Organization	Question 14:	Question 14 Comments:
Operations and Real-time Operations] R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan, [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]		
SERC OC Standards Review Group	Yes and No	14.1 - R1 and R2 - The word "impacted" tends to broaden the requirements to have procedures, processes and plans in place with each RC within the RC's Interconnection. We suggest the phrasing should be tightened up to convey the original meaning that the team intended. For example, does the team intend for the FRCC RC to have an agreement with the PJM or MISO RC? 14.2 - We suggest bringing R6 under R1 as subrequirement R1.7 and rewrite it as follows: R1 - The Dispute Resolution process will be followed when the Reliability Coordinator issuing a mitigation plan and the Reliability Coordinator(s) receiving a mitigation plan disagree on the proper steps to be taken. 14.3 - We suggest deleting R4.1 and adding a second sentence to R4: The frequency of these communications shall be at least weekly. 14.4 - R4: The word "impacted" makes it sound like these calls are only to be made when problems are expected or are occurring. If this requirement is intended more for operational awareness calls (such as the daily SERC RC call), then the word "impacted" needs to be changed to "contiguous". 14.5 - We suggest rewriting R5 to read: In the event that an operating issue cannot be confirmed, each Reliability Coordinator shall operate as though the problem exists.
Response: The RC SDT thanks you for your comment. 14.1: The RC SDT believes "impacted" directly relates to the purpose statement. The original wording of "one or more other" is vague and difficult to measure. Using the word "other" presents a similar situation. The RCSDT chose to use the word "impacted" to tighten the requirement and remove ambiguity. The RC SDT does not intend for non-contiguous reliability coordinators to have "RC agreements", but to have Procedures, Processes, or Plans with impacted reliability coordinators. 14.2: To address your comments on the process for resolution of disagreements and R5, the RC SDT proposes the 4 requirements: R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify impacted Reliability Coordinators. [Violation		

Organization	Question 14:	Question 14 Comments:
		Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R6. Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators, [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan, [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] 14.3: The RC SDT deleted 4.1 modified R4 to: "The RC shall participate in agreed upon conference calls at least weekly and other communication forums with impacted Reliability Coordinators." 14.4: The RC SDT chose the word "impacted" after much discussion. Impacted has the implication that the RC is immediately impacted or the RC may be impacted by a future situation. We feel that the requirement for weekly calls addresses your concern. 14.5: R5 was modified as above.
Buckeye Power, Inc.	Yes and No	abstain
Entergy Services, Inc	Yes	
Salt River Project	Yes	
US Bureau of Reclamation	Yes	
PJM Interconnection	Yes	

Organization	Question 14:	Question 14 Comments:
Bonneville Power Administration	Yes	
Manitoba Hydro	Yes	
NPCC	Yes	
CU of Springfield	Yes	
Ameren	Yes	
Reliability Coordinator Comment Working Group	Yes	
Northern California Power Agency	Yes	
AEP	Yes	
American Transmission Company		Abstain

15. Do you agree with the revisions to the Measures in IRO-014-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Summary Consideration: The RC SDT received comments to revise M1 to remove “System operators” as it added to the requirement and to remove “for real-time use”. The RC SDT agrees and has modified the measure as shown below:

M1. The Reliability Coordinator ~~’s System Operators~~ shall have available ~~for Real-time use,~~ the latest approved [documented](#) version of Operating Procedures, Processes, or Plans that require notifications, information exchange or the coordination of actions among impacted Reliability Coordinators. [This documentation may include, but is not limited to, dated, current in force documentation with the specified elements.](#)

~~M1.1 These Operating Procedures, Processes, or Plans shall address:~~

- ~~– M1.1.1 – Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators.~~
- ~~– M1.1.2 – Energy and capacity shortages.~~
- ~~– M1.1.3 – Planned or unplanned outage information.~~
- ~~– M1.1.4 – Voltage control, including the coordination of reactive resources for voltage control.~~
- ~~– M1.1.5 – Coordination of information exchange to support reliability assessments.~~
- ~~– M1.1.6 – Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas.~~

~~– Most oOther The~~ measures were ~~also~~ revised to conform to changes in the requirements [and to provide samples of acceptable evidence.](#)

Organization	Question 15:	Question 15 Comments:
Independent Electricity System Operator -	No	Measure 1 actually contains a number of subrequirements that should be stipulated in R1, not M1. If indeed these are required, they should be stipulated in the Requirement section, not the Measures Section.

Organization	Question 15:	Question 15 Comments:
Ontario		
Response: The RC SDT thanks you for your comment. The RC SDT modified M1 deleting “System Operators” and the submeasures were removed and included only in the requirement.		
ISO/RTO Council Standards Review Subcommittee	No	Measure 1 appears to add to the requirement. Requirement 1 does not mention anything about System Operators yet the measurement does. The measurement should just be to verify that the RC has have Operating Processes, Procedures, and Plans. The sub-measurements are not measurements at all. There should be the single measurement to verify the Operating Processes, Procedures, and Plans have been developed and address the sub-requirements. This really points out the problem with making the criteria that must be considered in the Operating Processes, Procedures, and Plans sub-requirements in the first place. They aren't requirements of any sort. They represent criteria. The drafting team should consider making them a bulleted list without the Rs, then the drafting team won't feel compelled to write sub-measures that don't measure anything.
Response: The RC SDT thanks you for your comment. . The RC SDT modified M1 deleting “System Operators” and the submeasures were removed and included only in the requirement. As the list includes topics for every RC is required to address, these are mandatory and should be numbered rather than bulleted.		
MRO NERC SDTandards Review Subcommittee	No	Measure 1 appears to add to the requirement. Requirement 1 does not mention anything about System Operators yet the measurement does. The measurement should just be to verify that the RC has have Operating Processes, Procedures, and Plans. The sub-measurements are not measurements at all. There should be the single measurement to verify the Operating Processes, Procedures, and Plans have been developed and address the sub-requirements. This really points out the problem with making the criteria that must be considered in the Operating Processes, Procedures, and Plans sub-requirements in the first place. They aren't requirements of any sort. They represent criteria. The drafting team should consider making them a bulleted list without the Rs, then the drafting team won't feel compelled to write sub-measures that don't measure anything. We do not agree with M6 because we don't agree with R6.
Response: The RC SDT thanks you for your comment. The RC SDT modified M1 deleting “System Operators” and the submeasures were removed and included only in the requirement. R6: The RC SDT disagrees with your assertion that “RCs may have disagreements and there is no way to require a solution in these types of		

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Organization	Question 15:	Question 15 Comments:
situations". RC's need to coordinate solutions and the revised wording of the requirements R5-R8 will require that.		
Southern Company Transmission	No	15.1 - In M1, delete "for Real-time use".15.2 - Modify the measures to be consistent with changes requested in R1, R2, R4, R4.1 and R5.
Response: The RC SDT thanks you for your comment. The RC SDT modified M1 and deleted "for Real-time use." The measures were revised based on revisions to the requirements (see response to Q14).		
FirstEnergy	No	The measures should be modified per our suggested modifications in question 14.
Response: The RC SDT thanks you for your comment. The measures were revised based on revisions to the requirements (see response to Q14).		
Duke Energy	No	See comment #14 above. Also, Measure M5 is inconsistent with Requirement R5. It should mirror the requirement. Also, need to add the requirement number at the end of each Measure.
Response: The RC SDT thanks you for your comment. See response to question 14. M5 was modified to reflect the entirety of R5 and new R6/M6, R7/M7 and R8/M8 were written for clarity and completeness.		
SERC OC Standards Review Group	Yes and No	15.1 - In M1, delete "System Operator" and "for real-time use".15.2 - Modify the measures to be consistent with changes requested in R1, R2, R4, R4.1 and R5.
Response: The RC SDT thanks you for your comment. The RC SDT modified M1 and deleted both, "System Operators" and "for Real-time use." The measures were revised based on revisions to the requirements (see response to Q14).		
Buckeye Power, Inc.	Yes and No	Abstain
Manitoba Hydro	Yes	

Organization	Question 15:	Question 15 Comments:
NPCC	Yes	
Ameren	Yes	
Reliability Coordinator Comment Working Group	Yes	
Northern California Power Agency	Yes	
CU of Springfield	Yes	
Entergy Services, Inc	Yes	
Salt River Project	Yes	
US Bureau of Reclamation	Yes	
PJM Interconnection	Yes	
Bonneville Power Administration	Yes	

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Organization	Question 15:	Question 15 Comments:
AEP	Yes	
American Transmission Company		Abstain

**16. Do you agree with the Violation Severity Levels proposed in IRO-014-2 as shown in the posted Standard and Implementation Plan?
If not, please explain in the comment area.**

Summary Consideration: Several commenters suggested that the High and Severe VSLs for R2 contradicted the requirement. The RC SDT agreed and removed the "nots" from the VSLs to correct this error.

The VSL for R4 was originally proposed as a binary requirement with only a Lower VSL – since that time, a determination was made that noncompliance with any binary requirement must be classified a Severe VSL – thus the VSL for R4 was changed from Lower to Severe.

Several commenters had suggested revisions for the VSLs for R6. This requirement was imported from IRO-016 and several commenters suggested expanding the set of requirements regarding the Implementation Plan. The RC SDT expanded the requirements to 4 separate requirements and developed VSLs for these requirements (R5-R8). This made some of the comments on the VSLs moot.

Organization	Question 16:	Question 16 Comments:
Independent Electricity System Operator - Ontario	No	R2: the High and Severe VSLs contradict with the requirement. We believe all of the "nots" should be removed. R6: The Low VSL should be a High since not agreeing to a plan but implementing one that has not been agreed to is a high violation of the requirement. The VSLs for R1 may need to be revised if our comments on M1 are adopted.
Response: The RC SDT thanks you for your comment. We have revised the VSL based on your comment. R6 – The requirements were revised and additional requirements were added for clarity. The VSLs were written based on the revised requirements. The VSL for R1 was unchanged as R1 remained unchanged.		
MRO NERC SDTandards Review	No	For R2, the High and Severe VSLs contradict the requirement. We believe all of the "nots" should be removed. We don't agree with the VSLs in R4 since we believe R4 should be struck.

Organization	Question 16:	Question 16 Comments:
Subcommittee		The Lower VSL for R6 should not even be a violation unless the impact was negative. If the RC implemented a different mitigation plan and resolved the issue, then the RC was likely correct to disagree.
Response: The RC SDT thanks you for your comment. We have revised the VSL for R2 per your suggestion. R4 – R4 remains in the standard R6 - The requirements were revised and additional requirements were added for clarity. The VSLs were written based on the revised requirements.		
Southern Company Transmission	No	16.1 - In R2, severe should be "... and no action was taken by the RC". 16.2 - In R5, severe should also include "... or that the RC failed to operate as though the problem existed." 16.3 - Modify the VSLs to be consistent with changes requested in R1, R2, R4, R4.1 and R5.
Response: The RC SDT thanks you for your comment. 16.1 The requirement is to have agreed to plans and to distribute the plans. Other requirements address the actions to be taken. 16.2 The requirements were revised and additional requirements were added for clarity. The VSLs were written based on the revised requirements. 16.3 The VSLs were revised based on stakeholder comments and revised requirements.		
FirstEnergy	No	The VSL should be modified per our suggested modifications in question 14.
Response: The RC SDT thanks you for your comment. The VSLs were revised to reflect revisions to the requirements.		
Duke Energy	No	See comments #14 and #15 above - VSLs need to be revised to correspond to the revised Requirements and Measures.
Response: The RC SDT thanks you for your comment. Please see responses to comment 14 and 15 above. VSLs were revised to reflect		

Organization	Question 16:	Question 16 Comments:
revised requirements.		
ISO/RTO Council Standards Review Subcommittee	No	For R2, the High and Severe VSLs contradict the requirement. We believe all of the "notes" should be removed. We don't agree with the VSLs in R4 since we believe R4 should be struck. The Lower VSL for R6 should not even be a violation unless the impact was negative. If the RC implemented a different mitigation plan and resolved the issue, then the RC was likely correct to disagree.
Response: The RC SDT thanks you for your comment. The VSL for R2 was revised per your suggestion. R4 – R4 remains in the standard. The VSLs were revised to reflect that noncompliance with a binary requirement is Severe. R6 – The requirements were revised and additional requirements were added for clarity. The VSLs were written based on the revised requirements.		
SERC OC Standards Review Group	Yes and No	16.1 - In R2, severe should be "no action was taken by the RC". 16.2 - In R5, severe should also include that the RC failed to operate as though the problem existed. 16.3 - Modify the VSLs to be consistent with changes requested in R1, R2, R4, R4.1 and R5.
Response: The RC SDT thanks you for your comment. 16.1 - The requirement is to have agreed to plans and to distribute the plans. Other requirements address the actions to be taken. 16.2 - The requirements were revised and additional requirements were added for clarity. The VSLs were written based on the revised requirements. 16.3 - The VSLs were revised based on stakeholder comments and revised requirements.		
Buckeye Power, Inc.	Yes and No	abstain

Organization	Question 16:	Question 16 Comments:
US Bureau of Reclamation	Yes	
Entergy Services, Inc	Yes	
Salt River Project	Yes	
Bonneville Power Administration	Yes	
AEP	Yes	
PJM Interconnection	Yes	
Manitoba Hydro	Yes	
NPCC	Yes	
Ameren	Yes	
CU of Springfield	Yes	
Reliability Coordinator Comment Working Group	Yes	
Northern California Power Agency	Yes	

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 16:	Question 16 Comments:
American Transmission Company		Abstain

17. Do you agree with the RC SDT recommendation to retire IRO-015-1 and move the requirements into IRO-014-2? If not, please explain in the comment area.

Summary Consideration: Stakeholders agree with the proposed revisions.

Organization	Question 17:	Question 17 Comments:
Buckeye Power, Inc.	Yes and No	abstain
SERC OC Standards Review Group	Yes	17.1 - We agree with the recommendation to retire IRO-015-2
Response: The RC SDT thanks you for your comment.		
Southern Company Transmission	Yes	17.1 - We agree with the recommendation to retire IRO-015-2.
Response: The RC SDT thanks you for your comment.		
Manitoba Hydro	Yes	
NPCC	Yes	
Ameren	Yes	
Independent Electricity System Operator - Ontario	Yes	

Organization	Question 17:	Question 17 Comments:
CU of Springfield	Yes	
Reliability Coordinator Comment Working Group	Yes	
Northern California Power Agency	Yes	
MRO NERC SDTandards Review Subcommittee	Yes	
ISO New England Inc.	Yes	
Entergy Services, Inc	Yes	
Salt River Project	Yes	
US Bureau of Reclamation	Yes	
PJM Interconnection	Yes	
FirstEnergy	Yes	
Bonneville Power	Yes	

Organization	Question 17:	Question 17 Comments:
Administration		
Duke Energy	Yes	
AEP	Yes	
ISO/RTO Council Standards Review Subcommittee	Yes	
American Transmission Company		Abstain

18. Do you agree with the revisions to IRO-016-1 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Summary Consideration: Stakeholders agree with the concept of moving the requirements of IRO-016-1 into IRO-014-2. Some commenters did not agree with the wording of the new requirements in IRO-014 that were formerly in IRO-016. The RC SDT reviewed the Implementation Plan for IRO-016 and its requirements and made some revisions to the requirements listed in IRO-014-2. There are now 4 requirements formed to cover the intent of the requirement transferred from IRO-016:

R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify impacted Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

R6. Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators, [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan, [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

Organization	Question 18:	Question 18 Comments:
Duke Energy	No	See comment #14 above regarding re-write needed for Requirement R6 of IRO-014-2.
Response: The RC SDT thanks you for your comment. Please see response in #14 above.		
MRO NERC SDTandards Review Subcommittee	Yes	We do agree with moving the requirement. However, the drafting team needs to revisit the wording of the requirement. The new wording is much more confusing. Until we reviewed IRO-016-2, it was not clear at all that R6 in IRO-014 was attempting to mimic R1 and its sub-requirements in IRO-016-2.

Organization	Question 18:	Question 18 Comments:
Response: The RC SDT thanks you for your comment. The RC SDT reviewed the Implementation Plan for IRO-016 and its requirements and made some revisions to the requirements listed in IRO-014-2. There are now 4 requirements: R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify impacted Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R6. Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators, [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan,. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]		
Southern Company Transmission	Yes	18.1 - We agree with the recommendation to retire IRO-016-2.
Response: The RC SDT thanks you for your comment.		
Buckeye Power, Inc.	Yes and No	Abstain
SERC OC Standards Review Group	Yes	18.1 - We agree with the recommendation to retire IRO-016-2
Response: The RC SDT thanks you for your comment.		
ISO/RTO Council Standards Review	Yes	We do agree with moving the requirement. However, the drafting team needs to revisit the wording of the requirement. The new wording is much more confusing. Until we reviewed IRO-016-2, it was not clear at all that R6 in IRO-014 was attempting to mimic R1 and its sub-requirements in IRO-016-

Organization	Question 18:	Question 18 Comments:
Subcommittee		2.
Response: The RC SDT thanks you for your comment. The RC SDT reviewed the Implementation Plan for IRO-016 and its requirements and made some revisions to the requirements listed in IRO-014-2. There are now 4 requirements: R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify impacted Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R6. Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators, [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan,. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]		
Manitoba Hydro	Yes	
NPCC	Yes	
Ameren	Yes	
Independent Electricity System Operator - Ontario	Yes	
CU of Springfield	Yes	
Reliability Coordinator Comment Working	Yes	

Comments for Set of Reliability Coordination Standards (Project 2006-06)

Organization	Question 18:	Question 18 Comments:
Group		
Northern California Power Agency	Yes	
ISO New England Inc.	Yes	
Entergy Services, Inc	Yes	
MEAG Power		
Salt River Project	Yes	
US Bureau of Reclamation	Yes	
PJM Interconnection	Yes	
FirstEnergy	Yes	
Bonneville Power Administration	Yes	
AEP	Yes	
American Transmission Company		Abstain

19. If you have any other comments, not expressed in questions above, on this set of revisions, please provide your comments here.

Summary Consideration: The RC SDT received comments that COM-001-2, R5 should be retired upon regulatory approval. The RC SDT will propose the earliest possible retirement date – the first day of the first calendar quarter following applicable regulatory approval, or in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter following BOT adoption.

Organization	Question 19:
Southern Company Transmission	19.1 - We suggest the effective date for the retirement of R5 (NERC Net Security Policy) in the COM-001-2 Standard should be effective immediately upon regulatory approval. As written, the Policy is unenforceable, contains no measures and is not germane to BES Reliability.
Response: The RC SDT thanks you for your comment. We concur and will request an effective date as you suggest.	
SERC OC Standards Review Group	19.1 - We suggest the effective date for the retirement of R5 (NERC Net Security Policy) in the COM-001-2 Standard should be effective immediately upon regulatory approval. As written, the Policy is unenforceable, contains no measures and is not germane to BES Reliability
Response: The RC SDT thanks you for your comment. We concur and will request an effective date as you suggest.	
Entergy Services, Inc	Overall, we think the coordinated set of standards being developed by the RTOSDT and IROLSDT are good for reliability, crisp, and tightens up the reliability concepts.
Response: The RC SDT thanks you for your comment.	
MEAG Power	My other concerns are addressed in the comments of the SERC OC Standards Review Group.
Response: The RC SDT thanks you for your comment.	
Salt River Project	I appreciate the new comment form in Word version. his allows me to comment on each requirement specifically addressing the requirement, measure or the VSL's

Organization	Question 19:
Response: The RC SDT thanks you for your comment.	
#2 Standards Interface Subcommittee/Compliance Elements Development Resource Pool	Standard – COM-001-2 Telecommunications: Requirement 1: Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall operationally test, on a quarterly basis at a minimum, alternative telecommunications facilities to ensure the availability of their use when normal telecommunications facilities fail. Proposed Measure: Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall provide evidence that it operationally tested, on a quarterly basis at a minimum, alternative telecommunications facilities to ensure the availability of their use when normal telecommunications facilities fail. SDT Proposed Lower VSL The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to operationally test within the last quarter. CEDRP Proposed Lower VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator performed operational testing of alternative telecommunications, but did not perform a test in one of the previous four quarters. SDT Proposed Moderate VSL: The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to operationally test within the last 2 quarters. CEDRP Proposed Moderate VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator performed operational testing of alternative telecommunications, but did not perform a test in two of the previous four quarters. SDT Proposed High VSL: The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to operationally test within the last 3 quarters. CEDRP Proposed High VSL: The Reliability Coordinator, Balancing Authority or Transmission Operator performed operational testing of alternative telecommunications, but did not perform a test in three of the previous four quarters.

Organization	Question 19:
	SDT Proposed Severe VSL: The Reliability Coordinator, Transmission Operator, or Balancing Authority failed to operationally test within the last 4 quarters. CEDRP Proposed Severe VSL: The Responsible Entity failed to operationally test alternative telecommunications every quarter on more than three separate occasions (i.e. more than any three different quarters). ===== Standard – COM-001-2 R2 Telecommunications Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities of the failure of its normal telecommunications facilities, and shall verify that alternate means of telecommunications are functional. Proposed Measure: Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide evidence that it notified impacted entities of failure of their normal telecommunications facilities, and verified the alternate means of telecommunications were functional. Discussion - This requirement needs to be re-written to be more clearly define who the entities are that are “impacted.” The key attributes appear to be notification of ALL (communication) impacted entities (possible omission if some, but not all are not notified). The requirement does not give any guidance on the “verification” side – this is a problem, one entity can interpret that to mean “we looked and it was working”, another may be to verify with all impacted entities that alternate communication is working. We suggest this requirement needs a little more clarification. Response: The RC SDT believes that entities should contact others when their normal communication capability is lost. For example, the normal phone line could be cut and someone trying to contact that entity may only get a busy signal and have no idea that alternate communications is necessary. We have revised the requirement to place time bounds on outages that require notification. The requirement was rewritten to: R2. Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure (30 minutes or longer) of its normal interpersonal communications capabilities. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i> The CEDRP does not feel it can write a valid VSL for this requirement as currently worded. SDT Proposed Lower VSL:

Organization	Question 19:
	The Reliability Coordinator, Transmission Operator or Balancing Authority notified all impacted entities of the failure of their normal telecommunications facilities, but failed to verify the alternate means of telecommunications are functional. CEDRP Proposed Lower VSL: See Discussion SDT Proposed Moderate VSL: The Reliability Coordinator, Transmission Operator or Balancing Authority notified some, but not all, impacted entities of the failure of their normal telecommunications facilities, and failed to verify the alternate means of telecommunications are functional. CEDRP Proposed Moderate VSL: See Discussion: SDT Proposed High VSL: N/A CEDRP Proposed High VSL: See Discussion SDT Proposed Severe VSL: The Reliability Coordinator, Transmission Operator or Balancing Authority failed to notify any impacted entities of the failure of their normal telecommunications facilities, and failed verify the alternate means of telecommunications are functional. CEDRP Proposed Severe VSL: See Discussion Standard – COM-001-2 R3 Telecommunications Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider shall use English as the language for all inter-entity Bulk Electric System (BES) reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected BES. Transmission Operators and Balancing Authorities may use an alternate language for internal operations. Proposed Measure: The Reliability Coordinator, Transmission Operator or Balancing Authority shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, that will be used

Organization	Question 19:
	to determine that personnel used English as the language for all inter-entity BES reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected BES. NOTE: OK with this as is because the requirement and VSLs have been re-written, will be removed from this standard shortly, and included in the new COM-003-1 standard. Response: Thank you for your comment. SDT Proposed Severe VSL: The Responsible Entity failed to provide evidence of concurrence to use a language other than English for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. CEDRP Proposed Severe VSL: The Responsible Entity failed to provide evidence of the concurrence to use a language other than English for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. ===== Standard – COM-001-2 R4 Telecommunications Each Distribution Provider and Generation Operator shall have telecommunications facilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information. Proposed Measure: Each Distribution Provider and Generation Operator has telecommunications facilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information. “has” telecomm with TOP and BA Discussion – Telecommunication Facilities is ambiguous and is not included in the NERC glossary of terms – the CEDRP recommend deleting the word “facilities” from the requirement and measure and leaving it just as “telecommunications” with its TOP and BA . Response: The term “telecommunications facilities” was replaced with “interpersonal communications

Organization	Question 19:
	capabilities" to clarify the intent of the requirement. SDT Proposed High VSL: N/A CEDRP Proposed High VSL: The Responsible Entity failed to establish telecommunications with either their Balancing Authority OR Transmission Operator for the exchange of Interconnection and operating information. SDT Proposed Severe VSL: The Distribution Provider or Generation Operator failed to have telecommunications facilities with its Transmission Operator and Balancing Authority CEDRP Proposed Severe VSL: The Responsible Entity failed to establish telecommunications with their Balancing Authority AND Transmission Operator for the exchange of Interconnection and operating information. 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? Yes, considering the wording of the requirement as written. More specifically, the word "have" as used in the requirement is a bit vague. A better choice could have been, "established and maintains." Response: Thank you for your comment. ===== Standard: COM-002-3 Communications and Coordination
	Response: The RC SDT thanks you for your comments. Please see responses embedded above. In the future, please do not submit comments in this format. It is extremely burdensome on the drafting team in trying to respond to the comments. Please answer each question individually. If you encounter difficulty, please contact NERC for assistance.
Standards Interface Subcommittee/Compliance Elements Drafting	Standard – IRO-001 R1 The Reliability Coordinator shall act or direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts. [Violation Risk

Organization	Question 19:
	Factor: High] [Time Horizon: Real-time Operations and Same Day Operations] Proposed Measure Each Reliability Coordinator shall have evidence that it acted, or issued directives, to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts within its Reliability Coordinator Area Discussion – 1. As currently worded it can be interpreted that any time an event occurs the RC would be in violation of the standard simply because they had failed “to prevent” an event. 2. This requirement does not have a “timing” element included, although it implies timing based on the “duration of the event”. Including that “duration of the event” is problematic – it appears to imply that human intervention may provide a more timely response than relay operation, we would suggest more clarification about what the “duration” element of the requirement is intended to address (e.g. generation re-dispatch?). 3. There also appears to be a “quality” element included based on the mitigation of magnitude of the event. As a result we believe that timeliness, effectiveness and communication should be the basis of the VSLs. 4. The VSLs as differentiate between directing actions and acting. Practically, there is no difference. The RC is still giving the directive. It is just a matter of who is carrying it out. This is not a valid basis for differentiating between VSLs. We suggest the VSLs be defined based on actual system impact (i.e. Was the RC acting or directing actions to prevent or to mitigate?) and to either modify the requirement to remove timing aspects or to add the timing aspects to the VSLs. Response: 1. The RC SDT does not agree that there would be a violation any time an event occurred. The RC should always be looking ahead. Even though events can occur that were not foreseeable or due to catastrophic failures of system equipment. 2. The intent of the phrase of “duration of the event” is to emphasize that there are actions that can be taken to shorten the duration of an event. These include ordering redispatch and system reconfiguration (including load shedding) to mitigate an Adverse Reliability Impact, thus shortening the event and its impact on the interconnection. 3. The VSL has been re-written to include only a Severe VSL. 4. We agree and have revised the VSL to only have a Severe VSL. SDT Proposed High VSL IRO-001 R1

Organization	Question 19:
	The Reliability Coordinator failed to act to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts. CEDRP Proposed VSL The Reliability Coordinator failed to act to prevent the magnitude or duration of Adverse Reliability Impacts. SDT Proposed Severe VSL IRO-001 R1 The Reliability Coordinator failed to act and direct actions to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts CEDRP Proposed VSL The Reliability Coordinator failed to act and direct actions to mitigate the magnitude or duration of Adverse Reliability Impacts CAE Resource Pool Comments The Enforcement Authority Statement, “NERC shall be responsible for compliance monitoring of the Regional Entity.” Is not clear, if it is intended to encompass Regional Entities that perform RC functions is should be clearly stated, if not it should not be included in the Enforcement Authority section. ===== Standard – IRO-001 R2 Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers, and Purchasing-Selling Entities shall act without intentional delay to comply with Reliability Coordinator directives unless such actions would violate safety, equipment, or regulatory or statutory requirements. [Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations] Proposed Measure Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, or Purchasing-Selling Entity shall have evidence that it acted without delay to comply with the Reliability Coordinator’s directives unless such actions would violate safety, equipment, or regulatory or statutory requirements. Discussion - The team would suggest “intentional delay” be eliminated from the requirement – e.g. “shall act to...”). To act with an intentional delay represents a willful act to disregard the requirement. Willful disregard of requirements is one of the factors that the enforcement authority uses to magnify penalties. Requirements should not include attempts to avoid willful disregard of the requirement.

Organization	Question 19:
	The measure and VSLs do not consider the exceptions for not following the RC objective. The drafting team should consider combining requirements R2 and R3. Thus, one VSL would become failure to notify the RC of the inability to comply. The drafting team could consider applying the numerical category of VSLs for some directives such as an order to redispach. Obviously, it would not work well if the directive was to reconfigure the system. Response: The term "intentional delay" was eliminated from the standard as you suggested. The VSLs were revised to reflect the requirement. SDT Proposed Moderate ~~Moderate~~ High VSL The responsible entity followed the Reliability Coordinators directive unless such actions would violate safety, equipment, or regulatory or statutory requirements with a delay. ~~not caused by equipment problems.~~ CEDRP Proposed VSL IRO-001 R2 The team does not agree that this is a valid VSL. SDT Proposed High VSL ~~The responsible entity followed the majority of the Reliability Coordinators directive but did not fully follow the directive because it would violate safety, equipment, statutory or regulatory requirements.~~ CEDRP Proposed VSL IRO-001 R2 The team does not agree that this is a valid VSL. The word majority implies some ability to numerically measure the response to the directive. Thus, the drafting team should consider applying the numerical category of the VSL guidelines. SDT Proposed Severe VSL ~~The responsible entity did not follow the Reliability Coordinators directive. The responsible entity did not follow the Reliability Coordinators directive, the directive would not have violated safety, equipment, regulatory, or statutory requirements, and responsible entity did not communicate the inability to follow the directive to the Reliability Coordinator.~~ CEDRP Proposed VSL IRO-001 R2 The responsible entity did not follow the Reliability Coordinators directive, the directive would not have violated safety, equipment, regulatory, or statutory requirements, and responsible entity did not communicate the inability to follow the directive to the Reliability Coordinator.

Organization	Question 19:
	===== Standard - IRO-001 R3 The Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider or Purchasing-Selling Entity shall immediately confirm the ability to comply with the directive or inform the Reliability Coordinator upon recognition of the inability to perform the directive. [Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations] Proposed Measure Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, or Purchasing-Selling Entity shall have evidence that it confirmed its ability to comply with the Reliability Coordinator's directives, or if for safety, equipment, regulatory or statutory requirements it could not comply, informed the Reliability Coordinator upon recognition of the inability to comply. Discussion – The requirement appears to be based on communication and can be problematic by including the requirement to immediately confirm the ability to comply, a directive can be issued to one entity or several entities at one time (e.g. conference call, all call, electronic notification) that may create several issues when attempting to process all confirmations, the requirement language presents a risk of being found out of compliance for following a directive but not providing an “immediate” confirmation to the RC. The CEDRP believes it to be a reasonable expectation that all entities will comply with reliability directives and notification should be made only on exception. The SDT should consider combining this requirement with R2. Response: The phrase “immediately confirm the ability to comply” was removed from the requirement. The new wording is: R3. Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, or Purchasing-Selling Entity shall inform its Reliability Coordinator upon recognition of its inability to perform the directive. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations]</i> SDT Proposed Lower VSL IRO-001 R3 The responsible entity failed to immediately confirm the ability to comply with the directive issued by the Reliability Coordinator.

Organization	Question 19:
	CEDRP Proposed VSL See above discussion note ===== Standard - IRO-001 R4 Each Reliability Coordinator that identifies an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area shall notify, without intentional delay, all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] Proposed Measure Each Reliability Coordinator shall have evidence that it notified, without intentional delay, all impacted Transmission Operators and balancing Authorities in its Reliability Coordinator Area when it identified a real or potential threat with Adverse Reliability Impacts, within its Reliability Coordinator Area. Discussion – To act with an intentional delay represents a willful act to disregard the requirement. Willful disregard of requirements is one of the factors that the enforcement authority uses to magnify penalties. Requirements should not include attempts to avoid willful disregard of the requirement. This requirement appears to fit the numerical category of the VSL guidelines best. Response: The term “intentional delay” was eliminated from the standard as you suggested. The VSLs were revised as you suggested. SDT Proposed Lower VSL IRO-001 R4 N/A CEDRP Proposed VSL The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify 25% or less of the Transmission Operators and Balancing Authorities within its Reliability Coordination Area. SDT Proposed Moderate VSL IRO-001 R4 N/A CEDRP Proposed VSL

Organization	Question 19:
	The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify more than 25% but less than or equal to 50% of the Transmission Operators and Balancing Authorities within its Reliability Coordination Area. SDT Proposed High VSL IRO-001 R4 N/A CEDRP Proposed VSL The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify more than 50% but less than or equal to 75% of the Transmission Operators and Balancing Authorities within its Reliability Coordination Area. SDT Proposed Severe VSL: IRO-001 R4 The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. CEDRP Proposed Severe VSL: The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify more than 75% of the Transmission Operators and Balancing Authorities within its Reliability Coordination Area. ===== Standard - IRO-001 R5 Each Reliability Coordinator who identifies an expected or actual threat with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify, without intentional delay, all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when the transmission problem has been mitigated. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] Proposed Measure Each Reliability Coordinator shall have evidence that it notified, without intentional delay, all impacted Transmission Operators and balancing Authorities in its Reliability Coordinator Area when the real or potential threat with Adverse Reliability Impacts within its Reliability Coordinator Area has been mitigated.

Organization	Question 19:
	Discussion – To act with an intentional delay represents a willful act to disregard the requirement. Willful disregard of requirements is one of the factors that the enforcement authority uses to magnify penalties. Requirements should not include attempts to avoid willful disregard of the requirement. Measure 5 is written implying that there is an Adverse Reliability Impact. The drafting team should consider wording the measurement to consider that there may not be an Adverse Reliability Impact requiring a directive. The Commission in paragraph 27 of the VSL order has stated that multiple VSLs are preferable where possible. Suggest applying the numerical category of the VSL Guidelines based on the number of entities notified. Response: The term “intentional delay” was eliminated from the standard as you suggested. The VSLs were revised per your suggestion. SDT Proposed Lower VSL: IRO-001 R5 N/A CEDRP Proposed Lower VSL: The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify 25% or less of the impacted Transmission Operators and Balancing Authorities within its Reliability Coordination Area that the Adverse Reliability Impact had been mitigated. SDT Proposed Moderate VSL: IRO-001 R5 N/A CEDRP Proposed Moderate VSL: The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify more than 25% but less than or equal to 50% of the impacted Transmission Operators and Balancing Authorities within its Reliability Coordination Area that the Adverse Reliability Impact had been mitigated. SDT Proposed High VSL: IRO-001 R5 N/A CEDRP Proposed High VSL: The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify more than 50% but less than or equal to 75% of the

Organization	Question 19:
	impacted Transmission Operators and Balancing Authorities within its Reliability Coordination Area that the Adverse Reliability Impact had been mitigated. SDT Proposed Severe VSL: IRO-001 R5 The Reliability Coordinator failed to notify all impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated. CEDRP Proposed Severe VSL: The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to notify more than 75% of the impacted Transmission Operators and Balancing Authorities within its Reliability Coordination Area that the Adverse Reliability Impact had been mitigated. ===== Standard – IRO-002-2 R1 Each Reliability Coordinator shall determine the data requirements to support its reliability coordination tasks and shall request such data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities, or adjacent Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] Proposed Measure Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a letter to Transmission Operators, Balancing Authorities, Transmission Owners, Generator Owners, Generator Operators, and Load-Serving Entities, or adjacent Reliability Coordinators, or other equivalent evidence that will be used to confirm that the Reliability Coordinator has requested the data required to support its reliability coordination tasks. Discussion – The VSLs attempt to measure the quality of the data requirements. They require the compliance auditor to judge if another RC has material impact and what data is administrative and what data is substantial. Given the typical length of a compliance audit, it is doubtful that the compliance auditor can make these types of judgments about the quality of the data and the material impact of another RC. The drafting team should consider applying numerical category of VSLs based on the number of entities the data request is made from. It is interesting that the measure also does not require

Organization	Question 19:
	any documentation of a data specification. Response: The requirement was retired by the work of the IROLSDT. It is no longer in the standard. SDT Proposed Lower VSL: The Reliability Coordinator demonstrated that it 1) determined its data requirements and requested that data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators with a material impact on the Bulk Electric System in its Reliability Coordination Area but did not request the data from Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators with minimal impact on the Bulk Electric System in its Reliability Coordination Area or 2) determined its data requirements necessary to perform its reliability functions with the exceptions of data that may be needed for administrative purposes such as data reporting. CEDRP Proposed Lower VSL: IRO-002-2 R1 The Reliability Coordinator failed to request data to support its reliability coordination tasks from 25% or less of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities, or adjacent Reliability Coordinators. SDT Proposed Moderate VSL: The Reliability Coordinator demonstrated that it determined the majority but not all of its data requirements necessary to support its reliability coordination functions and requested that data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators. CEDRP Proposed Moderate VSL: IRO-002-2 R1 The Reliability Coordinator failed to request data to support its reliability coordination tasks from more than 25% but less than or equal to 50% of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities, or adjacent Reliability Coordinators. SDT Proposed High VSL: The Reliability Coordinator demonstrated that it determined 1) some but less than the majority of its data requirements necessary to support its reliability

Organization	Question 19:
	coordination functions and requested that data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators Or 2) all of its data requirements necessary to support its reliability coordination functions but failed to demonstrate that it requested data from two of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators. CEDRP Proposed High VSL: IRO-002-2 R1 The Reliability Coordinator failed to request data to support its reliability coordination tasks from more than 50% but less than or equal to 75% of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities, or adjacent Reliability Coordinators. SDT Proposed Severe VSL: The Reliability Coordinator failed to demonstrate that it 1) determined its data requirements necessary to support its reliability coordination functions and requested that data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators Or 2) requested the data from three or more of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators. CEDRP Proposed Severe VSL: IRO-002-2 R1 The Reliability Coordinator failed to request data to support its reliability coordination tasks from more than 75% of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities, or adjacent Reliability Coordinators,

Organization	Question 19:
	Or, The Reliability Coordinator failed to determine data requirements to support its reliability coordination tasks. Standard – IRO-002-2 R2 Each Reliability Coordinator shall have the authority to veto planned outages to analysis tools, including final approvals for planned maintenance. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] Proposed Measure Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a documented procedure or equivalent evidence that will be used to confirm that the Reliability Coordinator has the authority to veto planned outages to analysis tools, including final approvals for planned maintenance as specified in Requirement 2. Is this requirement needed? R1 IRO-001-2 requires the RC to mitigate Adverse Reliability Impacts. R2 IRO-001-2 requires responsible entities to comply with the RC directives. Wouldn't the RC thus have the right to cancel all types of outages (i.e. analysis tools, transmission equipment, etc). FERC has stated in paragraph 112 of Order 693-A that an RC does not derive their authority from agreements but rather from FERC's approval of the standards. Barring the team's decision to remove this requirement, the Severe VSL is confusing. We have suggested different wording. Response: While the RC SDT agrees that the other requirements should cover this subject, this is a direct response to the 2003 blackout and is included here. We have revised the Severe VSL to reflect the revised requirement. SDT Proposed Severe VSL IRO-002-2 R2 Reliability Coordinator approval is not required for planned maintenance or planned outages. CEDRP Proposed VSL Reliability Coordinator does not approve planned maintenance or planned outages.

Organization	Question 19:
	===== Standard – IRO-014-2 R1 No comments ===== Standard – IRO-014-2 R2 R2. Each Reliability Coordinator's Operating Procedure, Process, or Plan that requires one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) shall be: [Violation Risk Factor: Lower] [Time Horizon: Real-time Operations and Operations Planning] R2.1. Agreed to by all the Reliability Coordinators required to take the indicated action(s). R2.2. Distributed to all Reliability Coordinators that are required to take the indicated action(s). Proposed Measure M2. The Reliability Coordinator shall have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were: M2.1 Agreed to by all the Reliability Coordinators required to take the indicated action(s). M2.2 Distributed to all Reliability Coordinators that are required to take the indicated action(s). Discussion – The High and Severe VSLs appear to use “not” incorrectly. Response: We agree and have revised the VSLs. SDT Proposed Moderate VSL: IRO-014-2 R2 The Reliability Coordinator ~~failed to~~ did not have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were distributed to all Reliability Coordinators that are required to take action. CEDRP Proposed Moderate VSL: IRO-014-2 R2 The Reliability Coordinator did not have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were distributed to all Reliability Coordinators that are required to take

Organization	Question 19:
	action. SDT Proposed High VSL: The Reliability Coordinator ~~failed to~~ did not have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were ~~not~~ agreed to by all Reliability Coordinators that are required to take action CEDRP Proposed High VSL: The Reliability Coordinator did not have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were agreed to by all Reliability Coordinators that are required to take action SDT Proposed Severe VSL: The Reliability Coordinator ~~failed to~~ did not have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were ~~not~~ agreed to by all Reliability Coordinators that are required to take action and were ~~not~~ distributed to all Reliability Coordinators that are required to take action CEDRP Proposed Severe VSL: The Reliability Coordinator did not have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were agreed to by all Reliability Coordinators that are required to take action and were distributed to all Reliability Coordinators that are required to take action ===== Standard – IRO-014-2 R3 [Response: The SDT appreciates the comments. To better emphasize the distinction, the SDT decided to underline the “and” and the “or”.] Requirement (including sub-requirements) R3. The Reliability Coordinator shall make notifications and exchange reliability–related information with impacted Reliability Coordinators using its predefined Operating Procedures, Processes, or Plans for conditions that may impact other Reliability Coordinator Areas or other means to accomplish the notifications and exchange of reliability-related information. [Violation Risk Factor: Medium][Time

Organization	Question 19:
	Horizon: Real-time Operations and Operations Planning] Proposed Measure M3. The Reliability Coordinator shall have evidence it made notifications and exchanged reliability–related information with impacted Reliability Coordinators using its predefined Operating Procedures, Processes, or Plans for conditions that may impact other Reliability Coordinator Areas or other means to accomplish the notifications and exchange of reliability-related information. Discussion: The VSLs appear to be appropriate. Since the only difference is the use of the “and” and “or”, we suggest emphasizing those words in bold. We read this more than once before we noticed the difference. Response: We revised the VSL to emphasize the “OR” and “AND” parts. SDT Proposed High VSL: The Reliability Coordinator failed to make notifications or exchange reliability–related information with impacted Reliability Coordinators. CEDRP Proposed High VSL: IRO-014-2 R3 The Reliability Coordinator failed to make notifications or exchange reliability–related information with impacted Reliability Coordinators. SDT Proposed Severe VSL: The Reliability Coordinator failed to make notifications and exchange reliability–related information with impacted Reliability Coordinators. CEDRP Proposed Severe VSL: IRO-014-2 R3 The Reliability Coordinator failed to make notifications and exchange reliability–related information with impacted Reliability Coordinators. ===== Standard – IRO-014-2 R4 R4. The Reliability Coordinator shall participate in agreed upon conference calls and other communication forums with impacted Reliability Coordinators. [Violation Risk Factor: Lower][Time

Organization	Question 19:
	Horizon: Real-time Operations] The frequency of these conference calls shall be agreed upon by all involved Reliability Coordinators and shall be at least weekly. Proposed Measure M4. The Reliability Coordinator shall have evidence it participated in agreed upon (at least weekly) conference calls and other communication forums with impacted Reliability Coordinators. Discussion – This requirement is purely administrative and probably does not rise to a level of a reliability standard requirement. It is in essence redundant, with R1.1 IRO-014-2? It appears R1.1 addresses the same information that would be expected to be discussed in a weekly conference call. Should the drafting team disagree and retain this requirement, please consider applying multiple VSLs based on how often the RC participates in conference calls, how many they missed, or how many impacted RCs they participated in conference calls with. Response: R1.1 is a sub-requirement of R1 which requires the reliability coordinator “to have” procedures, processes, or plans, and R4 requires “participation.” R4 requires participation on calls. If the RC fails to participate, that is a violation of the requirement, making it a binary requirement with only one VSL. SDT Proposed Lower VSL: The Reliability Coordinator failed to participate in agreed upon (at least weekly) conference calls and other communication forums with impacted Reliability Coordinators. CEDRP Proposed Lower VSL: IRO-014-2 R4 The Reliability Coordinator participated in agreed upon conference calls and other communication forums with impacted Reliability Coordinators bi-weekly, Or the Reliability Coordinator failed to participate in one weekly conference call, Or the Reliability Coordinator agreed to participate in conference calls with 25% or less of the impacted Reliability Coordinators. SDT Proposed Moderate VSL: N/A

Organization	Question 19:
	CEDRP Proposed Moderate VSL: IRO-014-2 R4 The Reliability Coordinator participated in agreed upon conference calls and other communication forums with impacted Reliability Coordinators every third week, Or the Reliability Coordinator failed to participate in two weekly conference calls, Or the Reliability Coordinator agreed to participate in conference calls with more than 25% but less than or equal to 50% of the impacted Reliability Coordinators. SDT Proposed High VSL: N/A CEDRP Proposed High VSL: IRO-014-2 R4 The Reliability Coordinator participated in agreed upon conference calls and other communication forums with impacted Reliability Coordinators fourth week, Or the Reliability Coordinator failed to participate in three weekly conference calls, Or the Reliability Coordinator agreed to participate in conference calls with more than 50% but less than or equal to 75% of the impacted Reliability Coordinators. SDT Proposed Severe VSL: N/A CEDRP Proposed Severe VSL: IRO-014-2 R4 The Reliability Coordinator participated in agreed upon conference calls and other communication forums with impacted Reliability Coordinators at least every fifth week, Or the Reliability Coordinator failed to participate in four weekly conference calls, Or the Reliability Coordinator failed to agree to participate in any conference calls, Or the Reliability Coordinator agreed to participate in conference calls with more than 75% but less than 100% of the impacted Reliability Coordinators. =====

Organization	Question 19:
	Standard – IRO-014-2 R5 R5. When an expected or actual reliability issue is detected, the Reliability Coordinator shall confirm the existence of the issue with the impacted Reliability Coordinators. ~~Until in the event that the issue cannot be~~ has been proven to not exist, confirmed, each Reliability Coordinator shall operate as though the problem exists. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] Proposed Measure The Reliability Coordinator shall have evidence that, in cases when an expected or actual reliability issue was detected, it has confirmed the existence of the issue with the impacted Reliability Coordinators. Discussion – This requirement is confusing in the way it is worded. We think it is trying to say that the RC should operate as though the reliability issue (should this be Adverse Reliability Impact) is detected until the issue is confirmed not to exist. The way it is worded might imply that if one doesn't confirm it to exist, operate as though it does. This leaves open the interpretation that a confirmation that it doesn't exist must still be operated to as though it does exist. The drafting team should consider splitting operating to prevent from operating to mitigate an existing event in the VSLs. Response: The RC SDT reviewed the Implementation Plan for IRO-016 and its requirements and made some revisions to the requirements listed in IRO-014-2. There are now 4 requirements: R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify impacted Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R6. Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators, [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. [Violation Risk

Organization	Question 19:
	Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan,. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] The RC SDT has revised / created VSLs based on the new requirements. SDT Proposed Lower VSL The Reliability Coordinator that detected an expected or actual reliability issue contacted the other Reliability Coordinator(s) to confirm that there was a problem but could not confirm that the problem existed and failed to operate as though the problem existed. CEDRP Proposed VSL IRO-014-2 R5 N/A SDT Proposed High VSL N/A CEDRP Proposed VSL IRO-014-2 R5 The Reliability Coordinator that detected an expected reliability issue failed to contact the other Reliability Coordinator(s) to confirm that there was a problem. SDT Proposed Severe VSL The Reliability Coordinator that detected an expected or actual reliability issue failed to contact the other Reliability Coordinator(s) to confirm that there was a problem. CEDRP Proposed VSL IRO-014-2 R5 The Reliability Coordinator that detected an actual reliability issue failed to contact the other Reliability Coordinator(s) to confirm that there was a problem. ===== Standard – IRO-014-2 R6 When an expected or actual reliability issue exists and the impacted Reliability Coordinators cannot agree on a mitigation plan, all impacted Reliability Coordinators shall implement the mitigation plan developed by the Reliability Coordinator who has the reliability issue. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] Proposed Measure

Organization	Question 19:
	The affected Reliability Coordinators shall have evidence that, in cases when an expected or actual reliability issue existed and the impacted Reliability Coordinators could not agree on a mitigation plan, they implemented the mitigation plan developed by the Reliability Coordinator who has the reliability issue. Discussion: We are concerned the validity of this requirement, it may force an RC to implement a solution that they don't agree with and ultimately result in an Adverse Reliability Impact. The RC may not agree with the solution because it may not be reliable for their footprint. They need to have the ability to veto mitigation plans that cause Adverse Reliability Impacts in their footprint without incurring a compliance violation. Response: R6 was brought into this standard from IRO-016, R1 and R2. The RC SDT removed the wording relating to the "most conservative solution" because it can not be measured. We are proposing to use the mitigation plan of the RC who is experiencing the issue in cases where an agreed to mitigation plan can not be developed. SDT Proposed Lower VSL The Reliability Coordinator did not agree on a mitigation plan and implemented a plan other than the one developed by the Reliability Coordinator who had the reliability issue. CEDRP Proposed VSL IRO-014-2 R6 N/A SDT Proposed Severe VSL The Reliability Coordinator did not agree on a mitigation plan and did not implement a mitigation plan. CEDRP Proposed VSL IRO-014-2 R6 What if the RC is correct in disagreeing and the mitigation plan would have caused an Adverse Reliability Impact on their system?
	Response: The RC SDT thanks you for your comments. Please see responses embedded above. In the future, please do not submit comments in this format. It is extremely burdensome on the drafting team in trying to respond to the comments. Please answer each question individually. If you encounter difficulty, please contact NERC for assistance.

Standard Development Roadmap

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed:

1. Draft SAR Version 1 posted January 15, 2007
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5. Standards sent to BOT for approval.	December 2009
6. Standards filed with regulatory authorities.	January 2010

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

Adverse Reliability Impact – The impact of an event that results in Bulk Electric System instability, uncontrolled separation, or cascading outages.

A. Introduction

1. **Title:** Reliability Coordination – Responsibilities and Authorities
2. **Number:** IRO-001-2
3. **Purpose:** To establish requirements for issuance of and complying with Reliability Coordinator directives or notification within the Reliability Coordinator Areas.
4. **Applicability**
 - 4.1. Reliability Coordinators.
 - 4.2. Transmission Operators.
 - 4.3. Balancing Authorities.
 - 4.4. Generator Operators.
 - 4.5. Transmission Service Providers.
 - 4.6. Load-Serving Entities.
 - 4.7. Distribution Providers.
 - 4.8. Purchasing-Selling Entities.
5. **Effective Date:** In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees approval.

B. Requirements

- R1. Each Reliability Coordinator shall act or direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts. *[Violation Risk Factor: High][Time Horizon: Real-time Operations and Same Day Operations]*
- R2. Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity shall comply with its Reliability Coordinator's directives unless such actions would violate safety, equipment, or regulatory or statutory requirements. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations]*
- R3. Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity shall inform its Reliability Coordinator upon recognition of its inability to perform a directive. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations]*
- R4. Each Reliability Coordinator that identifies an expected or actual threat with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.

[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]

- R5.** Each Reliability Coordinator that identifies an expected or actual threat with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when the transmission problem has been mitigated. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*
- R6.** Each Reliability Coordinator shall provide its operating personnel with the authority to veto planned outages to its own analysis tools. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

C. Measures

- M1.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it has acted, or issued directives, to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts within its Reliability Coordinator Area. (R1)
- M2.** Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider and Purchasing-Selling Entity shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it complied with its Reliability Coordinator's directives unless such actions would have violated safety, equipment, or regulatory or statutory requirements. (R2)
- M3.** Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider and Purchasing-Selling Entity shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it that it informed the Reliability Coordinator of its inability to comply with its Reliability Coordinator's directives. (R3)
- M4.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it notified all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when it identified a real or potential threat with Adverse Reliability Impacts, within its Reliability Coordinator Area. (R4)
- M5.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it notified all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when a real or potential threat with Adverse Reliability Impacts within its Reliability Coordinator Area had been mitigated. (R5)
- M6.** Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a documented procedure or equivalent evidence that will be used to confirm that the Reliability Coordinator has provided its operating personnel with the authority to veto planned outages of its own analysis tools. (R6)

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

Regional Entity

1.2. Compliance Monitoring Period and Reset Time Frame

Not applicable

1.3. Compliance Monitoring and Enforcement Processes

Compliance Audits

Self-Certifications

Spot Checking

Compliance Violation Investigations

Self-Reporting

Complaints

1.4. Data Retention

The Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider, Transmission Service Provider, Purchasing-Selling Entity and Load Serving Entity shall each keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider, Transmission Service Provider, Purchasing-Selling Entity and Load Serving Entity shall retain its current, in force document and any documents in force since the last compliance audit for all Requirements and Measures.
- If a Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider, Transmission Service Provider, Purchasing-Selling Entity or Load Serving Entity is found non-compliant, it shall keep information related to the non-compliance until found compliant.
- The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

1.5. Additional Compliance Information

None.

2. Violation Severity Levels

Standard IRO-001-2 Reliability Coordination – Responsibilities and Authorities

Requirement	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	N/A	N/A	N/A	The Reliability Coordinator failed to act or direct actions to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts
R2	N/A	N/A	N/A	The responsible entity failed to follow the Reliability Coordinator directive and it would not have violated the safety, equipment, statutory or regulatory requirements.
R3	N/A	N/A	N/A	The responsible entity failed to inform its Reliability Coordinator upon recognition of its inability to perform the directive.
R4	The Reliability Coordinator identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area and failed to issue an alert to one, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.	The Reliability Coordinator identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area and failed to issue an alert to two, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.	The Reliability Coordinator identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area and failed to issue an alert to three or more, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.	The Reliability Coordinator identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area and failed to issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.

Standard IRO-001-2 Reliability Coordination – Responsibilities and Authorities

R5	The Reliability Coordinator issued an alert to notify entities of a transmission problem but failed to notify one, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.	The Reliability Coordinator issued an alert to notify entities of a transmission problem but failed to notify two, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.	The Reliability Coordinator issued an alert to notify entities of a transmission problem but failed to notify three or more, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.	The Reliability Coordinator issued an alert to notify entities of a transmission problem but failed to notify all impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.
R6	N/A	N/A	N/A	The Reliability Coordinator failed to provide its operating personnel with the authority to veto planned outages of its own analysis tools.

E. Regional Variances

None identified.

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
1	April 4, 2007	Approved by FERC — Effective Date	New
2	TBD	Revised per SAR for project 2006-6, reliability Coordination; added VRFs and VSLs as approved from VRF and VSL projects	Revised

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Adverse Reliability Impact – The impact of an event that results in Bulk Electric System frequency-related instability; ~~unplanned tripping of load or generation; or~~ uncontrolled separation or cascading outages ~~that affects a widespread area of the Interconnection.~~

A. Introduction

1. **Title:** Reliability Coordination – Responsibilities and Authorities
2. **Number:** IRO-001-2
3. **Purpose:** To establish requirements for issuance of and complying with Reliability Coordinator directives or notification within the Reliability Coordinator Areas.
4. **Applicability**
 - 4.1. Reliability Coordinators.
 - 4.2. Transmission Operators.
 - 4.3. Balancing Authorities.
 - 4.4. Generator Operators.
 - 4.5. Transmission Service Providers.
 - 4.6. Load-Serving Entities.
 - 4.7. Distribution Providers.
 - 4.8. Purchasing-Selling Entities.
5. **Effective Date:** In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees approval.

B. Requirements

- R1. ~~The Each~~ Reliability Coordinator shall act or direct ~~actions~~ to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts. *[Violation Risk Factor: High][Time Horizon: Real-time Operations and Same Day Operations]*
- R2. ~~Each~~ Transmission Operators, Balancing ~~Authorities~~ ~~Authority~~, Generator Operators, Transmission Service Providers, Load-Serving ~~Entities~~ ~~Entity~~, Distribution Provider, and Purchasing-Selling ~~Entities~~ ~~Entity~~ shall ~~act without intentional delay to~~ comply with ~~its~~ Reliability Coordinator's directives unless such actions would violate safety, equipment, or regulatory or statutory requirements. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations]*
- R3. ~~The Each~~ Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, ~~and/or~~ Purchasing-Selling Entity shall ~~immediately confirm the ability to comply with the directive or~~ inform ~~the~~ ~~its~~ Reliability Coordinator upon recognition of ~~its~~ ~~he~~ inability to perform ~~the~~ ~~a~~ directive. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations]*
- R4. Each Reliability Coordinator ~~who that~~ identifies an expected or actual threat with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify, ~~without intentional delay~~, all impacted Transmission Operators and Balancing Authorities in its Reliability

Coordinator Area. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

- R5. Each Reliability Coordinator ~~who~~ that identifies an expected or actual threat with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify, ~~without intentional delay,~~ all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when the transmission problem has been mitigated. *[Violation Risk Factor: Medium~~High~~] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*
- R6. Each Reliability Coordinator shall provide its Operating Personnel with the authority to veto planned outages to its own analysis tools. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

C. Measures

- M1. Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that ~~they~~ it ~~has~~ have acted, or issued directives, to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts within its Reliability Coordinator Area. (R1)
- M2. Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider ~~or~~ and Purchasing-Selling Entity shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it ~~acted without delay to comply~~ with the its Reliability Coordinator's directives unless such actions would have violated safety, equipment, or regulatory or statutory requirements. (R2)
- M3. Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider ~~or~~ and Purchasing-Selling Entity shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it that it informed the Reliability Coordinator of its inability to comply with ~~the~~ its Reliability Coordinator's directives. (R3)
- M4. Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it notified, ~~without intentional delay,~~ all impacted Transmission Operators and Bbalancing Authorities in its Reliability Coordinator Area when it identified a real or potential threat with Adverse Reliability Impacts, within its Reliability Coordinator Area. (R4)
- M5. Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it notified, ~~without intentional delay,~~ all impacted Transmission Operators and Bbalancing Authorities in its Reliability Coordinator Area when ~~the~~ a real or potential threat with Adverse Reliability Impacts within its Reliability Coordinator Area had ~~s~~ been mitigated. (R5)
- M6. Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a documented procedure or equivalent evidence that will be used to

confirm that the Reliability Coordinator has provided its Operating Personnel with the authority to veto planned outages of its own analysis tools. (R6)

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

~~NERC shall be responsible for compliance monitoring of the Regional Entity.~~

~~Regional Entityies shall be responsible for compliance monitoring of the Reliability Coordinators, Transmission Operators, Generator Operators, Distribution Providers, and Load Serving Entities.~~

1.2. Compliance Monitoring Period and Reset Time Frame

Not applicable

~~1.3. One or more of the following methods will be used to assess compliance:~~

~~— Self-certification (Conducted annually with submission according to schedule.)~~

~~— Spot Check Audits (Conducted anytime with up to 30 days notice given to prepare.)~~

~~— Periodic Audit (Conducted once every three years according to schedule.)~~

~~— Triggered Investigations (Notification of an investigation must be made within 60 days of an event or complaint of noncompliance. The entity will have up to 30 days to prepare for the investigation. An entity may request an extension of the preparation period and the extension will be considered by the Compliance Monitor on a case-by-case basis.)~~

~~The Performance Reset Period shall be 12 months from the last finding of non-compliance.~~

1.2.1.3. Compliance Monitoring and Enforcement Processes:

Compliance Audits

Self-Certifications

Spot Checking

Compliance Violation Investigations

Self-Reporting

Complaints

1.3.1.4. Data Retention

The Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider, Transmission Service Provider, Purchasing-Selling Entity and Load Serving Entity shall each keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- o Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider, Transmission Service Provider, Purchasing-Selling Entity and Load Serving Entity shall retain its current, in force document and any documents in force since the last compliance audit for all Requirements and Measures.
- o If a Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider, Transmission Service Provider, Purchasing-Selling Entity or Load Serving Entity is found non-compliant, it shall keep information related to the non-compliance until found compliant.
- o The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

1.4.1.5. Additional Compliance Information

None.

2. Violation Severity Levels

Requirement	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	N/A	N/A	~~The Reliability Coordinator failed to act to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts.~~ <u>N/A</u>	The Reliability Coordinator failed to act ~~or~~ and direct actions to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts
R2	N/A	~~The responsible entity followed the Reliability Coordinators directive with a delay not caused by equipment problems.~~ <u>N/A</u>	~~The responsible entity followed the majority of the Reliability Coordinators directive but did not fully follow the directive because it would violate safety, equipment, statutory or regulatory requirements.~~ <u>N/A</u>	The responsible entity <u>failed to follow the Reliability Coordinator directive and it would not have violated the safety, equipment, statutory or regulatory requirements.</u> ~~did not follow the Reliability Coordinators directive.~~
R3	~~The responsible entity failed to immediately confirm the ability to comply with the directive issued by the Reliability Coordinator.~~ <u>N/A</u>	N/A	N/A	The responsible entity failed to inform ~~the~~ <u>its</u> Reliability Coordinator upon recognition of ~~the~~ <u>its</u> inability to perform the directive.
R4	<u>The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area and failed to issue an alert to one, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.</u> <u>N/A</u>	<u>The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area and failed to issue an alert to two, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.</u> <u>N/A</u>	<u>The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area and failed to issue an alert to three or more, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.</u> <u>N/A</u>	The Reliability Coordinator ~~who~~ identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area <u>and</u> failed to issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.

R5	The Reliability Coordinator issued an alert to notify entities of a transmission problem but failed to notify one, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.	The Reliability Coordinator issued an alert to notify entities of a transmission problem but failed to notify two, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated. ~~N/A~~	The Reliability Coordinator issued an alert to notify entities of a transmission problem but failed to notify three or more, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated. ~~N/A~~	The Reliability Coordinator issued an alert to notify entities of a transmission problem but failed to notify all impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.
R6	N/A	N/A	N/A	The Reliability Coordinator failed to provide its operating personnel with the authority to veto planned outages of its own analysis tools.

Requirement		Lower VSL	Moderate VSL	High VSL	Severe VSL
	R1	N/A	N/A	The Reliability Coordinator failed to act to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts.	The Reliability Coordinator failed to act and direct actions to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts
	R2	N/A	The responsible entity followed the Reliability Coordinators directive with a delay not caused by equipment problems.	The responsible entity followed the majority of the Reliability Coordinators directive but did not fully follow the directive because it would violate safety, equipment, statutory or regulatory requirements.	The responsible entity did not follow the Reliability Coordinators directive.
	R3	The responsible entity failed to immediately confirm the ability to comply with the directive issued by the Reliability Coordinator.	N/A	N/A	The responsible entity failed to inform the Reliability Coordinator upon recognition of the inability to perform the directive.
	R4	N/A	N/A	N/A	The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.
	R5	N/A	N/A	N/A	The Reliability Coordinator failed to notify all impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.

E. Regional Variances

None identified.

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
1	April 4, 2007	Approved by FERC — Effective Date	New
2	TBD	Revised per SAR for project 2006-6, reliability Coordination; added VRFs and VSLs as approved from VRF and VSL projects	Revised

Standard Development Roadmap

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed:

1. Draft SAR Version 1 posted January 15, 2007
2. Draft SAR Version 1 Comment Period ended February 14, 2007
3. Draft SAR Version 2 and comment responses on SAR version 1 posted March 19, 2007
4. Draft Version 2 SAR comment period ended April 17, 2007
5. SAR version 2 and comment responses for SAR version 2 accepted by SC and SDT appointed in June 2007.
6. First posting of revised standards on August 5, 2008 with comment period closed on September 16, 2008.
7. Draft Version 2 of standards and response to comments September 16, 2008 – May 26, 2009.

Proposed Action Plan and Description of Current Draft:

The SDT began working on revisions to the standards in August 2007. The current posting contains revisions based on stakeholder comments on the first draft. The team is seeking comments on the revised standards.

Future Development Plan:

Anticipated Actions	Anticipated Date
1. Second Posting of draft standards,	July-August 2009
2. Respond to comments on second posting	August 2009
3. Post Standards for pre-ballot period.	September 2009
4. Standards posted for initial and recirculation ballots.	October 2009
5. Standards sent to BOT for approval.	December 2009
6. Standards filed with regulatory authorities.	January 2010

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

Adverse Reliability Impact – The impact of an event that results in Bulk Electric System instability; uncontrolled separation or cascading outages.

A. Introduction

1. **Title:** Coordination Among Reliability Coordinators
2. **Number:** IRO-014-2
3. **Purpose:** To ensure that each Reliability Coordinator's operations are coordinated such that they will not have an Adverse Reliability Impact on other Reliability Coordinator Areas and to preserve the reliability benefits of interconnected operations.
4. **Applicability:**
 - 4.1. Reliability Coordinators.
5. **Effective Date:** In those jurisdictions where regulatory approval is required, this standard shall become effective one year after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective one year after Board of Trustees approval.

B. Requirements

- R1. Each Reliability Coordinator shall have Operating Procedures, Processes, or Plans for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following:
[Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning]
 - 1.1. Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators.
 - 1.2. Energy and capacity shortages.
 - 1.3. Planned or unplanned outage information.
 - 1.4. Control of voltage, including the coordination of reactive resources.
 - 1.5. Coordination of information exchange to support reliability assessments.
 - 1.6. Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas.
- R2. Each Reliability Coordinator's Operating Procedure, Process, or Plan that requires one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) shall be: *[Violation Risk Factor: Lower] [Time Horizon: Operations Planning and Long-term Planning]*
 - 2.1. Agreed to by all the Reliability Coordinators required to take the indicated action(s).
 - 2.2. Distributed to all Reliability Coordinators that are required to take the indicated action(s).

- R3.** Each Reliability Coordinator shall make notifications and exchange reliability-related information with impacted Reliability Coordinators using its predefined Operating Procedures, Processes, or Plans for conditions that may impact other Reliability Coordinator Areas or other means to accomplish the notifications and exchange of reliability-related information. *[Violation Risk Factor: Medium][Time Horizon: Real-time Operations and Operations Planning]*
- R4.** Each Reliability Coordinator shall participate in agreed upon conference calls, at least weekly, and other communication forums with impacted Reliability Coordinators. *[Violation Risk Factor: Lower][Time Horizon: Real-time Operations]*
- R5.** Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify impacted Reliability Coordinators. *[Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*
- R6.** Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators, *[Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*
- R7.** The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. *[Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*
- R8.** Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan. *[Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*

C. Measures

- M1.** Each Reliability Coordinator shall have available the latest approved documented version of Operating Procedures, Processes, or Plans that require notifications, information exchange or the coordination of actions among impacted Reliability Coordinators. This documentation may include, but is not limited to, dated, current in force documentation with the specified elements.
- M2.** Each Reliability Coordinator shall have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were:
 - 2.1** Agreed to by all the Reliability Coordinators required to take the indicated action(s).
 - 2.2** Distributed to all Reliability Coordinators that are required to take the indicated action(s).

This evidence may include, but is not limited to dated document with confirmation of receipt or dated electronic communications with confirmation of receipt.

- M3.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it made notifications and exchanged reliability-related information with impacted Reliability Coordinators using its predefined Operating Procedures, Processes, or Plans for conditions that may impact other Reliability Coordinator Areas or other means to accomplish the notifications and exchange of reliability-related information.
- M4.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it participated in agreed upon (at least weekly) conference calls and other communication forums with impacted Reliability Coordinators.
- M5.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it, upon identification of an Adverse Reliability Impact, notified impacted Reliability Coordinators.
- M6.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it operated as though the problem exists when the identified Adverse Reliability Impact was not agreed to by the impacted Reliability Coordinators.
- M7.** Each Reliability Coordinator with the identified Adverse Reliability Impact shall have evidence and provide evidence that it developed a mitigation plan when the impacted Reliability Coordinators could not agree that the problem exists. This evidence may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation.
- M8.** Each impacted Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it implemented the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan,.

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

Regional Entity

1.2. Compliance Monitoring Period and Reset Time Frame

Not Applicable

1.3. Compliance Monitoring and Enforcement Processes:

Compliance Audits

Self-Certifications

Spot Checking

Compliance Violation Investigations

Self-Reporting

Complaints

1.4. Data Retention

The Reliability Coordinator shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- o Each Reliability Coordinator shall retain its current, in force document and any documents in force since the last compliance audit for all Requirements R1, R2, and Measures M1, M2.
- o Each Reliability Coordinator shall retain its most recent 12 months of evidence for Requirement R3, R4 and Measure M3, M4.
- o Each Reliability Coordinator shall retain 3 calendar years plus current calendar year of evidence for Requirements R5 through R8 and Measures M5 through M8.
- o If a Reliability Coordinator is found non-compliant, it shall keep information related to the non-compliance until found compliant.
- o The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

2. Violation Severity Levels

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	The Reliability Coordinator has Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address one or two of the subrequirements.	The Reliability Coordinator has Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address three or four of the subrequirements.	The Reliability Coordinator has Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address five of the subrequirements.	The Reliability Coordinator failed to have Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability.
R2	N/A	The Reliability Coordinator failed to have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were distributed to all Reliability Coordinators that are required to take action.	The Reliability Coordinator failed to have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were agreed to by all Reliability Coordinators that are required to take action.	The Reliability Coordinator failed to have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were agreed to by all Reliability Coordinators that are required to take action and were distributed to all Reliability Coordinators that are required to take action.

Standard IRO-014-2 — Coordination Among Reliability Coordinators

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R3	N/A	N/A	The Reliability Coordinator failed to make notifications OR exchange reliability-related information with impacted Reliability Coordinators.	The Reliability Coordinator failed to make notifications AND exchange reliability-related information with impacted Reliability Coordinators.
R4	N/A	N/A	N/A	The Reliability Coordinator failed to participate in an agreed upon (at least weekly) conference call or other communication forum with impacted Reliability Coordinators.
R5	N/A	The Reliability Coordinator failed to notify one, but not all, of the impacted Reliability Coordinators upon identification of an Adverse Reliability Impact.	N/A	The Reliability Coordinator failed to notify any impacted Reliability Coordinators upon identification of an Adverse Reliability Impact.
R6	N/A	N/A	N/A	The Reliability Coordinator failed to operate as though the problem existed when the identified Adverse Reliability Impact was not agreed to by the impacted Reliability Coordinators.

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R7	N/A	N/A	N/A	The Reliability Coordinator with the identified Adverse Reliability Impact failed to develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists.
R8	N/A	N/A	N/A	The impacted Reliability Coordinator failed to implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators could not agree on a mitigation plan.

E. Regional Differences

None identified.

F. Associated Documents

Version History

Version	Date	Action	Change Tracking
1	August 10, 2005	1. Changed incorrect use of certain hyphens (-) to “en dash (–).” 2. Hyphenated “30-day” when used as adjective. 3. Changed standard header to be consistent with standard “Title.” 4. Initial capped heading “Definitions of Terms Used in Standard.” 5. Added “periods” to items where appropriate. 6. Changed “Timeframe” to “Time Frame” in item D, 1.2. 7. Lower cased all words that are not “defined” terms — drafting team, self-certification. 8. Changed apostrophes to “smart” symbols. 9. Added comma in all word strings “Procedures, Processes, or Plans,” etc. 10. Added hyphens to “Reliability Coordinator-to-Reliability Coordinator” where used as adjective. 11. Removed comma in item 2.1.2. 12. Removed extra spaces between words where appropriate.	January 20, 2006
1	February 7, 2006	Approved by BOT	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New
2	TBD	Revised per SAR for Project 2006-6, RCSDT	Revised

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Adverse Reliability Impact – The impact of an event that results in Bulk Electric System frequency-related instability; ~~unplanned tripping of load or generation; or~~ uncontrolled separation or cascading outages ~~that affects a widespread area of the Interconnection.~~

A. Introduction

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2. **Number:** IRO-014-2
3. **Purpose:** To ensure that each Reliability Coordinator's operations are coordinated such that they will not have an Adverse Reliability Impact on other Reliability Coordinator Areas and to preserve the reliability benefits of interconnected operations.
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 - 4.1. Reliability Coordinators.
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- R1. ~~Each~~ The Reliability Coordinator shall have Operating Procedures, Processes, or Plans for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address, ~~as a minimum,~~ the following: *[Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning]*
 - ~~R1.1.1.1.~~ Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators.
 - ~~R1.2.1.2.~~ Energy and capacity shortages.
 - ~~R1.3.1.3.~~ Planned or unplanned outage information.
 - ~~R1.4.1.4.~~ ~~Voltage~~ Control of voltage, including the coordination of reactive resources ~~for voltage control.~~
 - ~~R1.5.1.5.~~ Coordination of information exchange to support reliability assessments.
 - ~~R1.6.1.6.~~ Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas.
- R2. Each Reliability Coordinator's Operating Procedure, Process, or Plan that requires one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) shall be: *[Violation Risk Factor: Lower] [Time Horizon: ~~Real-time Operations and~~ Operations Planning and Long-term Planning]*
 - ~~R2.1.2.1.~~ Agreed to by all the Reliability Coordinators required to take the indicated action(s).

R2.2.2.2. Distributed to all Reliability Coordinators that are required to take the indicated action(s).

R3. ~~The~~ Each Reliability Coordinator shall make notifications and exchange reliability-related information with impacted Reliability Coordinators using its predefined ~~shall follow its~~ Operating Procedures, Processes, or Plans for conditions that may impact other Reliability Coordinator Areas or other means to accomplish the notifications and exchange of reliability-related information. *[Violation Risk Factor: Medium][Time Horizon: Real-time Operations and Operations Planning]*

R4. ~~The~~ Each Reliability Coordinator shall participate in agreed upon conference calls, at least weekly, and other communication forums with impacted Reliability Coordinators. *[Violation Risk Factor: Lower][Time Horizon: Real-time Operations]*

~~4.1. The frequency of these conference calls shall be agreed upon by all involved Reliability Coordinators and shall be at least weekly.~~

R5. ~~When an expected or actual reliability issue is detected, the~~ Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify ~~confirm~~ impacted Reliability Coordinators. *[Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]* ~~the existence of the issue with the impacted Reliability Coordinators.~~

~~R6. In the event that the issue cannot be confirmed, Each impacted~~ each Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators, *[Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*

R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. *[Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*

R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when ~~When an expected or actual reliability issue exists and the~~ the impacted Reliability Coordinators can not agree on a mitigation plan, ~~all impacted Reliability Coordinators shall implement the mitigation plan developed by the Reliability Coordinator who has the reliability issue.~~ *[Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*

C. Measures

M1. ~~The~~ Each Reliability Coordinator's ~~System Operators~~ shall have available ~~for Real-time use,~~ the latest approved documented version of Operating Procedures, Processes, or Plans that require notifications, information exchange or the coordination of actions among impacted Reliability Coordinators. This documentation may include, but is not limited to, dated, current in force documentation with the specified elements.

~~1.1 These Operating Procedures, Processes, or Plans shall address:~~

~~1.1.1 Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators.~~

~~1.1.2 Energy and capacity shortages.~~

~~1.1.3 Planned or unplanned outage information.~~

~~1.1.4 Control of voltage control, including the coordination of reactive resources for voltage control.~~

~~1.1.5 Coordination of information exchange to support reliability assessments.~~

~~1.1.6 Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas.~~

M2. ~~The~~ Each Reliability Coordinator shall have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were:

~~M2.12.1~~ Agreed to by all the Reliability Coordinators required to take the indicated action(s).

~~M2.22.2~~ Distributed to all Reliability Coordinators that are required to take the indicated action(s).

This evidence may include, but is not limited to dated document with confirmation of receipt or dated electronic communications with confirmation of receipt.

M3. ~~The~~ Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it made notifications and exchanged reliability-related information with impacted Reliability Coordinators using its predefined Operating Procedures, Processes, or Plans for conditions that may impact other Reliability Coordinator Areas or other means to accomplish the notifications and exchange of reliability-related information.

M4. ~~The~~ Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it participated in agreed upon (at least weekly) conference calls and other communication forums with impacted Reliability Coordinators.

M5. ~~The~~ Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it~~that, upon identification of an Adverse Reliability Impact, notified in cases when an expected or actual reliability issue was detected, it has confirmed the existence of the issue with the~~ impacted Reliability Coordinators.

- M6. ~~The~~Each Reliability Coordinator ~~In the event that the issue was not confirmed, each Reliability Coordinator~~ shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it operated as though the problem exists when the identified Adverse Reliability Impact was not agreed to by the impacted Reliability Coordinators.
- M7. The Reliability Coordinator with the identified Adverse Reliability Impact shall have evidence and provide evidence that it developed a mitigation plan when the impacted Reliability Coordinators could not agree that the problem exists. This evidence may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation.
- M8. Each impacted Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it implemented the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan,. ~~The affected Reliability Coordinators shall have evidence that, in cases when an expected or actual reliability issue existed and the impacted Reliability Coordinators could not agree on a mitigation plan, they implemented the mitigation plan developed by the Reliability Coordinator who has the reliability issue.~~

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

Regional Entity

1.2. Compliance Monitoring Period and Reset Time Frame

Not Applicable

1.3. Compliance Monitoring and Enforcement Processes:

Compliance Audits

Self-Certifications

Spot Checking

Compliance Violation Investigations

Self-Reporting

Complaints

1.4. Data Retention

Each Reliability Coordinator shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- o Each Reliability Coordinator shall retain its current, in force document and any documents in force since the last compliance audit for Requirements R1, R2, and Measures M1, M2.
- o Each Reliability Coordinator shall retain its most recent 12 months of evidence for Requirement R3, R4 and Measures M3, M4.
- o Each Reliability Coordinator shall retain 3 calendar years plus current calendar year of evidence for Requirements R5 through R8 and Measures M5 through M8.
- o If a Reliability Coordinator is found non-compliant, it shall keep information related to the non-compliance until found compliant.
- o The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

2. Violation Severity Levels

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	The Reliability Coordinator has Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address one or two of the subrequirements.	The Reliability Coordinator has Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address three or four of the subrequirements.	The Reliability Coordinator has Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address five of the subrequirements.	The Reliability Coordinator failed to have Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability.
R2	N/A	The Reliability Coordinator failed to have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were distributed to all Reliability Coordinators that are required to take action.	The Reliability Coordinator failed to have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were ~~not~~ agreed to by all Reliability Coordinators that are required to take action.	The Reliability Coordinator failed to have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were ~~not~~ agreed to by all Reliability Coordinators that are required to take action and were ~~not~~ distributed to all Reliability Coordinators that are required to take action.

Standard IRO-014-2 — Coordination Among Reliability Coordinators

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R3	N/A	N/A	The Reliability Coordinator failed to make notifications ~~OR~~ exchange reliability-related information with impacted Reliability Coordinators.	The Reliability Coordinator failed to make notifications ~~AND~~ exchange reliability-related information with impacted Reliability Coordinators.
R4	~~N/A The Reliability Coordinator failed to participate in agreed-upon (at least weekly) conference calls and other communication forums with impacted Reliability Coordinators.~~	N/A	N/A	<u>The Reliability Coordinator failed to participate in an agreed upon (at least weekly) conference call or other communication forum with impacted Reliability Coordinators.</u> ~~N/A~~
<u>R5</u>	<u>N/A</u>	<u>The Reliability Coordinator failed to notify one, but not all, of the impacted Reliability Coordinators upon identification of an Adverse Reliability Impact.</u>	<u>N/A</u>	<u>The Reliability Coordinator failed to notify any impacted Reliability Coordinators upon identification of an Adverse Reliability Impact.</u>
~~R6~~ <u>5</u>	~~The Reliability Coordinator that detected an expected or actual reliability issue contacted the other Reliability Coordinator(s) to confirm that there was a problem but could not confirm that the problem existed and failed to operate as though the problem existed.~~ <u>N/A</u>	N/A	N/A	~~The Reliability Coordinator~~ <u>failed to operate as though the problem existed when the identified Adverse Reliability Impact was not agreed to by the impacted Reliability Coordinators.</u> ~~that detected an expected or actual reliability issue failed to contact the other Reliability Coordinator(s) to confirm that there was a problem.~~

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
~~R7~~ 6	~~The Reliability Coordinator did not agree on a mitigation plan and implemented a plan other than the one developed by the Reliability Coordinator who had the reliability issue.~~ N/A	N/A	N/A	The Reliability Coordinator with the identified Adverse Reliability Impact failed to develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. ~~The Reliability Coordinator did not agree on a mitigation plan and did not implement a mitigation plan.~~
R8	N/A	N/A	N/A	The impacted Reliability Coordinator failed to implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators could not agree on a mitigation plan.

E. Regional Differences

None identified.

F. Associated Documents**Version History**

Version	Date	Action	Change Tracking
1	August 10, 2005	1. Changed incorrect use of certain hyphens (-) to “en dash (–).” 2. Hyphenated “30-day” when used as adjective. 3. Changed standard header to be consistent with standard “Title.” 4. Initial capped heading “Definitions of Terms Used in Standard.” 5. Added “periods” to items where appropriate. 6. Changed “Timeframe” to “Time Frame” in item D, 1.2. 7. Lower cased all words that are not “defined” terms — drafting team, self-certification. 8. Changed apostrophes to “smart” symbols. 9. Added comma in all word strings “Procedures, Processes, or Plans,” etc. 10. Added hyphens to “Reliability Coordinator-to-Reliability Coordinator” where used as adjective. 11. Removed comma in item 2.1.2. 12. Removed extra spaces between words where appropriate.	January 20, 2006
1	February 7, 2006	Approved by BOT	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New
2	TBD	Revised per SAR for Project 2006-6, RCSDT	Revised

UNOFFICIAL Comment Form for Reliability Coordination — Project 2006-06

Please DO NOT use this form. Please use the electronic comment form located at the link below to submit comments on the proposed revisions to the standards for Project 2006-06: Reliability Coordination. Comments must be submitted by **August 9, 2009**. If you have questions please contact Stephen Crutchfield at stephen.crutchfield@nerc.net or by telephone at 609-651-9455.

http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html

Background Information:

The Reliability Coordination Standards Drafting Team (RC SDT) was tasked with 1) ensuring that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique and enforceable, 2) ensuring that this set of requirements is sufficient to maintain reliability of the Bulk Electric System, and 3) revising the group of standards based on FERC Order 693.

During the course of the project, the NERC standards staff revised the Reliability Standards Development Plan and noted several areas of overlapping scope between certain projects. The original SAR for Project 2006-06 called for revisions to PER-004 — Reliability Coordination — Staffing and PRC-001 — System Protection Coordination. Based on scope overlap, it was determined that PER-004 and PRC-001 would best be served by moving the proposed work to Project 2006-01: System Personnel Training and Project 2007-06: System Protection, respectively.

The RC SDT proposed revisions to the set of standards under the project in August and September 2008. The RC SDT made revisions to the set of standards based on stakeholder feedback and the results of the IROL Standards Drafting Team work. Since the inception of this project, the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for three new Standards which included revisions to other IRO standards. With the approval of the IROL set of standards, certain requirements were retired from other IRO standards (see below summaries for specific examples under the RC SDT project).

Requirements, Measures and Violation Severity Levels in COM-001-2

Requirements: The RC SDT received several comments regarding the intent of the term “telecommunications facilities”. For COM-001-2, the RC SDT envisions telecommunications to be voice or message communication between operating personnel. The standard has been renamed “Communications” and the term “telecommunications facilities” was replaced with “interpersonal communications capabilities” throughout the standards to better reflect the intent of the RC SDT.

We also received comments regarding the applicability of the standard that suggested adding other entities listed in IRO-001 (LSE, PSE, and TSP). The RC SDT contends that, in order to receive and carry out directives, an entity must be able to communicate with the RC...either directly or through other entities (e.g. — a DP may receive the directive from the TOP who received it from the RC). We have not expanded the applicability of Requirements R1 and R2 as suggested as we feel that this expands the standard beyond the reliability - it is not necessary nor is it practical, for reliability purposes, for every entity to have normal and back-up interpersonal communications capabilities with every other entity.

Other commenters had concerns with regard to R2 and the intent with regard to length of outages. The requirement was revised as:

R2. Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure (30 minutes or longer) of its normal interpersonal communications capabilities. *[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]*

R3 was expanded to include the Transmission Service Provider, Load-Serving Entity, and Purchasing-Selling Entity – to ensure that they use the English language for inter-entity communications. The informational (last) sentence of R3 was removed per stakeholder suggestions.

Measures: Commenters suggested general as well as specific revisions to the measures. One general comment suggested making the language consistent among the measures regarding evidence. M1-M3 were revised to include the phrase “shall have and provide upon request evidence that ...”.

Several commenters suggested revisions to M3. The RC SDT revised M3 based on the comments received suggesting that the applicability be expanded to include Generator Operators, Distribution Providers, Transmission Service Providers, Purchasing-selling Entities and Load-Serving Entities. Several entities commented that M3 did not match R3 which included an explanatory sentence that allowed an entity to use a language other than English for its internal communications. The informational second sentence was removed from Requirement R3, thus eliminating the “disconnect” between the requirement and the measure. All measures were revised as necessary to reflect revisions to requirements.

VSLs: The RC SDT made revisions to the VSLs based on the comments received and also to reflect revisions to the associated requirements. We received comments that the VSLs for R1 and R2 were based on multiple violations. We agreed and revised the VSLs to reflect a single violation.

Requirements, Measures and Violation Severity Levels in COM-002-3

The work of the IROL SDT resulted in the retirement of R1 from the standard. The RC SDT received comments recommending expanding the applicability of the standard and separating Requirement R1 into two distinct requirements. The applicability was expanded to include Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity. The requirements were revised to:

R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a directive associated with real-time operational emergency conditions shall require the recipient of the directive to repeat the intent of the directive back; and shall acknowledge the response as correct or repeat the original statement to resolve any misunderstandings. *[Violation Risk Factor: High][Time Horizon: Real-Time]*

R2. Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a directive issued per Requirement R1 shall repeat the intent of the directive back to the issuer of the directive. *[Violation Risk Factor: High][Time Horizon: Real-Time]*

The purpose statement was also revised to reflect the revisions to the standard:

To ensure communications by operating personnel are effective.

The RC SDT received comments recommending expanding the applicability of the standard and separating Requirement R1 into two distinct requirements. The applicability was expanded to include Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity. The measures were revised to:

M1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a directive associated with real-time operational emergency conditions shall have evidence such as voice recordings or transcripts of voice recordings to show that it required the recipient of the directive to repeat the intent of the directive back; and acknowledged the response as correct or repeated the original statement to resolve any misunderstandings.

M2. Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a directive issued per Requirement R1 shall have evidence such as voice recordings or transcripts of voice recordings to show that it repeated the intent of the directive back to the issuer of the directive.

The RC SDT received comments recommending revisions to the VSLs based on revisions to the requirements and measures. The RC SDT did this and created new VSLs for new Requirement R2.

Requirements, Measures and Violation Severity Levels in IRO-001-2

The RC SDT has received a notable number of comments suggesting edits to the proposed requirements and measures for the draft standard, particularly regarding the phrase “without intentional delay.” The comments do not oppose the objective of the phrase, but often point out the issues of measuring intent and measuring delay time.

To maintain the intent while improving the measurability of the requirement, the SDT proposes to modify the standard as follows: delete the phrase ‘without intentional delay’ and leave the obligation of response and timing an unstated requirement of R1 “The RC shall act or direct actions...”

An RC that requires a given action in a given time will be expected to inform the impacted entities of those actions and time requirements. This would obviate the need for providing a measure for “intent”, but still maintain the reliability intent of the original requirement.

The VSLs were revised to reflect revisions to the requirements as well as the comments of stakeholders. Several comments suggested that there was no fundamental difference between the RC “acting” or “directing actions”. The RC SDT agreed and removed the High VSL for R1 and revised the Severe VSL accordingly. Other commenters suggested removing the High VSL from R2 as the VSL contradicted the requirement. The RC SDT agreed and removed the VSL.

Requirements, Measures and Violation Severity Levels in IRO-002-2

Since the inception of this project (2006-06), the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for a new Standard IRO-010-1: Reliability Coordinator Data Specification and Collection. The work of the IROL SDT retired IRO-002-2 Requirement R1. The team received comments expressing concern about eliminating the requirement in IRO-002 to monitor frequency. While the Standard Drafting Team (SDT) recognizes the concern raised, the SDT is even more concerned with the subjectivity that any attempt to measure “Monitoring” can provide. It is the SDT’s

contention that adherence to reliability standards that require the said monitoring cannot be demonstrated unless the entity is closely monitoring the system parameters. Furthermore, the SDT contends that any requirements that describe the monitoring facilities needed to fulfill fundamental duties should be embedded in entity certification requirements. With IRO-014 and IRO-001 R1 in place, the actual act of monitoring is a secondary task that is inherent in responding to situations or events that could have an adverse impact on reliability. The team declined to delete R2 (Reliability Coordinator veto over analysis tool outages) as it was a specific recommendation from the 2003 Blackout report. This requirement was revised and moved into IRO-001-2 as R6.

Stakeholders indicated that R6 (previously IRO-002 R2) is a “binary” requirement and the Lower VSL was deleted and the Severe VSL was revised based on those comments.

Retirement of IRO-005-1

Several commenters had concerns around removing the requirement to monitor frequency (IRO-005-1 R8). The intent of this monitoring activity was incorporated into IRO-002-2, R1. Other commenters had concerns with the removal of other monitoring requirements in the standard. While the Standard Drafting Team (SDT) recognizes the concern raised, the SDT is even more concerned with the subjectivity associated with any attempt to measure “Monitoring.” It is the SDT’s contention that adherence to reliability standards that require the said monitoring cannot be demonstrated unless the entity is closely monitoring the system parameters. Furthermore, the SDT contends that any requirements that describe the monitoring facilities needed to fulfill fundamental duties should be embedded in entity certification process requirements. With IRO-014 and IRO-001 R1 in place, the actual act of monitoring is a secondary task that is inherent in responding to situations or events that could have an adverse impact on reliability.

Requirements, Measures and Violation Severity Levels in IRO-014-2

Several commenters expressed concerns with the term “impacted” and suggested replacing this with “other”. The RC SDT believes “impacted” directly relates to the purpose statement. Additionally, replacing “one or more other” with “impacted” does tighten the requirement and removes ambiguity. The RC SDT does not intend for non-contiguous Reliability Coordinators to have “Reliability Coordinator Agreements”, but to have Procedures, Processes, or Plans with impacted reliability coordinators. Other commenters suggested striking the term “as a minimum” in R1 and the RC SDT agrees and has modified R1 accordingly. Some commenters did not agree with the wording of the new requirements in IRO-014 that were formerly in IRO-016. The RC SDT reviewed the Implementation Plan for IRO-016 and its requirements and made some revisions to the requirements listed in IRO-014-2. There are now 4 requirements:

R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify impacted Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

R6. Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator that has the identified Adverse Reliability Impact when the

impacted Reliability Coordinators can not agree on a mitigation plan, [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

Several commenters suggested that the High and Severe VSLs for R2 contradicted the requirement. The RC SDT agreed and removed the “nots” from the VSLs. Several commenters had suggested revisions for the VSLs for R6. This requirement was imported from IRO-016 and several commenters suggested expanding the set of requirements regarding the mitigation plan. New VSLs were developed for these requirements.

Retirement of IRO-015-2

Stakeholders agreed with the proposed revisions and this is not being re-posted for comment.

Requirements of IRO-016-1

Stakeholders agreed with the concept of moving the requirements of IRO-016-1 into IRO-014-2. Some commenters did not agree with the wording of the new requirements in IRO-014 that were formerly in IRO-016 and the RC SDT revised these requirements in support of stakeholder comments. There are now 4 requirements, rather than 2, that address Reliability Coordinator actions when a Reliability Coordinator identifies an Adverse Reliability Impact. New measures and VSLs were developed to support these revised requirements.

Proposed Effective Dates

The RC SDT received comments that COM-001-2, R5 should have an effective date immediately upon regulatory approval. The RC SDT agrees and will request an effective date that is the first possible effective date – the first day of the first calendar quarter following applicable regulatory approval – or in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter following Board of Trustees adoption.

The Reliability Coordination Drafting Team would like to receive industry comments on these changes. The RC SDT asks that you review the revised standards and answer the following questions by August 9, 2009.

- 1. Do you agree with the revisions made to the Requirements in COM-001-2 as shown in the posted Standard? If not, please explain in the comment area.**

☐ Yes

☐ No

Comments:

- 2. Do you agree with the revisions made to the Measures in COM-001-2 as shown in the posted Standard? If not, please explain in the comment area.**

☐ Yes

☐ No

Comments:

- 3. Do you agree with the revisions made to the Violation Severity Levels in COM-001-2 as shown in the posted Standard? If not, please explain in the comment area.**

☐ Yes

☐ No

Comments:

- 4. Do you agree with the revisions made to the Requirements in COM-002-3 as shown in the posted Standard? If not, please explain in the comment area.**

☐ Yes

☐ No

Comments:

- 5. Do you agree with the revisions made to the Measures in COM-002-3 as shown in the posted Standard? If not, please explain in the comment area.**

☐ Yes

☐ No

Comments:

- 6. Do you agree with the revisions made to the Violation Severity Levels in COM-002-3 as shown in the posted Standard? If not, please explain in the comment area.**

☐ Yes

☐ No

Comments:

- 7. Do you agree with the revisions to the definition of Adverse Reliability Impacts (IRO-001-2)? If not, please explain in the comment area.**

☐ Yes

☐ No

Comments:

- 8. Do you agree with the revisions to the Requirements in IRO-001-2 as shown in the posted Standard? If not, please explain in the comment area.**

☐ Yes

☐ No

Comments:

- 9. Do you agree with the revisions to the Measures in IRO-001-2 as shown in the posted Standard? If not, please explain in the comment area.**

☐ Yes

☐ No

Comments:

- 10. Do you agree with the revisions to the Violation Severity Levels in IRO-001-2 as shown in the posted Standard? If not, please explain in the comment area.**

☐ Yes

☐ No

Comments:

- 11. Do you agree with the revisions to the Requirements in IRO-014-2 as shown in the posted Standard? If not, please explain in the comment area.**

☐ Yes

☐ No

Comments:

- 12. Do you agree with the revisions to the Measures in IRO-014-2 as shown in the posted Standard? If not, please explain in the comment area.**

☐ Yes

☐ No

Comments:

- 13. Do you agree with the revisions to the Violation Severity Levels in IRO-014-2 as shown in the posted Standard? If not, please explain in the comment area.**

☐ Yes

☐ No

Comments:

- 14. If you have any other comments, not expressed in questions above, for the RC SDT on any of the other changes made to this set of standards and their associated implementation plans, please provide them here.**

Comments:

Revisions to Defined Terms in the NERC Glossary

The RC SDT proposes modifying the following approved definition:

Adverse Reliability Impact — The impact of an event that results in Bulk Electric System instability, uncontrolled separation, or cascading outages.

Prerequisite Approvals

- None

Conforming Changes to Requirements in Already Approved Standards

- IRO-005, R15 is being incorporated into IRO-001-2.

Revision Summary

- The RC SDT revised the standard and is proposing retiring several requirements (R1, R2, R4, R5, R6, R7 and R10). Changes were made to eliminate redundancies between standards (existing and proposed), to align with NERCs Rules of Procedure and to address issues in FERC Order 693.

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Revisions or Retirements to Already Approved Standards

The following tables identify the sections of approved standards that shall be retired or revised when this standard is implemented. If the drafting team is recommending the retirement or revision of a requirement, that text is blue.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R1. Each Regional Reliability Organization, subregion, or interregional coordinating group shall establish one or more Reliability Coordinators to continuously assess transmission reliability and coordinate emergency operations among the operating entities within the region and across the regional boundaries. <i>[Violation Risk Factor: High]</i>	None – The RC SDT proposes retiring this requirement.
Notes: The RC SDT proposes that original IRO-001-1, R1 should be retired from the standard and addressed in NERC Rules of Procedure, Section 503, item 2.2: “Regional entities shall verify that all balancing authorities and transmission operators are under the responsibility of a reliability coordinator”.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R2. The Reliability Coordinator shall comply with a regional reliability plan approved by the NERC Operating Committee. <i>[Violation Risk Factor: High]</i> R5. The Reliability Coordinator shall list within its reliability plan all entities to which the Reliability Coordinator has delegated required tasks. <i>[Violation Risk Factor: Lower]</i>	None – The RC SDT proposes retiring this requirement
Notes: The RC SDT proposes retiring R2 and R5 as the regional reliability plan is a “how” document that shows how an RC will comply with all other NERC Standards, making this requirement redundant.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R3. The Reliability Coordinator shall have clear decision-making authority to act and direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities and Purchasing-Selling Entities within its Reliability Coordinator Area to preserve the integrity and reliability of the Bulk Electric System. These actions shall be taken without delay, but no longer than 30 minutes. <i>[Violation Risk Factor: High]</i>	IRO-001-2 R1. Each Reliability Coordinator shall act or direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations and Same Day Operations]</i>
Notes: • The RC SDT is proposing to remove the blue text in the first sentence. • The RC SDT is proposing that the last sentence of R3 be retired. The timing of RC response to events varies based on system conditions. The specific timing criteria for responses to IROLs are contained in other standards (e.g., TOP-007, R2). ▪ The Distribution Provider was added as an applicable entity per FERC Order 693.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R4. Reliability Coordinators that delegate tasks to other entities shall have formal operating agreements with each entity to which tasks are delegated. The Reliability Coordinator shall verify that all delegated tasks are understood, communicated, and addressed within its Reliability Coordinator Area. All responsibilities for complying with NERC and regional standards applicable to Reliability Coordinators shall remain with the Reliability Coordinator. <i>[Violation Risk Factor: Medium]</i>	None – retire the requirement RC SDT proposes that original IRO-001-1, R4 is redundant with NERC Rules of Procedure, section 500 and should be retired from the standard. Section 501 states: “The purpose of the compliance registry will be to clearly identify those entities that are responsible for compliance with reliability standards. Organizations listed on the registry will be responsible for knowing the content of and for complying with the NERC reliability standards.” Also, section 507, item 2 addresses written agreements; Joint registration pursuant to written agreement. “Where a JRO and any of its members or related entities agree, in writing, upon a division of compliance responsibility among them for one or more reliability standard(s) applicable to a particular function, and/or for one or more requirements within particular reliability standard(s), both the JRO and such member(s) or related entit(ies) shall register as an organization responsible for that function. The JRO and its member(s) or related entit(ies) must have a written agreement that clearly specifies their respective responsibilities, which shall be submitted as part of the joint registration. Neither NERC nor the regional entity shall be parties to any such agreement between a JRO and its member or related entit(ies), nor shall NERC or the regional entity have responsibility for reviewing or approving any such agreement, other than to verify that the agreement provides for an allocation or assignment of responsibilities consistent with the joint registration.”
Notes: The RC SDT recommends the retirement of IRO-001-1 R4.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R6. The Reliability Coordinator shall verify that all delegated tasks are carried out by NERC-certified Reliability Coordinator operating personnel. <i>[Violation Risk Factor: Medium]</i>	None – retire requirement because it is redundant with: PER-003-0 R1. Each Transmission Operator, Balancing Authority, and Reliability Coordinator shall staff all operating positions that meet both of the following criteria with personnel that are NERC certified for the applicable functions: R1.1. Positions that have the primary responsibility, either directly or through communications with others, for the real-time operation of the interconnected Bulk Electric System. R1.2. Positions directly responsible for complying with NERC standards.
Notes: The RC SDT recommends retiring IRO-001-1 R6 as it is redundant with PER-003-0 R1.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R7. The Reliability Coordinator shall have clear, comprehensive coordination agreements with adjacent Reliability Coordinators to ensure that System Operating Limit (SOL) or Interconnection Reliability Operating Limit (IROL) violation mitigation requiring actions in adjacent Reliability Coordinator Areas are coordinated. <i>[Violation Risk Factor: High]</i>	None – requirement should be retired because it is redundant with: IRO-014-1 R1. Each Reliability Coordinator shall have Operating Procedures, Processes, or Plans for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following: .
Notes: The RC SDT recommends the retirement of IRO-001-1 R7 as this is redundant with IRO-014-1 R1.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R8: Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities shall comply with Reliability Coordinator directives unless such actions would violate safety, equipment, or regulatory or statutory requirements. Under these circumstances, the Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, or Purchasing-Selling Entity shall immediately inform the Reliability Coordinator of the inability to perform the directive so that the Reliability Coordinator may implement alternate remedial actions. <i>[Violation Risk Factor: High]</i>	IRO-001-2 R2. Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity shall comply with its Reliability Coordinator's directives unless such actions would violate safety, equipment, or regulatory or statutory requirements. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations]</i> R3. Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider and Purchasing-Selling Entity shall inform its Reliability Coordinator upon recognition of its inability to perform a directive. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations]</i> R4. Each Reliability Coordinator that identifies an expected or actual threat with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify, all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i>
Notes: The RC SDT added the Distribution Provider per FERC Order 693 and added the blue text shown in the requirements above. The RC SDT proposes the replacement of IRO-001-1, R8 with three requirements IRO-001-2, R2, R3, and R4. This will add clarity and measurability to the standard. The last part of the second sentence should be removed as it is implicit in R1, which states that the Reliability Coordination will act or direct actions to mitigate issues. Stakeholders indicated issues with the ability to measure compliance with the phrase, "without intentional delay" and this was removed. Relating to First Energy's comment in FERC Order 693, the requirements address both personnel safety and equipment. There is no reference to a chain of command in the requirements. The standard is written such that decision-making authority rests with the Reliability Coordinator. No further revisions to the standard are required.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R9. The Reliability Coordinator shall act in the interests of reliability for the overall Reliability Coordinator Area and the Interconnection before the interests of any other entity. <i>[Violation Risk Factor: High]</i>	None – retire the requirement as redundant.
Notes: The RC SDT proposes retiring this requirement. All Reliability Coordinator Standard Requirements are developed so that the Reliability Coordinator shall act in the interest of reliability for the RC Area and the Interconnection. Section 6 of the NERC Standard Development Procedure states that NERC develops and maintains Reliability Standards. Equity issues are covered under the Reliability Coordinator Standards of Conduct.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 (this requirement was incorporated from IRO-005-2) R15. Each Reliability Coordinator who foresees a transmission problem (such as an SOL or IROL violation, loss of reactive reserves, etc.) within its Reliability Coordinator Area shall issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area without delay. The receiving Reliability Coordinator shall disseminate this information to its impacted Transmission Operators and Balancing Authorities. The Reliability Coordinator shall notify all impacted Transmission Operators, Balancing Authorities, when the transmission problem has been mitigated. <i>[Violation Risk Factor: High]</i>	IRO-001-2 R4. Each Reliability Coordinator that identifies a real or potential threat with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations]</i> R5. Each Reliability Coordinator that identifies an expected or actual threat with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when the transmission problem has been mitigated. <i>[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i>
Notes: This requirement was moved from IRO-005 into IRO-001-2, R4 and R5.	

Implementation Plan for IRO-001-2**Reliability Coordination — Responsibilities and Authorities**

Functions that Must Comply with the Requirements in the Standards

Standard	Functions that Must Comply With the Requirements							
	Reliability Coordinator	Balancing Authority	Distribution Provider	Transmission Operator	Transmission Service Provider	Purchasing Selling Entity	Generator Operator	Load Serving Entity
IRO-001-2	X	X	X	X	X	X	X	X

Effective Dates

In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees approval.

Revisions to Defined Terms in the NERC Glossary

The RC SDT proposes modifying the following approved definition:

Adverse Reliability Impact — The impact of an event that results in [Bulk Electric System](#) ~~frequency-related~~ instability; ~~unplanned tripping of load or generation~~; or uncontrolled separation, or cascading outages, ~~that affects a widespread area of the Interconnection.~~

Prerequisite Approvals

- None

Conforming Changes to Requirements in Already Approved Standards

- IRO-005, R15 is being incorporated into IRO-001-2.

Revision Summary

- The RC SDT revised the standard and is proposing retiring several requirements (R1, R2, R4, R5, R6, R7 and R10). Changes were made to eliminate redundancies between standards (existing and proposed), to align with NERCs Rules of Procedure and to address issues in FERC Order 693.

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Revisions or Retirements to Already Approved Standards

The following tables identify the sections of approved standards that shall be retired or revised when this standard is implemented. If the drafting team is recommending the retirement or revision of a requirement, that text is blue.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R1. Each Regional Reliability Organization, subregion, or interregional coordinating group shall establish one or more Reliability Coordinators to continuously assess transmission reliability and coordinate emergency operations among the operating entities within the region and across the regional boundaries. <i>[Violation Risk Factor: High]</i>	None – The RC SDT proposes retiring this requirement.
Notes: The RC SDT proposes that original IRO-001-1, R1 should be retired from the standard and addressed in NERC Rules of Procedure, Section 503, item 2.2: “Regional entities shall verify that all balancing authorities and transmission operators are under the responsibility of a reliability coordinator”.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R2. The Reliability Coordinator shall comply with a regional reliability plan approved by the NERC Operating Committee. <i>[Violation Risk Factor: High]</i> R5. The Reliability Coordinator shall list within its reliability plan all entities to which the Reliability Coordinator has delegated required tasks. <i>[Violation Risk Factor: Lower]</i>	None – The RC SDT proposes retiring this requirement
Notes: The RC SDT proposes retiring R2 and R5 as the regional reliability plan is a “how” document that shows how an RC will comply with all other NERC Standards, making this requirement redundant.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R3. The Reliability Coordinator shall have clear decision-making authority to act and direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities and Purchasing-Selling Entities within its Reliability Coordinator Area to preserve the integrity and reliability of the Bulk Electric System. These actions shall be taken without delay, but no longer than 30 minutes. <i>[Violation Risk Factor: High]</i>	IRO-001-2 R1. ~~The~~ <u>Each</u> Reliability Coordinator shall act or direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, <u>Distribution Providers</u> and Purchasing-Selling Entities within its Reliability Coordinator Area to <u>prevent or mitigate the magnitude or duration of Adverse Reliability Impacts.</u> <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations and Same Day Operations]</i>
Notes: • The RC SDT is proposing to remove the blue text in the first sentence. • The RC SDT is proposing that the last sentence of R3 be retired. The timing of RC response to events varies based on system conditions. The specific timing criteria for responses to IROLs are contained in other standards (e.g., TOP-007, R2). ▪ The Distribution Provider was added as an applicable entity per FERC Order 693.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R4. Reliability Coordinators that delegate tasks to other entities shall have formal operating agreements with each entity to which tasks are delegated. The Reliability Coordinator shall verify that all delegated tasks are understood, communicated, and addressed within its Reliability Coordinator Area. All responsibilities for complying with NERC and regional standards applicable to Reliability Coordinators shall remain with the Reliability Coordinator. <i>[Violation Risk Factor: Medium]</i>	None – retire the requirement RC SDT proposes that original IRO-001-1, R4 is redundant with NERC Rules of Procedure, section 500 and should be retired from the standard. Section 501 states: “The purpose of the compliance registry will be to clearly identify those entities that are responsible for compliance with reliability standards. Organizations listed on the registry will be responsible for knowing the content of and for complying with the NERC reliability standards.” Also, section 507, item 2 addresses written agreements; Joint registration pursuant to written agreement. “Where a JRO and any of its members or related entities agree, in writing, upon a division of compliance responsibility among them for one or more reliability standard(s) applicable to a particular function, and/or for one or more requirements within particular reliability standard(s), both the JRO and such member(s) or related entity(ies) shall register as an organization responsible for that function. The JRO and its member(s) or related entity(ies) must have a written agreement that clearly specifies their respective responsibilities, which shall be submitted as part of the joint registration. Neither NERC nor the regional entity shall be parties to any such agreement between a JRO and its member or related entity(ies), nor shall NERC or the regional entity have responsibility for reviewing or approving any such agreement, other than to verify that the agreement provides for an allocation or assignment of responsibilities consistent with the joint registration.”
Notes: The RC SDT recommends the retirement of IRO-001-1 R4.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R6. The Reliability Coordinator shall verify that all delegated tasks are carried out by NERC-certified Reliability Coordinator operating personnel. <i>[Violation Risk Factor: Medium]</i>	None – retire requirement because it is redundant with: PER-003-0 R1. Each Transmission Operator, Balancing Authority, and Reliability Coordinator shall staff all operating positions that meet both of the following criteria with personnel that are NERC certified for the applicable functions: R1.1. Positions that have the primary responsibility, either directly or through communications with others, for the real-time operation of the interconnected Bulk Electric System. R1.2. Positions directly responsible for complying with NERC standards.
Notes: The RC SDT recommends retiring IRO-001-1 R6 as it is redundant with PER-003-0 R1.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R7. The Reliability Coordinator shall have clear, comprehensive coordination agreements with adjacent Reliability Coordinators to ensure that System Operating Limit (SOL) or Interconnection Reliability Operating Limit (IROL) violation mitigation requiring actions in adjacent Reliability Coordinator Areas are coordinated. <i>[Violation Risk Factor: High]</i>	None – requirement should be retired because it is redundant with: IRO-014-1 R1. ~~The~~ <u>Each</u> Reliability Coordinator shall have Operating Procedures, Processes, or Plans ~~in place~~ for activities that require notification, exchange of information or coordination of actions with ~~one or more other~~ <u>impacted</u> Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall <u>collectively address the following:</u> ~~address Scenarios that affect other Reliability Coordinator Areas as well as those developed in coordination with other Reliability Coordinators.~~
Notes: The RC SDT recommends the retirement of IRO-001-1 R7 as this is redundant with IRO-014-1 R1.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R8: Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities shall comply with Reliability Coordinator directives unless such actions would violate safety, equipment, or regulatory or statutory requirements. Under these circumstances, the Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, or Purchasing-Selling Entity shall immediately inform the Reliability Coordinator of the inability to perform the directive <u>so that the Reliability Coordinator may implement alternate remedial actions.</u> [Violation Risk Factor: High]	IRO-001-2 R2. <u>Each</u> Transmission Operators, Balancing ~~Authorities~~ <u>Authority</u>, Generator Operators, Transmission Service Providers, Load-Serving ~~Entities~~ <u>Entity</u>, <u>Distribution Provider</u>, and Purchasing-Selling ~~Entities~~ <u>Entity</u> shall ~~act without intentional delay to~~ comply with <u>its</u> Reliability Coordinator's directives unless such actions would violate safety, equipment, or regulatory or statutory requirements. [Violation Risk Factor: High] [Time Horizon: Real-time Operations] R3. ~~The~~ <u>Each</u> Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, <u>Distribution Provider</u> ~~or and~~ Purchasing-Selling Entity shall ~~immediately confirm the ability to comply with the directive or~~ inform <u>its</u> the Reliability Coordinator <u>upon recognition of the its</u> inability to perform ~~the a~~ directive. [Violation Risk Factor: High] [Time Horizon: Real-time Operations] R4. Each Reliability Coordinator that identifies an expected or actual threat with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify, ~~without intentional delay,~~ all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]
Notes: The RC SDT added the Distribution Provider per FERC Order 693 and added the blue text shown in the requirements above. The RC SDT proposes the replacement of IRO-001-1, R8 with three requirements IRO-001-2, R2, R3, and R4. This will add clarity and measurability to the standard. The last part of the second sentence should be removed as it is implicit in R1, which states that the Reliability Coordination will act or direct actions to mitigate issues. <u>Stakeholders indicated issues with the ability to measure compliance with the phrase, "without intentional delay" and this was removed.</u> Relating to First Energy's comment in FERC Order 693, the requirements address both personnel safety and equipment. There is no reference to a chain of command in the requirements. The standard is written such that decision-making authority rests with the Reliability Coordinator. No further revisions to the standard are required.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R9. The Reliability Coordinator shall act in the interests of reliability for the overall Reliability Coordinator Area and the Interconnection before the interests of any other entity. <i>[Violation Risk Factor: High]</i>	None – retire the requirement as redundant.
Notes: The RC SDT proposes retiring this requirement. All Reliability Coordinator Standard Requirements are developed so that the Reliability Coordinator shall act in the interest of reliability for the RC Area and the Interconnection. Section 6 of the NERC Standard Development Procedure states that NERC develops and maintains Reliability Standards. Equity issues are covered under the Reliability Coordinator Standards of Conduct.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 (this requirement was incorporated from IRO-005-2) R15. Each Reliability Coordinator who foresees a transmission problem (such as an SOL or IROL violation, loss of reactive reserves, etc.) within its Reliability Coordinator Area shall issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area without delay. The receiving Reliability Coordinator shall disseminate this information to its impacted Transmission Operators and Balancing Authorities. The Reliability Coordinator shall notify all impacted Transmission Operators, Balancing Authorities, when the transmission problem has been mitigated. <i>[Violation Risk Factor: High]</i>	IRO-001-2 R5R4. Each Reliability Coordinator ~~who~~ <u>that</u> identifies a real or potential threat with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations]</i> R5. <u>Each Reliability Coordinator that identifies an expected or actual threat with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when the transmission problem has been mitigated. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</u>
Notes: This requirement was moved from IRO-005 into IRO-001-2, ~~R5R4~~ and R5.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Functions that Must Comply with the Requirements in the Standards

Standard	Functions that Must Comply With the Requirements							
	Reliability Coordinator	Balancing Authority	Distribution Provider	Transmission Operator	Transmission Service Provider	Purchasing Selling Entity	Generator Operator	Load Serving Entity
IRO-001-2	X	X	X	X	X	X	X	X

Effective Dates

~~To be determined.~~ In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees approval.

Implementation Plan for IRO-014-2 — Coordination Among Reliability Coordinators

Prerequisite Approvals

- None required

Conforming Changes to Requirements in Already Approved Standards

- IRO-001-2 — Reliability Coordination – Responsibilities and Authorities
- IRO-015-1 — Notifications and Information Exchange Between Reliability Coordinators
- IRO-016-1 — Coordination of Real-time Activities between Reliability Coordinators

Revision Summary

- The Reliability Coordination SDT (RC SDT) revised the standard and is proposing retiring two requirements (R3 and R4). New requirements were brought into this standard from IRO-015-1 (R1-R2) and IRO-016-1 (R1 and its sub requirements). Changes were made to eliminate redundancies between standards (existing and proposed), eliminate administrative items, align with NERCs Rules of Procedure and to address issues in FERC Order 693.

Functions that Must Comply with the Requirements in the Standard:

- Reliability Coordinator

Effective Dates:

In those jurisdictions where regulatory approval is required, this standard shall become effective one year after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective one year after Board of Trustees approval.

Implementation Plan for IRO-014-2

Coordination Among Reliability Coordinators

Revisions or Retirements to Already Approved Standards

The following tables identify the sections of approved standards that shall be retired or revised when this standard is implemented. If the drafting team is recommending the retirement or revision of a requirement, that text is blue.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-2 R7. The Reliability Coordinator shall have clear, comprehensive coordination agreements with adjacent Reliability Coordinators to ensure that System Operating Limit or Interconnection Reliability Operating Limit violation mitigation requiring actions in adjacent Reliability Coordinator Areas are coordinated.	IRO-014-2 R1. Each Reliability Coordinator shall have Operating Procedures, Processes, or Plans for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following: <i>[Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning]</i> 1.1. Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators. 1.2. Energy and capacity shortages. 1.3. Planned or unplanned outage information. 1.4. Control of voltage, including the coordination of reactive resources for voltage control. 1.5. Coordination of information exchange to support reliability assessments. 1.6. Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas.
Notes: The RC SDT proposes retiring R7 as it is redundant with IRO-014, R1.	

Implementation Plan for IRO-014-2
Coordination Among Reliability Coordinators

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-014-1 R1. The Reliability Coordinator shall have Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with one or more other Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall address Scenarios that affect other Reliability Coordinator Areas as well as those developed in coordination with other Reliability Coordinators. <i>[Violation Risk Factor: Medium]</i> R1.1 These Operating Procedures, Processes, or Plans shall collectively address, as a minimum, the following: <i>[Violation Risk Factor: Lower]</i> R1.1.1 Communications and notifications, including the conditions¹ under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators. [Violation Risk Factor: Medium] R1.1.2 Energy and capacity shortages. [Violation Risk Factor: Medium] R1.1.3 Planned or unplanned outage information. [Violation Risk Factor: Medium] R1.1.4 Voltage control, including the coordination of reactive resources for voltage control. [Violation Risk Factor: Medium] R1.1.5 Coordination of information exchange to support reliability assessments. [Violation Risk Factor: Lower] R1.1.6 Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas. [Violation Risk Factor: Lower]	IRO-14-2 R1. Each Reliability Coordinator shall have Operating Procedures, Processes, or Plans for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following: <i>[Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning]</i> 1.1 Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators 1.2 Energy and capacity shortages. 1.3 Planned or unplanned outage information. 1.4 Control of voltage, including the coordination of reactive resources for voltage control. 1.5 Coordination of information exchange to support reliability assessments. 1.6 Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas.
Notes: Revise R1 as shown and delete the footnote.	

¹ Examples of conditions when one Reliability Coordinator may need to notify another Reliability Coordinator may include (but aren't limited to) sabotage events, Interconnection Reliability Operating Limit violations, voltage reductions, insufficient resources, arming of special protection systems, etc.

Implementation Plan for IRO-014-2
Coordination Among Reliability Coordinators

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-014-1 R2. Each Reliability Coordinator's Operating Procedure, Process, or Plan that requires one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) shall be: R2.1. Agreed to by all the Reliability Coordinators required to take the indicated action(s). R2.2. Distributed to all Reliability Coordinators that are required to take the indicated action(s).	IRO-014-2 R2. Each Reliability Coordinator's Operating Procedure, Process, or Plan that requires one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) shall be: <i>[Violation Risk Factor: Lower] [Time Horizon: Operations Planning and Long-term Planning]</i> 2.1 Agreed to by all the Reliability Coordinators required to take the indicated action(s). 2.2 Distributed to all Reliability Coordinators that are required to take the indicated action(s).
Notes: The RC SDT added a Time Horizon to the requirement and eliminated the VRFs that were applied to the subrequirements.	

Implementation Plan for IRO-014-2
Coordination Among Reliability Coordinators

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-014-1 R3. A Reliability Coordinator's Operating Procedures, Processes, or Plans developed to support a Reliability Coordinator-to-Reliability Coordinator Operating Procedure, Process, or Plan shall include: R3.1. A reference to the associated Reliability Coordinator-to-Reliability Coordinator Operating Procedure, Process, or Plan. R3.2. The agreed-upon actions from the associated Reliability Coordinator-to-Reliability Coordinator Operating Procedure, Process, or Plan.	None – Retire the requirement
Notes: This requirement is administrative in nature describing the contents of the plans and should not be in a standard. The RC SDT proposes retiring R3 and its subrequirements and recommends converting these good utility practices into a guideline document for use in developing the operating procedures, processes or plans.	

Implementation Plan for IRO-014-2
Coordination Among Reliability Coordinators

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-014-1 R4. Each of the Operating Procedures, Processes, and Plans addressed in Reliability Standard IRO-014 Requirement 1 and Requirement 3 shall: R4.1. Include version control number or date. R4.2. Include a distribution list. R4.3. Be reviewed, at least once every three years, and updated if needed	None – retire the requirement.
Notes: This requirement is administrative in nature describing the contents of the plans and should not be in a standard. The RC SDT proposes retiring R4 and its subrequirements and recommends converting these good utility practices into a guideline document for use in developing the operating procedures, processes or plans.	

Implementation Plan for IRO-014-2
Coordination Among Reliability Coordinators

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-015-1 R1. The Reliability Coordinator shall follow its Operating Procedures, Processes, or Plans for making notifications and exchanging reliability-related information with other Reliability Coordinators. <i>[Violation Risk Factor: Medium]</i> R1.1 The Reliability Coordinator shall make notifications to other Reliability Coordinators of conditions in its Reliability Coordinator Area that may impact other Reliability Coordinator Areas. <i>[Violation Risk Factor: Medium]</i> R2. The Reliability Coordinator shall participate in agreed upon conference calls and other communication forums with adjacent Reliability Coordinators. <i>[Violation Risk Factor: Lower]</i> R2.1 The frequency of these conference calls shall be agreed upon by all involved Reliability Coordinators and shall be at least weekly. <i>[Violation Risk Factor: Lower]</i> R3. The Reliability Coordinator shall provide reliability-related information as requested by other Reliability Coordinators. <i>[Violation Risk Factor: Medium]</i>	IRO-014-2 R3. Each Reliability Coordinator shall make notifications and exchange reliability-related information with impacted Reliability Coordinators using its predefined Operating Procedures, Processes, or Plans for conditions that may impact other Reliability Coordinator Areas or other means to accomplish the notifications and exchange of reliability-related information. <i>[Violation Risk Factor: Medium]</i> R4. Each Reliability Coordinator shall participate in agreed upon conference calls, at least weekly, and other communication forums with impacted Reliability Coordinators. <i>[Violation Risk Factor: Lower]</i>
The RC SDT recommends retiring Standard IRO-015 and moving Requirements R1 and R2 to IRO-014-2 and revising as shown. The RC SDT proposes retiring R3 (as shown in the left column) as it is redundant with proposed R5 above. Reliability Coordinators already have several requirements aimed at providing data or information to other Reliability Coordinators in support of Reliability Coordinator responsibilities. For example, Reliability Coordinators provide reliability-related information to other Reliability Coordinators as part of IRO-010-1, R3 – they share information as they try to confirm the existence of operating issues as part of IRO-014-2 R5, etc.	

Implementation Plan for IRO-014-2
Coordination Among Reliability Coordinators

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-016-1 R1. The Reliability Coordinator that identifies a potential, expected, or actual problem that requires the actions of one or more other Reliability Coordinators shall contact the other Reliability Coordinator(s) to confirm that there is a problem and then discuss options and decide upon a solution to prevent or resolve the identified problem. <i>[Violation Risk Factor: Medium]</i> R1.1 If the involved Reliability Coordinators agree on the problem and the actions to take to prevent or mitigate the system condition, each involved Reliability Coordinator shall implement the agreed-upon solution, and notify the involved Reliability Coordinators of the action(s) taken. <i>[Violation Risk Factor: Medium]</i> R1.2 If the involved Reliability Coordinators cannot agree on the problem(s) each Reliability Coordinator shall re-evaluate the causes of the disagreement (bad data, status, study results, tools, etc.). <i>[Violation Risk Factor: Medium]</i> R1.2.1 If time permits, this re-evaluation shall be done before taking corrective actions. <i>[Violation Risk Factor: Medium]</i> R1.2.2 If time does not permit, then each Reliability Coordinator shall operate as though the problem(s) exist(s) until the conflicting system status is resolved. <i>[Violation Risk Factor: Medium]</i> R1.3 If the involved Reliability Coordinators cannot agree on the solution, the more conservative solution shall be implemented. <i>[Violation Risk Factor: Medium]</i>	IRO-014-2 R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify impacted Reliability Coordinators. <i>[Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i> R6. Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators <i>[Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i> R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. <i>[Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i> R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan. <i>[Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i>
Notes: IRO-014-2 R5 and R6 are revised versions of IRO-016-1, R1 and its subrequirements which were moved to this standard. The RC SDT removed the wording relating to the “most conservative solution” because it can not be measured. We are proposing to use the mitigation plan of the RC who is experiencing the issue in cases where an agreed to mitigation plan can not be developed. Note that stakeholders proposed revisions to these requirements, and the RC SDT subdivided the requirements to add more clarity.	

Implementation Plan for IRO-014-2 — Coordination Among Reliability Coordinators

Prerequisite Approvals

- None required

Conforming Changes to Requirements in Already Approved Standards

- IRO-001-2 — Reliability Coordination – Responsibilities and Authorities
- IRO-015-1 — Notifications and Information Exchange Between Reliability Coordinators
- IRO-016-1 — Coordination of Real-time Activities between Reliability Coordinators

Revision Summary

- The Reliability Coordination SDT (RC SDT) revised the standard and is proposing retiring two requirements (R3 and R4). New requirements were brought into this standard from IRO-015-1 (R1-R2) and IRO-016-1 (R1 and its sub requirements). Changes were made to eliminate redundancies between standards (existing and proposed), eliminate administrative items, align with NERCs Rules of Procedure and to address issues in FERC Order 693.

Functions that Must Comply with the Requirements in the Standard:

- Reliability Coordinator

Effective Dates

~~To be determined.~~

In those jurisdictions where regulatory approval is required, this standard shall become effective one year after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective one year after Board of Trustees approval.

Implementation Plan for IRO-014-2

Coordination Among Reliability Coordinators

Revisions or Retirements to Already Approved Standards

The following tables identify the sections of approved standards that shall be retired or revised when this standard is implemented. If the drafting team is recommending the retirement or revision of a requirement, that text is blue.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-2 R7. The Reliability Coordinator shall have clear, comprehensive coordination agreements with adjacent Reliability Coordinators to ensure that System Operating Limit or Interconnection Reliability Operating Limit violation mitigation requiring actions in adjacent Reliability Coordinator Areas are coordinated.	IRO-014-2 R1. ~~The~~<u>Each</u> Reliability Coordinator shall have Operating Procedures, Processes, or Plans for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address ~~as a minimum,~~ the following: <i>[Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning]</i> <u>R1.1.1.1.</u> Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators. <u>R1.2.1.2.</u> Energy and capacity shortages. <u>R1.3.1.3.</u> Planned or unplanned outage information. <u>R1.4.1.4.</u> <u>Control of</u> ~~V~~voltage ~~control,~~ including the coordination of reactive resources for voltage control. <u>R1.5.1.5.</u> Coordination of information exchange to support reliability assessments. <u>R1.6.1.6.</u> Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas.
Notes: The RC_SDT proposes retiring R7 as it is redundant with IRO-014, R1.	

Implementation Plan for IRO-014-2
Coordination Among Reliability Coordinators

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-014-1 R1. The Reliability Coordinator shall have Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with one or more other Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall address Scenarios that affect other Reliability Coordinator Areas as well as those developed in coordination with other Reliability Coordinators. [Violation Risk Factor: Medium] R1.1 These Operating Procedures, Processes, or Plans shall collectively address, as a minimum, the following: [Violation Risk Factor: Lower] R1.1.1 Communications and notifications, including the conditions¹ under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators. [Violation Risk Factor: Medium] R1.1.2 Energy and capacity shortages. [Violation Risk Factor: Medium] R1.1.3 Planned or unplanned outage information. [Violation Risk Factor: Medium] R1.1.4 Voltage control, including the coordination of reactive resources for voltage control. [Violation Risk Factor: Medium] R1.1.5 Coordination of information exchange to support reliability assessments. [Violation Risk Factor: Lower] R1.1.6 Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas. [Violation Risk Factor: Lower]	IRO-14-2 R1. ~~The Each~~ Reliability Coordinator shall have Operating Procedures, Processes, or Plans ~~in place~~ for activities that require notification, exchange of information or coordination of actions with impacted ~~with one or more other~~ Reliability Coordinators to support Interconnection reliability. ~~These Operating Procedures, Processes, or Plans shall address Scenarios that affect other Reliability Coordinator Areas as well as those developed in coordination with other Reliability Coordinators.~~ <u>These Operating Procedures, Processes, or Plans shall collectively address the following:</u> [Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning] ~~R1.1~~ ~~These Operating Procedures, Processes, or Plans shall collectively address, as a minimum, the following:~~ [Violation Risk Factor: Lower] ~~R1.1.1~~ Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators. ~~[Violation Risk Factor: Medium]~~ ~~R1.1.2~~ Energy and capacity shortages. ~~[Violation Risk Factor: Medium]~~ ~~R1.1.3~~ Planned or unplanned outage information. ~~[Violation Risk Factor: Medium]~~ ~~R1.1.4~~ <u>Control of Voltage</u> ~~control~~, including the coordination of reactive resources for voltage control. ~~[Violation Risk Factor: Medium]~~ ~~R1.1.5~~ Coordination of information exchange to support reliability assessments. ~~[Violation Risk Factor: Lower]~~ ~~R1.1.6~~ Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas. ~~[Violation Risk Factor: Lower]~~
Notes: Revise R1 as shown and delete the footnote.	

¹ Examples of conditions when one Reliability Coordinator may need to notify another Reliability Coordinator may include (but aren't limited to) sabotage events, Interconnection Reliability Operating Limit violations, voltage reductions, insufficient resources, arming of special protection systems, etc.

Implementation Plan for IRO-014-2
Coordination Among Reliability Coordinators

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-014-1 R2. Each Reliability Coordinator's Operating Procedure, Process, or Plan that requires one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) shall be: R2.1. Agreed to by all the Reliability Coordinators required to take the indicated action(s). R2.2. Distributed to all Reliability Coordinators that are required to take the indicated action(s).	IRO-014-2 R2. Each Reliability Coordinator's Operating Procedure, Process, or Plan that requires one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) shall be: <i>[Violation Risk Factor: Lower] [Time Horizon: Real-time-Operations Planning and Operations-Long-term Planning]</i> R2.1 Agreed to by all the Reliability Coordinators required to take the indicated action(s). <i>[Violation Risk Factor: Lower]</i> R2.2 Distributed to all Reliability Coordinators that are required to take the indicated action(s). <i>[Violation Risk Factor: Lower]</i>
Notes: The RC SDT added a Time Horizon to the requirement and eliminated the VRFs that were applied to the subrequirements.	

Implementation Plan for IRO-014-2
Coordination Among Reliability Coordinators

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-014-1 R3. A Reliability Coordinator's Operating Procedures, Processes, or Plans developed to support a Reliability Coordinator-to-Reliability Coordinator Operating Procedure, Process, or Plan shall include: R3.1. A reference to the associated Reliability Coordinator-to-Reliability Coordinator Operating Procedure, Process, or Plan. R3.2. The agreed-upon actions from the associated Reliability Coordinator-to-Reliability Coordinator Operating Procedure, Process, or Plan.	None – Retire the requirement
Notes: This requirement is administrative in nature describing the contents of the plans and should not be in a standard. The RC SDT proposes retiring R3 and its subrequirements and recommends converting these good utility practices into a guideline document for use in developing the operating procedures, processes or plans.	

Implementation Plan for IRO-014-2
Coordination Among Reliability Coordinators

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-014-1 R4. Each of the Operating Procedures, Processes, and Plans addressed in Reliability Standard IRO-014 Requirement 1 and Requirement 3 shall: R4.1. Include version control number or date. R4.2. Include a distribution list. R4.3. Be reviewed, at least once every three years, and updated if needed	None – retire the requirement.
Notes: This requirement is administrative in nature describing the contents of the plans and should not be in a standard. The RC SDT proposes retiring R4 and its subrequirements and recommends converting these good utility practices into a guideline document for use in developing the operating procedures, processes or plans.	

Implementation Plan for IRO-014-2
Coordination Among Reliability Coordinators

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-015-1 R1. The Reliability Coordinator shall follow its Operating Procedures, Processes, or Plans for making notifications and exchanging reliability-related information with other Reliability Coordinators. <i>[Violation Risk Factor: Medium]</i> R1.1 The Reliability Coordinator shall make notifications to other Reliability Coordinators of conditions in its Reliability Coordinator Area that may impact other Reliability Coordinator Areas. <i>[Violation Risk Factor: Medium]</i> R2. The Reliability Coordinator shall participate in agreed upon conference calls and other communication forums with adjacent Reliability Coordinators. <i>[Violation Risk Factor: Lower]</i> R2.1 The frequency of these conference calls shall be agreed upon by all involved Reliability Coordinators and shall be at least weekly. <i>[Violation Risk Factor: Lower]</i> R3. The Reliability Coordinator shall provide reliability-related information as requested by other Reliability Coordinators. <i>[Violation Risk Factor: Medium]</i>	IRO-014-2 ~~R5~~R3. ~~The Each~~ Reliability Coordinator shall make notifications and exchange reliability-related information with impacted Reliability Coordinators using its predefined Operating Procedures, Processes, or Plans for conditions that may impact other Reliability Coordinator Areas or other means to accomplish the notifications and exchange of reliability-related information. <i>[Violation Risk Factor: Medium]</i> ~~R6~~R4. ~~The Each~~ Reliability Coordinator shall participate in agreed upon conference calls, <u>at least weekly</u>, and other communication forums with impacted adjacent Reliability Coordinators. <i>[Violation Risk Factor: Lower]</i> ~~R6.1~~ ~~The frequency of these conference calls shall be agreed upon by all involved Reliability Coordinators and shall be at least weekly. [Violation Risk Factor: Lower]~~
The RC SDT recommends retiring Standard IRO-015 and moving Requirements R1 and R2 to IRO-014-2 and revising as shown. The RC SDT proposes retiring R3 (as shown in the left column) as it is redundant with proposed R5 above. Reliability Coordinators already have several requirements aimed at providing data or information to other Reliability Coordinators in support of Reliability Coordinator responsibilities. For example, Reliability Coordinators provide reliability-related information to other Reliability Coordinators as part of IRO-010-1, R3 – they share information as they try to confirm the existence of operating issues as part of IRO-014-2 R5, etc.	

Implementation Plan for IRO-014-2

Coordination Among Reliability Coordinators

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-016-1 R1. The Reliability Coordinator that identifies a potential, expected, or actual problem that requires the actions of one or more other Reliability Coordinators shall contact the other Reliability Coordinator(s) to confirm that there is a problem and then discuss options and decide upon a solution to prevent or resolve the identified problem. <i>[Violation Risk Factor: Medium]</i> R1.1 If the involved Reliability Coordinators agree on the problem and the actions to take to prevent or mitigate the system condition, each involved Reliability Coordinator shall implement the agreed-upon solution, and notify the involved Reliability Coordinators of the action(s) taken. <i>[Violation Risk Factor: Medium]</i> R1.2 If the involved Reliability Coordinators cannot agree on the problem(s) each Reliability Coordinator shall re-evaluate the causes of the disagreement (bad data, status, study results, tools, etc.). <i>[Violation Risk Factor: Medium]</i> R1.2.1 If time permits, this re-evaluation shall be done before taking corrective actions. <i>[Violation Risk Factor: Medium]</i> R1.2.2 If time does not permit, then each Reliability Coordinator shall operate as though the problem(s) exist(s) until the conflicting system status is resolved. <i>[Violation Risk Factor: Medium]</i> R1.3 If the involved Reliability Coordinators cannot agree on the solution, the <u>more conservative solution</u> shall be implemented. <i>[Violation Risk Factor: Medium]</i>	IRO-014-2 R5. ~~When an expected or actual reliability issue is detected, the~~<u>Each</u> Reliability Coordinator <u>upon identification of an Adverse Reliability Impact,</u> ~~shall confirm the existence of the issue with the~~ <u>notify</u> impacted ~~other~~ Reliability Coordinators that are involved. ~~In the event that the issue cannot be confirmed, each RC shall operate as though the problem exists.~~ <i>[Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i> R6. ~~When an expected or actual reliability issue exists and the~~ <u>Each</u> impacted ~~affected~~ Reliability Coordinators <u>shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators</u> ~~can not agree on a mitigation plan, all impacted affected Reliability Coordinators shall implement the mitigation plan developed by the Reliability Coordinator who has the reliability issue.~~ <i>[Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i> R7. <u>The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists.</u> <i>[Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i> R8. <u>Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan.</u> <i>[Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i>

Implementation Plan for IRO-014-2

Coordination Among Reliability Coordinators

Notes: IRO-014-2 R5 and R6 are revised versions of IRO-016-1, R1 and its subrequirements which were moved to this standard. The RC SDT removed the wording relating to the “most conservative solution” because it can not be measured. We are proposing to use the mitigation plan of the RC who is experiencing the issue in cases where an agreed to mitigation plan can not be developed. [Note that stakeholders proposed revisions to these requirements, and the RC SDT subdivided the requirements to add more clarity.](#)



NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

Standards Announcement

Comment Period Open

July 10–August 9, 2009

Now available at:

http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html

Project Name

Project 2006-06 — Reliability Coordination

Due Date and Submittal Information

The comment period is open **until 8 p.m. EDT on August 9, 2009**. Please use this [electronic form](#) to submit comments. If you experience any difficulties in using the electronic form, please contact Lauren Koller at Lauren.Koller@nerc.net. An off-line, unofficial copy of the comment form is posted on the project page: http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html

Content for Comment Period

The Reliability Coordination Standards Drafting Team is seeking comments on its second drafts of the following proposed standards:

- COM-001-2 — Communications
- COM-002-3 — Communications and Coordination
- IRO-001-2 — Reliability Coordination – Responsibilities and Authorities
- IRO-014-2 — Coordination Among Reliability Coordinators

The drafting team revised the proposed standards based on stakeholder feedback and the results of the IROL Standards Drafting Team work.

Other Materials Posted

- Revised implementation plans
- The drafting team's consideration of industry comments received during the first comment period

Project Background

The Reliability Coordination Standards Drafting Team was tasked with 1) ensuring that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique, and enforceable, 2) ensuring that this set of requirements is sufficient to maintain reliability of the Bulk Electric System, and 3) revising the group of standards based on FERC Order 693.

During the course of this project, the Reliability Coordination Standards Drafting Team incorporated changes due to the work of the IROL Standards Drafting Team, and two standards from the original Standards Authorization Request (PER-004 and PRC-001) were moved to other projects due to scope overlap. Detailed information on these changes can be found in the comment form for this posting.

Applicability of Standards in Project

Reliability Coordinator
Balancing Authority
Transmission Service Provider
Transmission Operator
Distribution Provider
Generator Operator
Purchasing Selling Entity
Load Serving Entity

Standards Development Process

The [Reliability Standards Development Procedure](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate

*For more information or assistance,
please contact Shaun Streeter at shaun.streeter@nerc.net or at 609.452.8060.*



Individual or group. (29 Responses)
Name (19 Responses)
Organization (19 Responses)
Group Name (10 Responses)
Lead Contact (10 Responses)
Contact Organization (10 Responses)
Question 1 (23 Responses)
Question 1 Comments (29 Responses)
Question 2 (27 Responses)
Question 2 Comments (29 Responses)
Question 3 (25 Responses)
Question 3 Comments (29 Responses)
Question 4 (28 Responses)
Question 4 Comments (29 Responses)
Question 5 (24 Responses)
Question 5 Comments (29 Responses)
Question 6 (23 Responses)
Question 6 Comments (29 Responses)
Question 7 (23 Responses)
Question 7 Comments (29 Responses)
Question 8 (22 Responses)
Question 8 Comments (29 Responses)
Question 9 (23 Responses)
Question 9 Comments (29 Responses)
Question 10 (21 Responses)
Question 10 Comments (29 Responses)
Question 11 (18 Responses)
Question 11 Comments (29 Responses)
Question 12 (18 Responses)
Question 12 Comments (29 Responses)
Question 13 (18 Responses)
Question 13 Comments (29 Responses)
Question 14 (0 Responses)
Question 14 Comments (29 Responses)

-
Individual
Steve Alexanderson
Central Lincoln
Comments: The inclusion of load serving entities and distribution providers does not address any present reliability gap. R4 is extremely vague, and is not likely to be interpreted consistently. What form of evidence will be acceptable? Photos of telephones?
No
Comments: M4 is of little help regarding R4. How does an entity perform this demonstration, especially in the case of an off-site audit? If left to the regions, there will be no consistency.
No
The severity levels have little or no relationship to reliability. Failure to provide a evidence of an agreement per R3, for example, has no impact on reliability by itself; yet it carries the maximum VSL. In reality, the impact would only be severe if the use of an alternate language resulted in a miscommunication.
No
The inclusion of load serving entities and distribution providers does not address any present BES reliability gap.
No
M2 goes beyond R2 in requiring recordings. This will be cost prohibitive for small entities that have little impact on the BES. Telephone recording equipment will be needed on company phones. and some way to handle the recording of

directives and responses that occur after hours on home or cell phones must be handled. Drafters seem to have missed the fact that not all the applicable entities have 24/7 dispatch centers.

Individual

Virginia Cook

JEA

R2 I would suggest that R2 be clarified so that it is understood that the 60 minutes starts at the beginning of the outage (or the end of the 30 minute period, if that was instead the intent) so that there can be no confusion about when the clock starts for notification periods. Otherwise, the wording of these standards is clearer than the current version. R4 I am concerned that with the word "capabilities" that the DP/GO's will be expected by the auditors to demonstrate that its "capability" was working every single second of every day since their last audit, especially since you have not included a data retention period (especially since this is rated a "high" VRF).

Yes

M1 - very nice, probably we will also be held responsible for completing the mitigation plans, so perhaps you should go ahead and add that so no one gets caught without sufficient evidence in that regard M2 - fine M3 - this measure would indicate that operators have the authority to agree among themselves to speak other languages, rather than a more formal agreement between entities, which is how I read the language of the requirement. If that is not what is meant, then I would suggest the examples include Memorandums of Agreement or Understanding, Contracts or other more formal mechanisms. M4 - fine

Yes

No

R1: just to avoid possible auditor misunderstandings the SDT might consider replacing the words "or repeat the original statement" to "reissue the directive" so that the RC does not get into trouble if the second statement is not verbatim of the first. This also helps clarify that another statement is required from the recipient along with a final acknowledgement from the RC that the intent is correct.

No

Not all entities have recorded lines. The standard does not directly require the to record their lines, but the measure implies it. It seems that a written log should be sufficient. Since both sides of the conversation gets audited, the auditors will have ample opportunity to check up on both sides.

Yes

Individual

Daniel Duff

Liberty Electric Power LLC

Yes

Yes

No
The proposed standard does not require the RC, TO, or BA to declare an emergency to the GO when issuing a directive. There has been confusion at times in the past as to whether the entity is issuing a directive based on economics or due to an emergency. The standard should be amended to require the RC/TO/BA to state the directive is due to a declared emergency. The GO is required to repeat back the intent of an emergency directive, but is not required to repeat back the intent of economic directive. This can lead to a finding of a severe VSL non-compliance on the part of the GO due to a failure of the RC/TO/BA to clearly state the nature of the directive.
Yes
Yes
Yes
No
Similar objection to COM-002-3: There should be a requirement to the RC to declare the nature of the directive, emergency or economic.
Yes
No
The VSL's have a "Severe" VSL attached to a GO who fails to inform the RC when the Go becomes aware it is are unable to fully comply with a directive. However, the RC failing to inform two TO's - who potentially could have many GOs supplying power to their systems - of an emergency is only a "Moderate" VSL.
Yes
Yes
Yes
Group
Northwest LSE Group
Russell A. Noble
Cowlitz County PUD
No
The RC STD has done a commendable effort. However, it is questionable how expanding the applicability to include LSEs, DPs, & PSEs that are non-scheduling/tagging entities will increase reliability of the BES. In fact, we believe that increasing the applicability could do just the opposite. Many of these entities that are only registered as a LSE, DP, and/or PSE do not have a 24/7 desk/dispatch facility to receive RC/BA/TOP reliability directives, and are too small (10s of MW) to effectively assist during a reliability crisis. In addition, the Regional Entities (WECC in this case) are overwhelmed as it is, asking them to take on even more audit responsibilities is unrealistic, and not worth the effort. In addition, for the small Registered Entity, what would constitute compliance with R3 & R4 if no TOP/BA real-time directives were received? Everyone employed speaks English and there is at least one phone on the premises? Will the small DP and/or LSE be required to monitor its communication system 24/7 with competent personnel for an unlikely TOP/BA directive?
No
To demonstrate compliance the small Registered Entities will be in the position of proving a negative: i.e., there is no real-time BES operational communication from or to any other entity. Currently, for the smaller entities, communication with the Transmission Operator or Balancing Authority is strictly for operational safety and local reliability of service, not operational reliability for the BES as defined by NERC. It is not clear how the small entity will show compliance. If R4 requires the small load-only DP and/or LSE to have 24/7 monitoring of its phone, and contracted answering service is unable to contact anyone, will this be a violation?
No
With the vague verbiage of R4 coupled with the High and Severe VSL, it is important to clarify R4 with the small DP in mind, and possibly include Lower and Moderate VSLs for smaller load-only DP violations.
No
It would be advantageous to exempt certain smaller Registered Entities (LSE, DP, & PSE) that are non-scheduling/tagging entities. In addition to not having a scheduling/tagging desk, many of these entities do not have a 24/7 desk to receive RC/BA/TOP reliability directives/calls. and are too small (10s of MW) to even be substantially

significant in a reliability crisis. Instead of making this Standard applicable to all DPs, LSEs, and PSEs, we suggest that the RC, BAs, and TOPs to yearly publish those LSEs, DPs, and PSEs responsible for responding to emergency reliability directives. Also, it would be advisable for the RC, BA, and TOP giving a reliability directive to clearly preface the instruction with "The following is an emergency reliability directive" to differentiate from normal operations communications. Many smaller entities do not have the resources to install reliable voice recording equipment, but having access to such recordings would be beneficial towards compliance documentation; thus, it would be helpful to require the directive issuing RC, BA, or TOP to provide a digital copy of the voice recording, or transcript if available on request to the recipient of the directive. Short of a recording or transcript of the recording, it will be difficult to determine how a small entity without recorded line would show compliance other than writing down the directive as it is given and reading it back to the issuer. If the directive is lengthy, this will slow down the process and probably defeat the purpose and value of quick action. Further, there is no guarantee that the receiver will accurately retain a complicated directive if not immediately documented in some way to allow review. Last of all, what is meant by the word "intent?" Must the recipient understand and demonstrate the "why" the directive is given and the intended "outcome," or merely paraphrase the directive to demonstrate understanding? If the recipient repeats word for word the directive back to the issuer without any other indication that the directive is understood, is this a violation??

No

Only in making the Measures agree with the suggested changes to the requirements above.

No

Only in making the Measures agree with the suggested changes to the requirements above.

Yes

No

No

To reduce the compliance burden on smaller entities that would never receive a Reliability Coordinator directive and reduce needless Regional Entity auditing, it would be most helpful to require the RC to publish its list of entities responsible for receiving reliability directives. Also, any Registered Entity should be able to request copies of digital audio recordings or transcripts of the audio recordings if available from the RC.

No

Only in making the Measures agree with the suggested changes to the requirements above.

No

Only in making the Measures agree with the suggested changes to the requirements above.

Abstain

Abstain

Abstain

No

Group

WECC Reliability Coordinator

Mike Davis

WECC RC

No

Yes

No

Yes

No

Yes

No

Yes

No

Yes

No

Yes

No

Yes

No

Yes

No

No

[illegible]

voice recordings or transcripts of voice recordings, electronic communications, or equivalent, of agreement shall be provided to explain the use of the alternate language. (R3.) M3 allows a language other than English. Must the agreement for non-English be in place in advance of the call?
No
see M3 comment for question 2
No
Support the intent but not the existing language. Do not support Requirements that include some examples since the examples can be confused with the Requirement. Do not support one written Requirement that has two requirements. Recommend the following Requirements A new R1 - Each Entity shall have Operational Procedure requiring that communications directives be repeated back to the issuer R2 – leave as is A new R3 – If not repeated, then issuer shall request the receiving Entity to repeat the communication directive A new R4 – The issuer will acknowledge the correctness of the repetition of the communications directive
No
Addressed the new proposed Requirements above in Question 4.
No
Address the new proposed Requirements.
No
Remove the word “outages” that appears after “cascading” as per NERC Glossary and FERC Directive issued Dec. 27, 2007.
No
Add “an issued” to the wording as shown following: The Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and/or Purchasing-Selling Entity shall immediately confirm the ability to comply with the directive or inform the its Reliability Coordinator upon recognition of itshe inability to perform thean issued directive.
Yes
No
(i) R4: Since failing to issue an alert to 3 entities already attracts a “High” VSL, not doing so for ANY (i.e. failing to issue an alert to all entities) or more than three should attract a “Severe” VSL. We suggest to change the High VSL to: “...failed to issue an alert to three, but not all, impacted....” and the Severe VSL to: “...failed to issue an alert to any or more than three impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. Some examples may help to make our intent clearer: If there were 3 BAs, TOPs etc. and none were alerted, this would be a “Severe” violation. If there were 6 BAs, TOPs etc. and 3 were not alerted, this would be a “High” violation. In this last case, if 4 BAs, TOPs etc. were not alerted, this would be a “Severe” violation. (ii) R5: Similar changes as in R4 should also apply to High and Severe in R5.
No
The intents of Requirements R7 and R8 are addressed in R6, and do not add anything. Suggest removing R7 and R8.
No
The intents of Measures M7 and M8 are addressed in M6, and do not add anything. Suggest removing M7 and M8.
No
(i) Arguably, all four VSLs could be developed as opposed to just having the Moderate and Severe, if the VSLs are graded according to the number of impacted RCs that need to be notified. For example, Low for missing one, Moderate for missing two, High for missing three, Severe for missing four or more. (ii) We do not have any issue with the binary nature of the VSLs for R6, R7 and R8, but they may need to be revised (wording change and/or removal) depending on the SDT’s response to our comments under Q11.
NPCC appreciates the work of the Drafting Team. No additional comments.
Individual
Brent Hebert
Calpine Corporation
Yes
Yes
Yes
Yes
Calpine supports three part communications when verbal directives are issued during real-time operational emergency conditions. Calpine believes all issued directives should be explicitly identified as such.

Group
Southern Company
Hugh Francis
Southern Company Services, Inc.
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
No
IRO-001-1 Requirement 3 states that, "The Reliability Coordinator shall have clear decision-making authority to act and to direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing- Selling Entities within its Reliability Coordinator Area to preserve the integrity and and reliability of the Bulk Electric System." This does not give one RC the authority to direct another RC. Requirement 7 and 8 would allow one RC to give a directive to another RC if they disagree. This would allow an RC with bad information to require another RC to carry out a mitigation plan that could degrade system reliability. For example, RC1 identifies a possible SOL violation in RC2's reliability area due to RC1's generation pattern. RC1 and RC2 can't agree that there is a problem. In order to mitigate the SOL a mitigation plan is developed by RC1 that requires RC2 to redispatch generation and reconfigure transmission in RC2's area so that the generation and transmission in RC1's area won't have to be redispatched or reconfigured. Suggested rewording of R7 and R8 R7. When Reliability Coordinators can not agree that a problem exists a mitigation plan will be developed by each Reliability Coordinator that will restore system reliability in their respective reliability areas. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed to relieve the identified Adverse Reliability Impact in their reliability area when the impacted Reliability Coordinators can not agree that a problem exists. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]
Yes
No
Reliability problems identified in other reliability areas are based on modeling information obtained from another reliability region. The fact that one RC will not agree that the model of an adjacent RC's reliability area may be more accurate than their model of the adjacent reliability area is no reason to impose a severe violation on the RC with the more accurate model of their own reliability region. Example: RC1 identifies a contingency overload of a transformer bank in an adjacent reliability area. The transformer bank was replaced the week before with a larger bank. When RC1 contacts RC2, RC2 explains that the bank overload is not valid because of the replacement. RC2 does not identify a problem due to the fact that the model RC2 is using has been updated with the new transformer bank. RC1 will not agree and requires RC2 to open a tie line with another reliability area to relieve the contingency overload. If RC2 does not follow the instructions of RC1, making the interconnection weaker to relieve a problem that does not exists, RC2 is out of compliance and a severe violation will be imposed.
Individual
Rao Somayajula

ReliabilityFirst Corporation
No
FERC 693 excludes distribution providers if they are not a user, owner or operator of BES. This should be reflected in R4 of the standard
No
No measures are posted for R4 of the revised standard
Yes
No
FERC 693 excludes distribution providers if they are not a user, owner or operator of BES. This should be reflected in R2 of the standard
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Individual
James H. Sorrels, Jr.
American Electric Power
Yes
AEP does generally agree with the revisions, but the use of the term "interpersonal communication capabilities" needs a NERC-approved definition. Otherwise, what is in scope? Are e-mail or text messages acceptable, and, if so, what type of guaranteed delivery is necessary?
Yes
Yes
Yes
AEP does generally agree with the revisions, but we have concerns with the much wider scope of three part communications that expand the required voice or transcript evidence. There is no rationale provided for changing the text in R1 and M1, and adding a the new R2 and M2. We would recommend that these items remain as stated in Version 2.
Yes
As described in the question 4 response, there is no rationale provided for changing the text in R1 and M1, and adding a the new R2 and M2. We would recommend that these items remain as stated in Version 2.
No
AEP is concerned that the severe VSL assigned to Requirement 2 is excessive and should be reconsidered.
Yes
Yes

Yes
Yes
Not applicable.
Not applicable.
Not applicable.
Group
SERC OC Standards Review Group
Jim Case
Entergy
No
The STD should clarify what types of communications are considered in the standard – is it voice or data communications or both?
Yes
Yes
No
The term “emergency” has a broad definition and other standards use “adverse conditions” or “adverse reliability impact”. There should be a consistency of terms when describing a system condition. The STD should include a definition of “directive” that includes more than “Emergency’ operational conditions. Should this requirement be modified to include the term “Reliability Directive” and the definition of this term added to the NERC Glossary?
Yes
Yes
If R1 changes as suggested in Question 4, the VSLs will need to be changed also.
No
What is the difference between “Adverse Reliability Impacts” and the definition of an IROL? Is this going to replace an IROL?
No
If R2 of IRO-001-1 is retired, what process is in place to ensure that reliability plans are kept up to date and are reviewed to approve footprint changes?
No
The measures should indicate how long records should be kept to verify compliance with the requirements.
Yes
No
Does the STD intend to give a Reliability Coordinator the authority to direct reliability outside their reliability area? This appears to be in conflict with IRO-001.
Yes
Yes
“The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Standards Review group only and should not be construed as the position of SERC Reliability Corporation, its board or its officers.”
Group
Bonneville Power Administration
Denise Koehn
BPA Transmission Reliability Program
Yes

No
Issue #1: Measure M3 The measure states that entities "shall have and provide" evidence that "personnel used English as the language for all" communications. This infers that all communications must be documented in some form or fashion and that any outage of the normal communication system must be met with alternative processes which will meet this measure, even if the alternative is the preparation of handwritten notes of each person's conversations, noting that the communications occurred in English. Unfortunately, there have been times where our Dictaphone stopped recording phone calls, and nobody knew it for days! This measure sets us up for a violation! It's just a matter of time.
Yes
Yes
Yes
No
Comments: Issue #1: Violation Severity Level The Moderate and Severe VSLs for Requirement R1 can lead to confusion. For instance, the Moderate VSL states that the responsible entity 'did not acknowledge the recipient was correct in the repeated directive OR (emphasis theirs) failed to repeat the intent of the original statement to resolve any misunderstandings.' What is it saying here? Is it dinging the responsible entity for making no response at all to the recipient after they repeated the intent of the message? Or is that what the Severe VSL is dinging for when it includes an AND rather than an OR in the statement? I can't tell what the drafting team was intending with their statements, but one of the statements seem to infer that the responsible entity can actually be dinged for not doing both, acknowledging the recipient as being correct in their response and at the very same time repeating the intent of the original statement to resolve any misunderstandings because the recipient was incorrect in their response. This then argues that the recipient can be both correct and incorrect at the same time. I didn't think that was possible...similar to binary code...either you get a one or a zero, but not both and never neither! I would argue that the drafting team should rewrite their VSLs to succinctly state that the responsible entity failed to respond after the recipient repeated the intent of the message. With that in mind, either the Moderate or the Severe VSL will be rewritten in an understandable way and the other VSL will disappear in the realms of impossible things.
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Issue #2: Data Retention Why would the Distribution Provider and Generator Operator be required to store historical data (three years in the case of Requirement R1 and Measure M1; twelve months in the case of Requirement R2 and Measure M2) to show that these requirements and measures have been successfully implemented when these two entities (Distribution Provider and Generator Operator) aren't even included either in Requirements R1 and R2 or in Measure M1 and M2? It would appear that they should only have to provide historical data for three months as required by the data retention time for Requirement 3 and Measure 3. Issue #1: Data Retention The first bullet in this section states that all entities are responsible for retaining documents associated with all Requirements and Measures associated with this standard. In reality, Requirements R1, R4, R5 and R6 and the corresponding Measures are the responsibility of the Reliability Coordinator. Requirements R2 and R3 and their corresponding Measures are implemented by the Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider, Transmission Service Provider, Purchasing-Selling Entity and the Load Serving Entity. The Data Retention section should be rewritten to reflect this so that entities are not required to maintain documents that they aren't suppose to even possess in some cases.
Individual
Brent ingebrightson
E.ON U.S.

No
E.ON U.S. suggests deleting "interpersonal" from the term "interpersonal communications capabilities". The need for and meaning of the term "interpersonal" isn't clear. Does it infer communications must be to/from a specific individual rather than to/from another reliability entity? Verbal vs electronic communications? All non-data communications? E.ON U.S. believes that the term "interpersonal" must be clarified if it is to remain in the standard. In the proposed R1 – how extensive must the quarterly testing be – establish contact or verify all functions? Does the term "alternative" include the "normal" communication medium or only the "backup" mediums? Does the alternative imply ALL possible communication alternatives? E.ON U.S. suggests replacing the term "alternative" with "planned backup" or similar. Quarterly testing needs to be limited to only established/planned backup communication methods not any potential "alternative" communication method.
No
E.ON U.S. believes that the M1 must be clarified to address whether the testing entity is responsible to develop and implement a mitigation plan when a test is unsuccessful due to an issue at the other end (i.e. non-testing entity).
No
E.ON U.S. suggests that R1 be modified to include the language that when an RC, BA and/or TOP issue a directive it must state: "This is a directive" and the entity receiving the directive must state: "I understand this is a directive". E.ON U.S. also requests that language be added to the requirement that states that this communication protocol is only for reliability related directives and not for other operational directives.
No
E.ON U.S. suggests that the VSL for R4 should be binary with the Severe VSL for failing to notify all entities as per R4. Partially meeting R4 is not consistent with the language in R4. E.ON U.S. also suggests that the VSL for R5 should be binary with the Severe VSL for failing to notify all entities as per R5. Partially meeting R5 is not consistent with the language in R5 but the reliability impact of partially meeting R5 is low.
COM-001-2 R1 and R2 and the associated M1 and M2 are only applicable to the RC, TOP and BA but the "Data Retention" for R1/R2 and M1/M2 require the DP and GOP to retain data for the Requirements and Measures. E.ON U.S. suggests that the requirement for data retention of the DP and GOP be eliminated from the standard.
Individual
Kasia Mihalchuk
Manitoba Hydro
No
do not believe a mitigation plan is necessary in R1. If the interpersonal communication capability fails during the quarterly test, the entity simply needs to fix it, document the fix and re-test. A mitigation plan is unnecessary as it would delay repairing the interpersonal communication capability. R2 assumed that the 30 minutes or longer in parenthesis is intended to describe the length of the outage. We think this would be clearer if the requirement were revised to: "Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure of its normal interpersonal communications capabilities lasting longer than 30 minutes." R3 is not necessary as it would be impossible to meet many other requirements if a common language such as English was not used. This requirement results in the waste of compliance resources managing and auditing documentation associated with it.
No
Conforming changes are required to the Measures based on the suggested modifications to the requirements in question 1.
No
Conforming changes are required to the VSLs based on the suggested modifications to the requirements in question 1. In addition, since R2 has a time component in the requirement four VSLs could be written based on the timeliness of the notification.
Yes
For the most part agree with the changes to the requirements and believe it goes a long way towards resolving the issue NERC has created recently with interpreting operating instructions as directives. This makes it clear that only directives that are required for operating emergencies require three way communication. The SDT could further support

resolution to this directive issue by developing a definition for directive. In requirement 1, I would use another word than "require". Consider using "request". An RC, BA, and TOP can't force the recipient of the directive to repeat it back. They can ask or request it be repeated back though.
Yes
For the most part agree with the measures with the exception that a conforming change needs to be made to M1 if the suggestion regarding "require" in Q4 is accepted.
No
If the suggestion regarding "require" in Q4 is accepted, conforming changes to the VSL need to made. Additionally, believe the Moderate and Severe VSLs are confusing based on repeating the language exactly in the requirement. In most cases, repeating the language of the requirement is best but we believe a deviation is warranted here. The intent of Moderate appears to be that the RC, TOP or BA did not acknowledge the repeat of the directive was correct and the repeat was correct. In the Severe, we believe the intent appears to be that the RC, TOP or BA did not acknowledge the repeat of the directive was correct but the repeat was incorrect. We agree that these distinctions make sense but offer the following changes to clarify the intent. Moderate VSL: The responsible entity issued a verbal directive associated with real-time operating emergency conditions and the recipient repeated the intent of the directive correctly, but the responsible entity did not acknowledge the recipient was correct. Severe VSL: The responsible entity issued a verbal directive associated with real-time operating emergency conditions and the recipient repeated the intent of the directive incorrectly, but the responsible entity failed to repeat the intent of the original statement to resolve any misunderstandings.
Yes
No
R5 does not make sense as it doesn't create an adverse reliability impact should the RC fail to notify impacted entities.
No
Measure for R5 would need to be struck should R5 be struck as per question 8.
No
Believe two VSLs are possible for R1 based on whether the RC is acting or directing actions to prevent versus mitigate. Failure to mitigate should be Severe. Failure to prevent should be High because if the RC fails to act or direct action to prevent, the Adverse Reliability Impact may still not happen if system conditions change. For the Moderate VSL of R2, please remove the clause "but not all". It is not necessary.
No
Requirements R2 and R8 need additional work. R2 appropriately requires the RC experiencing the Adverse Reliability Impact to distribute its Operating Procedure, Process or Plan to other RCs required to take action. However, it inappropriately places the burden on the same RC to obtain the agreement of impacted RCs. No RC can be forced to agree. Rather R2 should remove the bullet to require agreement from the impacted RC and a new requirement should be written to require the impacted RC to acknowledge the Operating Procedure, Process or Plan with agreement or disagreement. In the event of disagreement, a reliability or legal reason or failure to implement comparable actions should be given as the reason for not agreeing with the Operating Process, Procedure or Plan. This contributes to reliability by forcing the impacted RC to take action if the action is reasonable. Further, the drafting team needs to clarify that R2 also applies to the mitigation plan in R7. Because R7 requires the RC experiencing the Adverse Reliability Impact to develop the mitigation plan, the mitigation plan may not be agreed to by the impacted RC. The impacted RC may have a perfectly valid reliability, statutory, legal, or regulatory reason for not agreeing to the mitigation plan. R8 still obligates the RC to implement the mitigation plan developed in R7 though it may be contrary to reliability. R8 needs to allow the RC to refuse to implement the mitigation plan if the impacted RC has a reliability, statutory, legal or regulatory reason. Further the drafting team should consider if the impacted RC could refuse because the RC experiencing the Adverse Reliability Impact has not implemented comparable measures in their own area. R8 as written could allow an RC to simply pass cost on to the neighboring RC in the name of reliability. For example, the RC may not want to order a unit to be committed to avoid certain startup costs but they ask the neighboring RC to start up a unit in their footprint.
No
Conforming changes to the Measurements will be required for accepted changes from question 11.
No
Believe that four VSLs could be written for R4 based on the number of conference calls that are participated in. Four VSLs should be written for R5 based on the number of RCs notified. Furthermore, the current Severe VSL is redundant with the Moderate VSL. Failure to notify one RC meets both VSL since Severe uses the word any.
Individual
Troy Willis
Georgia Transmission Corporation
No

Per the NERC Reliability Standards Development Procedure, under the definition of a Reliability Standard; "The obligations or requirements must be material to reliability and measurable." With regards to R3. - It goes without saying that inter-entity BES reliability communications must be in a common language between the entities for understanding operation instructions. From an audit/measurability standpoint, the evidence to the requirement would not converge to a finite amount of material. The amount of evidence required to demonstrate compliance of this requirement would be a huge administrative burden. It seems this concept (for use of the English language) could be captured under the "Entity Tasks and Interrelationships" section of the NERC Reliability Functional Model which defines the set of functions that must be performed to ensure the reliability of the bulk electric system. It also explains the relationship between and among the entities responsible for performing the tasks within each function. Additionally, this concept (for use of the English language) could further be explained under each applicable registration type (BA, GOP, TSP, LSE, PSE, and DP) in the NERC Reliability Functional Model. The Second option for R3 is to remove the Requirement from the continent wide Standards and have the effected entities/regions create a "Regional Standard" where entities involved in inter-entity BES reliability communications have a history of language barrier concerns. As a separate issue to R3, it also seems conflicting that a written requirement would provide the option of "Unless agreed to otherwise". This option described in the language of the requirement implies that it is not a requirement but an option which further supports the suggestions above.
No
See comments to Question 1 in regards to measurability.
No
Again, Requirement 3 seems to be an option.
Yes
Yes
Yes
Yes
Yes
Yes
Yes
N/A
N/A
N/A
Individual
Bob Thomas
Illinois Municipal Electric Agency
No
The IMEA supports comments submitted by the MISO Standards Collaboration Group indicating R3 is not necessary. Similarly, IMEA questions the necessity of R4. Therefore, we question the need to expand the applicability of COM-001 to DP, LSE, and PSE since R3 and R4 are the only two Requirements applicable to those functions.
No
Conforming changes are required to the Measures based on the suggested modifications to the requirements in Question 1.
No
Conforming changes are required to the VSLs based on the suggested modifications to the requirements in Question 1.
No
IMEA questions the necessity of expanding the applicability of COM-002 as proposed in R2, particularly to the DP, LSE, and PSE functions. IMEA recommends accomplishing the intent of COM-002-3 R2 by simply referring to COM-002-3 R1 in IRO-001-2 R2 which requires those entities to comply with the RC directive. Thus it would be understood that the functional entity had repeated the directive in order to comply with it; thereby avoiding the necessity of expanding applicability to another reliability standard.
Conforming changes are required to the Measures based on the suggested modifications to the requirements in

Question 4.
No
Conforming changes are required to the VSLs based on the suggested modifications to the requirements in Question 4.
Yes
No
IMEA supports the comments submitted by the MISO Standards Collaboration Group. In addition, while we agree with the proposed revisions to IRO-001-2 R2, IMEA recommends (as indicated in our comments to Question 4) that a reference be made to COM-002-3 R1 in IRO-001-2 R2. By including this reference, it is understood the applicable entities successfully repeated the directive in order to comply with the directive.
No
IMEA supports the comments submitted by the MISO Standards Collaboration Group.
No
IMEA supports the comments submitted by the MISO Standards Collaboration Group.
In order to minimize the number of reliability standards and the details covered in requirements - particularly those dealing with communications - it is recommended that an up-front provision/requirement be included as part of the compliance registration process that certain functional entities (e.g., DP, LSE, PSE, etc.) shall be responsible for providing the necessary information to transact services and for complying with the directives/requests of certain functional authorities (e.g., BA, PC, RC, etc.) in order to maintain/enhance reliability of the BES.
Individual
Chris Scanlon
Exelon
No
Agree with the revisions with the following exception/recommendation: COM-001: purpose is to address communication facilities / capabilities (technical/hardware). COM-002: purpose is to address effectiveness (protocols). COM-001: R.1-3 address telecommunication facility requirements. R4 requires English use. Recommend the drafting team move COM-001 R4 (use English) to COM-002 where effectiveness of communications (protocols) between entities is addressed.
No
See answer to #1
No
See answer # 1
Group
FirstEnergy
Sam Ciccone
FirstEnergy Corp.
Yes
We agree with many of the changes made to the standard including the change of title to reflect communications (voice and text messages). The parenthesis around 30 minutes or longer should be removed as parenthesis by definition mean a word, phrase, or sentence inserted in a passage to explain or modify the thought. This phrase is more than an explanation of the term failure. It sets forth a time requirement that is an integral part of R1. We suggest rewording the requirement as "Each RC, TOP, and BA shall notify impacted entities within 60 minutes of a failure of its normal

interpersonal communications capabilities that lasts 30 minutes or longer."
Yes
However, it is not clear whether to show compliance the voice recordings and associated transcripts are of the test done or of the conversations across those facilities.
Yes
Yes
1. We agree with the clarification in R1 that a directive per COM-002-3 is a "verbal directive associated with real-time operational emergency conditions". We understand this to be a "Reliability" directive used during times of emergency or in situations where reliability may be an issue. Also, with this clarification, it confirms that the term "directive", as used in this standard, does not include "Operational" directives issued by System Operators during normal system conditions to change the status of an element such as a circuit breaker. 2. The industry does not appear to have a clear, consistent definition of what constitutes a directive. We suggest the standard require the person issuing a directive to use the phrase "I am directing you to ...", "I am ordering you to ..." or something similar to invoke the three part communication requirement. 3. Since this standard deals with communications and coordination during emergency conditions, it may be helpful to change the title of the standard to "Communications and Coordination – Emergency Conditions". 4. The phrase "the intent of the directive" could be difficult to comply with and measure. The words "the intent of" should be removed from Requirements R1 and R2.
Yes
Yes
Yes
If the term "cascading" used in the definition is referring to the NERC-defined term, it should be capitalized.
No
Regarding the retirement of IRO-001-1 R7 – We are not convinced that this requirement is redundant with IRO-014-1 R1. The existing requirement requires the RC to "have clear, comprehensive coordination agreements with adjacent RCs to ensure that SOL or IROL violation mitigation requiring actions in adjacent RC areas are coordinated". IRO-014-1 R1 requires agreements for coordination of actions between RCs to support Interconnection reliability, but it does not specifically require "clear" and "comprehensive" agreements to mitigate SOL or IROL violations. For IRO-001-1 R7 to be properly retired, the "mitigation of SOL and IROL violations" should be explicitly stated in IRO-014-2 R1 as one of the items to be addressed in the RC's Operating Procedure, Process, or Plan.
Yes
Yes
No
See our comments from Questions 8. If IRO-001 R7 is retired and deemed covered by IRO-014 R1, then IRO-014 R1 should include the "mitigation of SOL and IROL violations" as one of the items to be addressed in the RC's Operating Procedure, Process, or Plan.
Yes
Yes
Individual
Roger Champagne
Hydro-Québec TransÉnergie (HQT)
No
Interpersonal communication includes more than voice, such as instant messaging, text messaging and email. This Standard needs a definition of interpersonal communication. Having alternative interpersonal communications should be specified as a requirement since there is actually no requirement to have that alternative way of communication in the first place. Work communication within Québec must be in French according to the law. It is understood and agreed that communication outside Québec with adjacent entities would be, and is in fact already, in English. Accordingly, R3 should be modify as the proposition below: R3. Unless determined by law or otherwise agreed to, ...
No
Comments: See our comment for R3 in Q1. Accordingly, M3 should be modify to read as the proposition below: M3. ... that will be used to determine that personnel used English «or another language determine otherwise» as the language

for all inter-entity Bulk Electric System reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. If a language other than English is used, upon request, evidence shall be provided to explain the use of the alternate language. (R3.) M3 allows a language other than English. Must the agreement for non-English be in place in advance of the call?
No
see M3 comment for question 2
No
Support the intent but not the existing language. Do not support Requirements that include some examples since the examples can be confused with the Requirement. Do not support one written Requirement that has two requirements. Recommend the following Requirements A new R1 - Each Entity shall have Operational Procedure requiring that communications directives be repeated back to the issuer R2 – leave as is A new R3 – If not repeated, then issuer shall request the receiving Entity to repeat the communication directive A new R4 – The issuer will acknowledge the correctness of the repetition of the communications directive
No
Address the new proposed Requirements above in Question 4.
No
address the new proposed Requirements.
No
Remove the word “outages” that appears after “cascading” as per NERC Glossary and FERC Directive issued Dec. 27, 2007.
No
Add “an issued” to the wording as shown following: Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity shall inform its Reliability Coordinator upon recognition of its inability to perform «an issued» directive.
Yes
No
(i) R4: Since failing to issue an alert to 3 entities already attracts a “High” VSL, not doing so for ANY (i.e. failing to issue an alert to all entities) or more than three should attract a “Severe” VSL. We suggest to change the High VSL to: “...failed to issue an alert to three, but not all, impacted....” and the Severe VSL to: “...failed to issue an alert to any or more than three impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. Some examples may help to make our intent clearer: If there were 3 BAs, TOPs etc. and none were alerted, this would be a “Severe” violation. If there were 6 BAs, TOPs etc. and 3 were not alerted, this would be a “High” violation. In this last case, if 4 BAs, TOPs etc. were not alerted, this would be a “Severe” violation. (ii) R5: Similar changes as in R4 should also apply to High and Severe in R5.
No
The intents of Requirements R7 and R8 are addressed in R6, and do not add anything. Suggest removing R7 and R8.
No
The intents of Measures M7 and M8 are addressed in M6, and do not add anything. Suggest removing M7 and M8.
No
(i) Arguably, all four VSLs could be developed as opposed to just having the Moderate and Severe, if the VSLs are graded according to the number of impacted RCs that need to be notified. For example, Low for missing one, Moderate for missing two, High for missing three, Severe for missing four or more. (ii) We do not have any issue with the binary nature of the VSLs for R6, R7 and R8, but they may need to be revised (wording change and/or removal) depending on the SDT’s response to our comments under Q11.
Individual
Scott Berry
Indiana Municipal Power Agency
No
The requirements do not consider a pre-recorded communication that might be sent out from the Transmission Operator to Generator Operators or any other entity. If this communication is a directive associated with a real-time operational emergency condition (depending on the judgement used by an entity or auditor), it does not make sense to repeat back a pre-recorded message on the phone. It might be good to clearly state in the standard that pre-recorded messages do not need to be repeated back.

Individual
Greg Rowland
Duke Energy
No
R1 requires an entity to “develop a mitigation plan” if a test of alternative communications capabilities is unsuccessful. We believe that this phrase should be changed to “take action”, reflecting that an entity’s response to an unsuccessful test may be to simply call or email a repair order. The phrase “develop a mitigation plan” implies that an entity must establish a backup to the alternative communications capabilities rather than just restore the alternative communications capabilities.
No
Replace the phrase “develop a mitigation plan” with the phrase “take action” per our comment on Requirement R1 above. Also, the DP and GOP should be deleted from the Data Retention section requirements for R1/M1 and R2/M2. Need to add a Data Retention requirement for R4/M4 for the DP and GOP.
No
Replace the phrase “develop a mitigation plan” with the phrase “take action to restore the capabilities” per our comment on Requirement R1 above.
No
We agree with adding the clarification that these requirements refer to “emergency” communications, but we think the word “Emergency” should be capitalized to further clarify that it is a defined term in the NERC Glossary. Also, the phrase “require the recipient of the verbal directive to repeat the intent of the directive back” should be changed to “have the recipient of the verbal directive repeat the intent of the directive back”. This avoids making the issuer of the directive make a statement requiring a repeat back unless the recipient actually fails to repeat back as normally expected.
No
Change “emergency” to “Emergency” per comment on R1 above. Also change the phrase “required the recipient of the verbal directive to repeat” to “had the recipient of the verbal directive repeat” per our comment on R1 above.
No
Change “emergency” to “Emergency” in the VSLs per our comment on R1 above. Also, we don’t see a tangible difference between the Moderate and Severe VSLs, and the High VSL should really be the Severe VSL. We suggest having just a High and a Severe VSL as follows: • High VSL: “The responsible entity issued a verbal directive associated with real-time operating Emergency conditions and had the recipient repeat back the intent of the directive, but did not either acknowledge the recipient was correct in the repeated directive or failed to repeat the intent of the original statement to resolve any misunderstandings.” • Severe VSL: “The responsible entity issued a verbal directive associated with real-time operating Emergency conditions, but did not have the recipient repeat back the intent of the directive.”
Yes
Yes
Yes
Yes
No
• R1 introduces the concept of “impacted Reliability Coordinators” which is unclear. Revise R1 as follows: R1. For conditions or activities that may impact other Reliability Coordinator Areas, each Reliability Coordinator shall have Operating Procedures, Processes, or Plans for notification, exchange of information or coordination of actions with

those impacted Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following: • R2 Time Horizon should not include Long-term Planning. • R3 is unclear. Revise R3 as follows: R3. For conditions or activities that may impact other Reliability Coordinator Areas, each Reliability Coordinator shall make notifications and exchange reliability-related information with those impacted Reliability Coordinators using its predefined Operating Procedures, Processes, or Plans, or other available means to accomplish the notifications and exchange of reliability-related information. • R4 could be interpreted to require a weekly conference call even if there is no need for a call. Revise R4 as follows: R4. When there are conditions or activities that may impact other Reliability Coordinator areas, each Reliability coordinator shall participate in agreed upon conference calls, at least weekly, and other communication forums with those impacted Reliability Coordinators. • R5 – Insert the word “all” before impacted Reliability Coordinators for clarity. • R6, R7 and R8 are interrelated and unclear. Combine these three requirements into one clear requirement as follows: R6. When the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators, the Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan and each impacted Reliability Coordinator shall implement the plan.
No
Need to revise the Measures to coincide with the recommended changes to the requirements in #11 above. Also under Data Retention, 12 months of evidence is needed for R3, R4 and M3, M4. However 3 years plus the current year is required for R5 through R8 and M5 through M8. We see no reason the data requirements to be different and believe 12 months is the proper amount of data retention.
No
Need to revise the VSLs to coincide with recommended changes to the requirements in #11 above.
Individual
Jianmei Chai
Consumers Energy Company
No
COM-002 R2 specifies the Generator Operator that receives a directive from the Transmission Operator, Reliability Coordinator or Balancing Authority must repeat the intent of the directive back to the Transmission Operator. COM-002 M2 specifies that evidence must be retained in the form of either voice recordings or transcripts by the generator operator. Since the Transmission Operator, Reliability Coordinator and Balancing Authority already have voice recording capability (centrally located), it is not necessary for the Generator to also install voice recording capability at each generating station. We suggest the wording of COM-002 be changed such that only the Transmission Operator, Reliability Coordinator and Balancing Authority be required to keep voice recordings or transcripts.
Group
IRC Standards Review Committee
Ben Li
IESO
No
(1) We do not believe a mitigation plan is necessary in R1. If the interpersonal communication capability fails during the quarterly test, the entity simply needs to fix it, document the fix and re-test. A mitigation plan is unnecessary and will only delay repairing the interpersonal communication capability as it would have to be completed first before fixing the system. If repairing the system would be a lengthy process, then a mitigation plan may be developed to document that the entity is in process to fix the system. There is no associated requirement to have an alternate interpersonal communication capability along with R1 to test it. Thus, if a responsible entity did not have an alternate interpersonal communication capability, R1, in essence, does not apply. We suggest adding a requirement to have an alternate

interpersonal communication capability to address this gap. Alternatively, the requirement to have an alternate interpersonal communication capability along with requirements to test and fix it could be stipulated in the Organization Certification Requirements. (2) In R2, we assume that the 30 minutes or longer in parenthesis is intended to describe the length of the outage. We think this would be clearer if the requirement were revised to: "Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure of its normal interpersonal communications capabilities lasting longer than 30 minutes." (3) R3 is not necessary. This requirement results in the waste of compliance resources managing and auditing documentation associated with it with no measurable improvement to reliability.
No
Conforming changes are required to the Measures based on the suggested modifications to the requirements in question 1.
No
(1) Conforming changes are required to the VSLs based on the suggested modifications to the requirements in question 1. (2) FERC expressed its desire in the June 2008 order on VSLs to have as many VSLs as possible. We suggest since R2 also has a time component in the requirement four VSLs could be written based on the timeliness of the notification as well as the number of impacted entities that were not notified. The VSLs should reflect both components.
Yes
(1) We largely agree with the changes to the requirements and believe it goes a long way towards resolving the issue NERC has created recently with interpreting operating instructions as Reliability Directives. This makes it clear that only Reliability Directives that are required for operating emergencies require three way communication. We believe that the SDT could further support resolution to this Reliability Directive issue by developing a definition for Reliability Directive. We propose the following definition: Reliability Directive – A verbal communication by a Reliability Coordinator, Transmission Operator, or Balancing Authority that requires action by the recipient to prevent or mitigate an Adverse Reliability Impact. Please note that AESO already has this term defined. The above suggested definition may be different from the AESO's definition. (2) In requirement 1, we do believe that another word than "require" should be used. Consider using "request". An RC, BA, and TOP can't force the recipient of the Reliability Directive to repeat it back. They can ask or request it be repeated back though.
Yes
We largely agree with the measures with the exception that a conforming change needs to be made to M1 if the suggestion regarding "require" in Q4 is accepted.
No
If the suggestion regarding "require" in Q4 is accepted, conforming changes to the VSL need to made. Additionally, we believe the Moderate and Severe VSLs are confusing based on repeating the language exactly in the requirement. In most cases, repeating the language of the requirement is best but we believe a deviation is warranted here. The intent of Moderate appears to be that the RC, TOP or BA did not acknowledge the repeat of the Reliability Directive was correct and the repeat was correct. In the Severe, we believe the intent appears to be that the RC, TOP or BA did not acknowledge the repeat of the Reliability Directive was correct but the repeat was incorrect. We agree that these distinctions make sense but offer the following changes to clarify the intent. Moderate VSL: The responsible entity issued a verbal Reliability Directive associated with real-time operating emergency conditions and the recipient repeated the intent of the Reliability Directive correctly, but the responsible entity did not acknowledge the recipient was correct. Severe VSL: The responsible entity issued a verbal Reliability Directive associated with real-time operating emergency conditions and the recipient repeated the intent of the Reliability Directive incorrectly, but the responsible entity failed to repeat the intent of the original statement to resolve any misunderstandings.
Yes
The drafting team should consider that NERC is moving away from using the term "cascading outages". FERC has directed NERC to rescind this definition, and use the defined term "cascading" instead.
Yes
No
(1) R2 appropriately requires the RC experiencing the Adverse Reliability Impact to distribute its Operating Procedure, Process or Plan to other RCs required to take action. However, placing the burden on the same RC to obtain the agreement of impacted RCs may not be appropriate since the RC experiencing the Adverse Reliability Impact may not be able to force impacted RC to concur. We suggest the SDT to consider: a. Remove the bullet to require agreement from the impacted RC; b. Add a new requirement that the impacted RC shall acknowledge the Operating Procedure, Process or Plan with agreement or disagreement. In the event of disagreement, a reliability or legal reason or failure to implement comparable actions should be given. (2) We realize that R7 implies that the RC experiencing the Adverse Reliability Impact has come up with an alternative plan when its initial plan was not agreed to, but the alternative may still be disagreed by the impacted RC. Simply implementing the alternative plan, as stipulated in R8, could expose the

impacted RC to operate in an unreliable or unsafe domain. We therefore request the SDT to assess if any requirements need to be introduced to resolve this difference with due regard to reliability concerns in both RC areas when agreement cannot be reached even on the alternative plan.
No
Conforming changes to the Measurements will be required if changes as suggested in Question 11 are introduced.
No
(1) In the Commission's June 2008 order on VSLs, they expressed their preference for having as many VSLs as possible. We believe that four VSLs could be written for R4 based on the number of conference calls that are participated in. We also believe this would be consistent with the Commission's guideline 4 because the requirement is written in the plural, that is conference calls, so all conference calls must be considered in aggregate. Thus, failure to participate in more than one conference call does not represent distinct violations but a single violation. (2) Four VSLs should be written for R5 based on the number of RCs notified. Furthermore, the current Severe VSL is redundant with the Moderate VSL. Failure to notify one RC meets both VSL since Severe uses the word any. Note: CAISO abstains from these comments.
AESO abstains from commenting on VSLs. VSLs for Alberta will be developed by provincial authorities.
Individual
Michael R. Lombardi
Northeast Utilities
No
It is understood that the use of the term "interpersonal communications" and "interpersonal communications capabilities" were selected by the RC SDT to better reflect the intent of the Standard. However, NU reviewers are concerned over the new terminology and believe that it is unclear and not universally accepted to mean the same thing to all parties. NU's belief is that the original use of the terms "telecommunications" and "telecommunications facilities" are clearer and universally understood. NU recommends that the original terms be re-instated or the term "interpersonal communications" be replaced to reflect the intent of the Standard is to ensure "voice and text equipment" is adequate for communicating real-time operating information. R1 – the requirement has evolved to test alternative equipment, versus a requirement to have primary and alternative equipment. Standard should require entities to have the equipment such as in the -1 version. R2 is to notify impacted entities in the event of a loss of normal communications. With backup communications operating correctly do we assume there is no impact and therefore notification is not required? This is unclear from a compliance perspective and unnecessary if backup communications are available. Alternative communications often go several layers deep including cell phones, satellite phones, radio, etc.
Yes
Yes
Yes
No
NU agrees with expanding the applicability of the Standard beyond the Reliability Coordinators, Balancing Authorities and Transmission Operators to ensure that the recipient of a verbal directive repeats back the directive to the issuer (R2). Despite NU's agreement with R2, NU believes that M2 is duplicative to the intent of M1 and unnecessarily requires the installation of voice recording capabilities at the entities other than a RC, BA or TOP. It is our belief that the voice recordings of the RC, BA and TOP (M1) provide the evidentiary support required by all applicable entities.
Yes
No
Remove the word "outages" that appears after "cascading" as per NERC Glossary and FERC Directive issued Dec. 27, 2007.
No
The intent of R3 is not clear - i.e., "... shall inform its Reliability Coordinator upon recognition of its inability to perform a directive". Does this requirement pre-suppose a directive has been given? Suggest adding clarifying language that indicates that the requirement is applicable subsequent to a directive being received. It is our belief that the wording of Measure M3 supports the suggested changes to R3.
Yes
No
(i) R4: Since failing to issue an alert to 3 entities already attracts a "High" VSL, not doing so for ANY (i.e. failing to issue an alert to all entities) or more than three should attract a "Severe" VSL. We suggest to change the High VSL to:

"...failed to issue an alert to three, but not all, impacted..." and the Severe VSL to: "...failed to issue an alert to any or more than three impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. Some examples may help to make our intent clearer: If there were 3 BAs, TOPs etc. and none were alerted, this would be a "Severe" violation. If there were 6 BAs, TOPs etc. and 3 were not alerted, this would be a "High" violation. In this last case, if 4 BAs, TOPs etc. were not alerted, this would be a "Severe" violation. (ii) R5: Similar changes as in R4 should also apply to High and Severe in R5.
No
The intents of Requirements R7 and R8 are addressed in R6, and do not add anything. Suggest removing R7 and R8.
No
The intents of Measures M7 and M8 are addressed in M6, and do not add anything. Suggest removing M7 and M8.
No
(i) Arguably, all four VSLs could be developed as opposed to just having the Moderate and Severe, if the VSLs are graded according to the number of impacted RCs that need to be notified. For example, Low for missing one, Moderate for missing two, High for missing three, Severe for missing four or more. (ii) We do not have any issue with the binary nature of the VSLs for R6, R7 and R8, but they may need to be revised (wording change and/or removal) depending on the SDT's response to our comments under Q11.
Northeast Utilities appreciates the work of the Drafting Team. No additional comments.
Individual
Dan Rochester
Independent Electricity System Operator
No
We suggest the SDT review the applicability to Transmission Service Providers, Load-Serving Entities and Purchasing Entities from a real time operating perspective. We do not believe they are active participants in real time operation for which they require to have the same communication capability as the RCs, TOPs, BAs and DPs. Interpersonal communication includes more than voice, such as instant messaging, text messaging and email. This Standard needs a definition of interpersonal communication. Having alternative interpersonal communications should also be specified as a requirement. Work communication within Québec must be in French according to the law. It is understood and agreed that communication outside Québec with adjacent entities would be, and already is, in English. Accordingly, R3 should be modified as proposed below: R3. Unless dictated by law or otherwise agreed to, ... R4: We believe "Interconnection" should be replaced by "interconnection" since the former is not a defined term.
No
M3 and M4 may need to be revised depending on the response to our comments under Q1, above.
No
The VSLs for R3 may have to be changed based on the outcome of our comments in Q2 regarding the language of communication.
No
(i) We suggest the word "emergency" be capitalized since it is a defined term which generally covers the conditions under which directives are issued. (ii) We further suggest that to avoid confusion between operating instructions and directives, the term directive should be defined as suggested below: Directive or Reliability Directive – A verbal communication by a Reliability Coordinator, Transmission Operator, or Balancing Authority that requires complying action by the recipient to prevent or mitigate an Adverse Reliability Impact. (iii) Since R1 contains two requirements, there may be some benefit in separating these since that would make the VSLs clearer, i.e. separate the requirements placed on the issuer of the directive to (a) request the recipient to repeat the intent of the directive and (b) to acknowledge the response of the recipient as correct.
No
Comments: Some changes may be necessary based on the SDT's response to our suggestion in Q4.
No
The sequence of communication required under R1 is intended to ensure that directives from the issuing entities are clearly understood. The earlier this sequence is broken, the greater the uncertainty that this goal is achieved and the greater should be the severity level. Thus, failure to request that the recipient entity repeat the intent of the directive – the earliest step in the sequence - should attract the "Severe" VSL. Also, failing to repeat the original directive when there is any misunderstanding, again, in our view, leaves the intent of the directive equally unclear and should also attract a "Severe" VSL. Failing to acknowledge the recipient was correct in the repeating the intent of the directive – the last step in the sequence – is already assigned a "Moderate" VSL and this should not be repeated in the "Severe" VSL. We therefore suggest that the two conditions under "High" and "Severe" in R1 be combined as one under "Severe" as follows: The responsible entity issued a verbal directive associated with real-time operating emergency conditions but did not require the recipient to repeat the intent of the directive; OR The responsible entity issued a verbal directive associated with real-time operating emergency conditions and required the recipient to repeat the intent of the directive, but failed to repeat the intent of the original statement to resolve any misunderstandings.
No

Comments: Remove the word "outages" that appears after "cascading" as per NERC Glossary and FERC Directive issued Dec. 27, 2007.
No
Comments: Change "...inability to perform a directive." to "...inability to perform an issued directive."
Yes
No
(i) R1: For clarity, we suggest changing "it" to "that". R4: Since failing to issue an alert to 3 entities already attracts a "High" VSL, not doing so for ANY (i.e. failing to issue an alert to all entities) or more than three should attract a "Severe" VSL. We suggest to change the High VSL to: "...failed to issue an alert to three, but not all, impacted...." and the Severe VSL to: "...failed to issue an alert to any or more than three impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. Some examples may help to make our intent clearer: If there were 3 BAs, TOPs etc. and none were alerted, this would be a "Severe" violation. If there were 6 BAs, TOPs etc. and 3 were not alerted, this would be a "High" violation. In this last case, if 4 BAs, TOPs etc. were not alerted, this would be a "Severe" violation. (ii) R5: Similar changes as in R4 should also apply to High and Severe in R5.
No
(i) Definition of Adverse Reliability Impact is duplicated as it is already defined in IRO-001-2. (ii) We do not see the need for R7 and R8 since R6 already stipulates the necessary actions to be taken, it is not necessary for the Reliability Coordinator with the identified Adverse Reliability Impact to develop (re-develop?) a mitigation plan when the impacted Reliability Coordinators did not agree that the problem exists. What may be needed is the insertion of "shall develop a mitigation plan" before "notify impacted Reliability Coordinators" in R5. We suggest removing these requirements (R7 and R8).
No
Depending on the response of the SDT, changes to M5 to M8 may be required.
No
(i) Arguably, all four VSLs could be developed as opposed to just having the Moderate and Severe if the VSLs are graded according to then number of impacted RCs that need to be notified. For example, Low for missing one, Moderate for missing two, High for missing three, Severe for missing four or more. (ii) We do not have any issue with the binary nature of the VSLs for R6, R7 and R8, but they may need to be revised (wording change and/or removal) depending on the SDT's response to our comments under Q11.
In our comments on the previous posting, we expressed a disagreement with a proposed to remove IRO-005, in particular the latter part of R13, which stipulated that: In instances where there is a difference in derived limits, the Reliability Coordinator and its Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities shall always operate the Bulk Electric System to the most limiting parameter. Our rationale was that The FAC standards cover the methodology used in calculating SOLs and IROLs. Regardless of how these limits are calculated, in practice there always exists the possibility that different entities may come up with SOLs/IROLs, especially of the inter-ties, that could be different. Operating to the lowest SOLs/IROLs when more than one set exists is a necessary requirement for reliable operation. The SDT responded by suggesting that this requirement is redundant with FAC-014 which -014 states the requirement for developing and sharing SOL and IROL between the RC, PA, TP and TOP in both the planning and operating time frames. However, this response fails to address the situation where during operation, the situation of disagreeing SOLs or IROLs does arise. FAC-014 or any other standards do not currently have a requirement to ensure that all entities operate to the lower limit before the difference is resolved. This leaves room for unreliable operation. We suggest the SDT to consider restating this requirement somewhere. Note that this requirement is similar to R6 of IRO-014 that when in doubt, the more conservative approach should be taken. If it is necessary to have an R6 to deal with an uncertain identification/notification of an Adverse Reliability Impact, we don't see why it is not necessary to operate to a lower SOL or IROL when there is an unresolved difference.
Individual
Jason Shaver
American Transmission Company
No
We believe that the team needs to define the term "interpersonal communications capabilities". It's our understanding that the term refers to how entities will communicate (i.e. phone, cell phone, video conferencing, email or satellite phone) with each other, but that is not being clearly communicated by the requirement. A clear definition of the term "interpersonal communication capabilities" will likely provide needed clarity to the requirement. Requirement 1 seems to imply that an entity will be judge based on a single test of its alternative communication system within any given quarter, and if that test fails they must develop a mitigation plan. Our concern is that the requirement should allow for multiple testing and only if all or a reoccurring issue is found should you document and fix the issue. (Example: An entity performs weekly tests of its alternative communication system. One of the test's fails. All other tests, following the failed test, are successful. Would the entity have to develop a mitigation plan based on the one failure, or are the other successful tests sufficient to show compliance?) In R2, we assume that the 30 minutes or longer in parenthesis is

intended to describe the length of the outage. To clarify, we suggest that the language be changed to: "Each RC, TOP and BA shall notify impacted entities within 60 minutes of the detection of a failure of its normal interpersonal communication systems lasting longer than 30 minutes."
No
See our comment to question 1
No
are supportive of the language regarding "directives" which clarifies that directives are those which involve operating emergencies. However, in R1, we believe that the word "requires" should be changed to "request". An entity can request that another entity repeat back a directive but we cannot "require" it.
No
See our comments to question 4
Yes
Yes
Yes
Group
Midwest ISO Standards Collaborators
Jason L. Marshall
Midwest ISO
No
We do not believe a mitigation plan is necessary in R1. If the interpersonal communication capability fails during the quarterly test, the entity simply needs to fix it, document the fix and re-test. A mitigation plan is unnecessary and will only delay repairing the interpersonal communication capability as it would have to be completed first before fixing the system. In R2, we assume that the 30 minutes or longer in parenthesis is intended to describe the length of the outage. We think this would be clearer if the requirement were revised to: "Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure of its normal interpersonal communications capabilities lasting longer than 30 minutes." R3 is not necessary as it would be impossible to meet many other requirements if a common language such as English was not used. This requirement results in the waste of compliance resources managing and auditing documentation associated with it.
No
Conforming changes are required to the Measures based on the suggested modifications to the requirements in question 1.
No
Conforming changes are required to the VSLs based on the suggested modifications to the requirements in question 1. In addition, we suggest since R2 has a time component in the requirement, four VSLs could be written based on the timeliness of the notification. This would be consistent with the FERC's expressed desire in the June 2008 order on VSLs in which they stated that as many VSLs should be developed as possible.
Yes
We largely agree with the changes to the requirements and believe it goes a long way towards resolving the issue NERC has created recently with interpreting operating instructions as directives. This makes it clear that only directives that are required for operating emergencies require three way communication. We believe that the SDT could further support resolution to this directive issue by developing a definition for directive. We propose the following definition: Directive or Reliability Directive – A verbal communication by a Reliability Coordinator, Transmission Operator, or Balancing Authority that requires action by the recipient to prevent or mitigate an Adverse Reliability Impact. In requirement 1, we do believe that another word than "require" should be used. Consider using "request". An RC, BA, and TOP can't force the recipient of the directive to repeat it back. They can ask or request it be repeated back though.
Yes
We largely agree with the measures with the exception that a conforming change needs to be made to M1 if the

suggestion regarding "require" in Q4 is accepted.
No
If the suggestion regarding "require" in Q4 is accepted, conforming changes to the VSL need to made. Additionally, we believe the Moderate and Severe VSLs are confusing based on repeating the language exactly in the requirement. In most cases, repeating the language of the requirement is best but we believe a deviation is warranted here. The intent of Moderate appears to be that the RC, TOP or BA did not acknowledge the repeat of the directive was correct and the repeat was correct. In the Severe, we believe the intent appears to be that the RC, TOP or BA did not acknowledge the repeat of the directive was correct but the repeat was incorrect. We agree that these distinctions make sense but offer the following changes to clarify the intent. Moderate VSL: The responsible entity issued a verbal directive associated with real-time operating emergency conditions and the recipient repeated the intent of the directive correctly, but the responsible entity did not acknowledge the recipient was correct. Severe VSL: The responsible entity issued a verbal directive associated with real-time operating emergency conditions and the recipient repeated the intent of the directive incorrectly, but the responsible entity failed to repeat the intent of the original statement to resolve any misunderstandings.
Yes
No
We agree with many of the changes. However, we believe R5 is not necessary for reliability. We agree the RC should notify impacted entities when the transmission problem has been mitigated; however, if the RC fails to notify the impacted entities, it will not result in an Adverse Reliability Impact. Thus, it is not necessary as a sanctionable requirement.
No
Measurement 5 needs to be struck if R5 is struck per question 8.
No
The Commission stated in their order on VSLs in June of 2008 their preference for as many VSLs as possible. We believe two VSLs are possible for R1 based on whether the RC is acting or directing actions to prevent versus mitigate. Failure to mitigate should be Severe. Failure to prevent should be High because if the RC fails to act or direct action to prevent, the Adverse Reliability Impact may still not happen if system conditions change. For the Moderate VSL of R2, please remove the clause "but not all". It is not necessary.
No
Requirements R2 and R8 need additional work. R2 appropriately requires the RC experiencing the Adverse Reliability Impact to distribute its Operating Procedure, Process or Plan to other RCs required to take action. However, it inappropriately places the burden on the same RC to obtain the agreement of impacted RCs. No RC can be forced to agree. Rather R2 should remove the bullet to require agreement from the impacted RC and a new requirement should be written to require the impacted RC to acknowledge the Operating Procedure, Process or Plan with agreement or disagreement. In the event of disagreement, a reliability or legal reason or failure to implement comparable actions should be given as the reason for not agreeing with the Operating Process, Procedure or Plan. This contributes to reliability by forcing the impacted RC to take action if the action is reasonable. Further, the drafting team needs to clarify that R2 also applies to the mitigation plan in R7. Because R7 requires the RC experiencing the Adverse Reliability Impact to develop the mitigation plan, the mitigation plan may not be agreed to by the impacted RC. The impacted RC may have a perfectly valid reliability, statutory, legal, or regulatory reason for not agreeing to the mitigation plan. R8 still obligates the RC to implement the mitigation plan developed in R7 though it may be contrary to reliability. R8 needs to allow the RC to refuse to implement the mitigation plan if the impacted RC has a reliability, statutory, legal or regulatory reason. Further the drafting team should consider if the impacted RC could refuse because the RC experiencing the Adverse Reliability Impact has not implemented comparable measures in their own area. R8 as written could allow an RC to simply pass cost on to the neighboring RC in the name of reliability. For example, the RC may not want to order a unit to be committed to avoid certain startup costs but they ask the neighboring RC to start up a unit in their footprint.
No
Conforming changes to the Measurements will be required for accepted changes from question 11.
No
In the Commission's June 2008 order on VSLs, they expressed their preference for having as many VSLs as possible. We believe that four VSLs could be written for R4 based on the number of conference calls that are participated in. We also believe this would be consistent with the Commission's guideline 4 because the requirement is written in the plural, that is conference calls, so all conference calls must be considered in aggregate. Thus, failure to participate in more than one conference call does not represent distinct violations but a single violation. Four VSLs should be written for R5 based on the number of RCs notified. Furthermore, the current Severe VSL is redundant with the Moderate VSL. Failure to notify one RC meets both VSL since Severe uses the word any.

Consideration of Comments on Reliability Coordination — Project 2006-06

The Reliability Coordination Standard Drafting Team (RC SDT) thanks all commenters who submitted comments proposed revisions to the standards for Project 2006-06: Reliability Coordination. These standards were posted for a 30-day public comment period from July 10, 2009 through August 9, 2009. The stakeholders were asked to provide feedback on the standards through a special Electronic Comment Form. There were 31 sets of comments, including comments from more than 87 different people from over 62 companies representing 8 of the 10 Industry Segments as shown in the table on the following pages.

All comments received have been reformatted so that all comments received in response to the first question appear following the first question, etc. All comments have been posted at the following site:

http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html

Changes to Requirements, Measures and Violation Severity Levels in COM-001-2: Stakeholders suggested that there is a need to define Interpersonal Communications for this standard. The RC SDT is proposing the following definitions:

Interpersonal Communication: Any method that allows two or more individuals to interact, consult, or exchange information.

Alternative Interpersonal Communication: Any method that is able to serve as a substitute for and is redundant to normal Interpersonal Communication and does not utilize the same infrastructure (medium) as normal Interpersonal Communications.

Other stakeholders suggested edits to the requirements. The RC SDT revised the wording of R2 to add clarity and revised R3 to include the phrase “unless dictated by law...” to address legal requirements in some areas.

Several stakeholders suggested removing the mitigation plan from R1 and M1. The RC SDT agreed and made revisions to other measures to reflect changes to the requirements.

Stakeholders suggested adding more VSLs for R2. The RC SDT agreed and drafted additional VSLs reflecting timing and the number of entities notified. Other changes to the VSLs were made based on revisions to the requirements.

Stakeholders suggested removing the Distribution Provider and Generator Operator from the Data Retention section for R1 of COM-001. Since these are not applicable entities in R1, they were removed from Data Retention for the requirement.

The standard and the proposed definitions will be posted for an additional comment period.

Changes to Requirements, Measures and Violation Severity Levels in COM-002-3 Stakeholder consensus has been achieved with respect to the retirement of R1 and M1 from the last approved version of the standard. In response to the majority of the comments, the drafting team has modified and rearranged the order of the remaining requirements, and coined a definition for “Reliability Directive”. The drafting team is also coordinating with the RTO SDT (Project 2007-03) and the OPCP SDT (Project 2007-02) on the definition and usage of the term “Reliability Directive”.

Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.

As a reference, we have included the existing definition of Emergency:

Emergency: Any abnormal system condition that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System.

In accord with the majority of commenters, the drafting team made changes to the Measures to bring them into conformance with the adopted suggestions from question 4 for improving the Requirements.

Changes to Requirements, Measures and Violation Severity Levels in IRO-001-2

Stakeholders generally agreed with the revisions to the requirements. Several stakeholders suggested adding the words “an issued” before “directive” in R3. The RC SDT agreed and made the change. No further revisions were made to the requirements. The proposed revisions to the definition of Adverse Reliability Impacts is being posted for comment.

Stakeholders agreed with the measures for IRO-001-2. The measure M3 was revised to reflect the revision to R3. No other revisions were suggested for the measures.

The VLS for R3 was revised to add the word “issued” before directive to match the revised requirement. Stakeholders suggested minor revisions to the VSLs for R4 and R5. The RC SDT agreed and made the revisions.

The RC SDT believes that stakeholder consensus has been achieved on IRO-001-2. The definition of Adverse Reliability Impacts is included in this posting for comment.

Changes to Requirements, Measures and Violation Severity Levels in IRO-014-2

Stakeholders suggested revising R8 to include provisions for avoiding implementing actions that would violate safety, equipment or regulatory or statutory requirements. The RC SDT agreed and added this to the requirement. Other stakeholders suggested adding “For conditions or activities that impact other Reliability Coordinator Areas,...” at the beginning of R1 and R3. The RC SDT agreed and added this to the requirements. The Time Horizons for R2 were revised as suggested to “Same Day Operations and Operations Planning”. Several stakeholders expressed concerns regarding having R6-R8 as separate requirements. The intent of R6, R7, and R8 is to handle those things that arise that may not have had a plan identified in advance. The RC SDT contends the requirements should be separate requirements as they identify distinctly different actions and are adequate as written.

Stakeholders agreed with the Measures, except to make conforming changes for revisions to the requirements. The RC SDT has revised the measures based on the new requirements. One stakeholder suggested revision to the Data Retention for R5-R8. Data Retention was revised for R5 to 12 months, however the RC SDT believes that three years is the correct period for R6-R8.

Several stakeholders suggested developing four VSLs for R5. Typically, in the course of BES operations, the number of impacted Reliability Coordinators will be a small number. The SDT effort in this regard was to write the VSLs to represent both the large and small

scenarios containing an Adverse Reliability Impact. The essence of the severe VSL is that the RC did not notify any (as in no one) impacted RC's. As such, it should be severe. The essence of the moderate VSL is that the RC notified one other RC, however did not notify the remaining impacted RC's. The SDT felt the VSL's appropriately addressed the large and small scenarios. Other stakeholders suggested four VSLs for R4. The essence of R4 is written to require impacted RC's to talk at least weekly and is singular in nature. VSL's can not be written for conference calls that exceed the singular requirement.

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Gerry Adamski, at 609-452-8060 or at gerry.adamski@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.¹

¹ The appeals process is in the Reliability Standards Development Procedures:
<http://www.nerc.com/standards/newstandardsprocess.html>.

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Consideration of Comments on Project 2006-06 Reliability Coordination

The Industry Segments are:

- 1 — Transmission Owners
- 2 — RTOs, ISOs
- 3 — Load-serving Entities
- 4 — Transmission-dependent Utilities
- 5 — Electric Generators
- 6 — Electricity Brokers, Aggregators, and Marketers
- 7 — Large Electricity End Users
- 8 — Small Electricity End Users
- 9 — Federal, State, Provincial Regulatory or other Government Entities
- 10 — Regional Reliability Organizations, Regional Entities

		Commenter	Organization	Industry Segment									
				1	2	3	4	5	6	7	8	9	10
1.	Group	Russell A. Noble	Northwest LSE Group			X							
Additional Member		Additional Organization		Region Segment Selection									
1. Rick Paschall		Pacific Northwest Generating Cooperative		WECC 3									
2.	Group	Guy Zito	Northeast Power Coordinating Council										X
Additional Member		Additional Organization		Region Segment Selection									
1.	Ralph Rufrano	New York Power Authority	NPCC	5									
2.	Alan Adamson	New York State Reliability Council, LLC	NPCC	10									
3.	Paul Kiernan	New York Independent System Operator	NPCC	2									
4.	Roger Champagne	Hydro-Quebec TransEnergie	NPCC	2									
5.	Kurtis Chong	Independent Electric System Operator	NPCC	2									
6.	Sylvain Clermont	Hydro-Quebec TransEnergie	NPCC	1									
7.	Edward Dahill	National Grid	NPCC	1									
8.	Bohdan M. Dackow	US Power Generating Company (USPG)	NPCC	NA									
9.	Chris de Graffenried	Consolidated Edison Co. of New York	NPCC	1									
10.	Brian D. Evans-Mongeon	Utility Services	NPCC	8									

Consideration of Comments on Project 2006-06 Reliability Coordination

	Commenter	Organization	Industry Segment									
			1	2	3	4	5	6	7	8	9	10
11. Mike Garton	Dominion Resources Services, Inc.	NPCC	5									
12. Brian L. Gooder	Ontario Power Generation Incorporated	NPCC	5									
13. Kathleen Goodman	ISO - New England	NPCC	2									
14. David Kiguel	Hydro One Networks Inc.	NPCC	1									
15. Michael R. Lombardi	Northeast Utilities	NPCC	1									
16. Randy MacDonald	New Brunswick System Operator	NPCC	2									
17. Greg Mason	Dynegy Generation	NPCC	5									
18. Bruce Metruck	New York Power Authority	NPCC	6									
19. Chris Orzel	FPL/NextEra Energy	NPCC	5									
20. Robert Pellegrini	The United Illuminating Company	NPCC	1									
21. Michael Schiavone	National Grid	NPCC	1									
22. Peter Yost	Consolidated Edison Co. of New York, Inc.	NPCC	3									
23. Gerry Dunbar	Northeast Power Coordinating Council	NPCC	10									
24. Lee Pedowicz	Northeast Power Coordinating Council	NPCC	10									
25. Gregory Campoli	New York Independent System Operator	NPCC	2									
3.	Group	Jim Case	SERC OC Standards Review Group	X		X						
Additional Member			Additional Organization	Region	Segment Selection							
1.	Jack Kerr	Dominion Virginia Power	SERC	1, 3								
2.	Steve Fritz	ACES Power Marketing	SERC	6								
3.	Joel Wise	Tennessee Valley Authority	SERC	1, 3, 5, 9								
4.	Hugh Francis	Southern Co.	SERC	1, 3, 5								
5.	Alan Jones	Alcoa Power Generation	SERC	1, 5								
6.	Scott McGough	Oglethorpe Power Corporation	SERC	5								
7.	Keith Steinmetz	E.ON US Services	SERC	1, 3, 5								
8.	Mike Hardy	Southern Co.	SERC	1, 3, 5								
9.	Steve McElhaney	South Mississippi Electric Membership Corp.	SERC	1, 3, 5								
10.	Gary Hutson	South Mississippi Electric Membership Corp.	SERC	1, 3, 5								
11.	John Rembold	Southern Illinois Power Cooperative	SERC	1, 3, 5								

Consideration of Comments on Project 2006-06 Reliability Coordination

	Commenter	Organization	Industry Segment									
			1	2	3	4	5	6	7	8	9	10
12.	Timmy LeJeune	Louisiana Generating, LLC	SERC	1, 3, 5								
13.	Wayne Pourciau	Georgia System Operations Corp.	SERC	3								
14.	Tim Hattaway	PowerSouth Energy Cooperative	SERC	1, 3, 5								
15.	Tony Halcomb	Cogentrix Energy, LLC	SERC	5, 6								
16.	Robert Thomasson	Big Rivers Electric Cooperative	SERC	1, 3, 5								
17.	Wes Davis	SERC Reliability Corp.	SERC	10								
18.	John Troha	SERC Reliability Corp.	SERC	10								
4.	Group	Denise Koehn	Bonneville Power Administration	X		X		X	X			
Additional Member Additional Organization Region Segment Selection												
1.	Steven Davis	Generation Support	WECC	1								
5.	Group	Sam Ciccone	FirstEnergy	X		X	X	X	X			
Additional Member Additional Organization Region Segment Selection												
1.	Dave Folk	FE	RFC									
2.	Doug Hohlbaugh	FE	RFC									
3.	John Martinez	FE	RFC									
4.	Kevin Querry	FE	RFC									
6.	Group	Ben Li	IRC Standards Review Committee		X							
Additional Member Additional Organization Region Segment Selection												
1.	Patrick Brown	PJM	RFC	2								
2.	James Castle	NYISO	NPCC	2								
3.	Anita Lee	AESO	WECC	2								
4.	Bill Phillips	MISO	MRO	2								
5.	Steve Myers	ERCOT	ERCOT	2								
6.	Lourdes Estrada-Saliner	CAISO	WECC	2								
7.	Charles Yeung	SPP	SPP	2								
8.	Matt Goldberg	ISO-NE	NPCC	2								

Consideration of Comments on Project 2006-06 Reliability Coordination

		Commenter	Organization	Industry Segment									
				1	2	3	4	5	6	7	8	9	10
7.	Group	Jason L. Marshall	Midwest ISO Standards Collaborators		X								
Additional Member Additional Organization Region Segment Selection 1. Joe Knight Great River Energy MRO 1 2. Bob Thomas IMEA SERC 4 3. Barb Kedrowski We Energies RFC 3, 4, 5 4. Jim Cyrulewski JDRJC Associates RFC 8													
8.	Individual	Steve Alexanderson	Central Lincoln			X							
9.	Individual	Virginia Cook	JEA	X		X		X					
10.	Individual	Daniel Duff	Liberty Electric Power LLC					X					
11.	Individual	Mike Davis	WECC Reliability Coordinator										X
12.	Individual	Sandra Shaffer	PacifiCorp	X		X		X	X				
13.	Individual	Brent Hebert	Calpine Corporation					X	X				
14.	Individual	Brandy A. Dunn	Western Area Power Administration	X					X				
15.	Individual	Hugh Francis	Southern Company	X		X		X					
16.	Individual	Rao Somayajula	ReliabilityFirst Corporation										X
17.	Individual	James H. Sorrels, Jr.	American Electric Power	X		X		X	X				
18.	Individual	Brent Ingebrigtsen	E.ON U.S.	X		X		X	X				
19.	Individual	Kasia Mihalchuk	Manitoba Hydro	X		X		X	X				
20.	Individual	Troy Willis	Georgia Transmission Corporation	X									

Consideration of Comments on Project 2006-06 Reliability Coordination

		Commenter	Organization	Industry Segment									
				1	2	3	4	5	6	7	8	9	10
21.	Individual	Bob Thomas	Illinois Municipal Electric Agency				X						
22.	Individual	Chris Scanlon	Exelon	X		X		X	X				
23.	Individual	Roger Champagne	Hydro-Québec TransEnergie (HQT)	X									
24.	Individual	Scott Berry	Indiana Municipal Power Agency				X						
25.	Individual	Greg Rowland	Duke Energy	X		X		X	X				
26.	Individual	Jianmei Chai	Consumers Energy Company			X	X	X					
27.	Individual	Michael R. Lombardi	Northeast Utilities	X		X		X					
28.	Individual	Dan Rochester	Independent Electricity System Operator		X								
29.	Group	Carol Gerou	MRO NSRS										
30.	Individual	Alice Murdock	Xcel Energy										
31.	Individual	Jason Shaver	American Transmission Company	X									

1. Do you agree with the revisions made to the Requirements in COM-001-2 as shown in the posted Standard? If not, please explain in the comment area.

Summary Consideration: Most stakeholders agreed with the requirements in COM-001. Stakeholders suggested that there is a need to define Interpersonal Communications for this standard. The RC SDT is proposing the following definitions:

Interpersonal Communication: Any method that allows two or more individuals to interact, consult, or exchange information.

Alternative Interpersonal Communication: Any method that is able to serve as a substitute for and is redundant to normal Interpersonal Communication and does not utilize the same infrastructure (medium) as normal Interpersonal Communications.

Other stakeholders suggested edits to the requirements. The RC SDT revised the wording of R2 to add clarity, revised R3 to include the phrase “unless dictated by law...” to address legal requirements in some areas, and removed references to the mitigation plan in R1.

Organization	Yes or No	Question 1 Comment
Central Lincoln		Comments: The inclusion of load serving entities and distribution providers does not address any present reliability gap. R4 is extremely vague, and is not likely to be interpreted consistently. What form of evidence will be acceptable? Photos of telephones?
Response: The RC SDT thanks you for your comment. The LSE and DP were added as applicable entities to R3 as a result of stakeholder comments during the previous posting. The DP and GOP were added as applicable entities in R4 per FERC Order 693 directives. The Measure M4 for Requirement R4 was revised to: M4. Each Distribution Provider and Generator Operator shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent that it had Interpersonal Communications capabilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information. (R4.)		
JEA		R2 I would suggest that R2 be clarified so that it is understood that the 60 minutes starts at the beginning of the outage (or the end of the 30 minute period, if that was instead the intent) so that there can be no confusion about when the clock starts for notification periods. Otherwise, the wording of these standards is clearer than the current version. R4 I am concerned that with the word "capabilities" that the DP/GO's will be expected by the auditors to demonstrate that its "capability" was working every single second of every day since their last audit, especially since you have not included a data retention period(especially since this is rated a "high" VRF).

Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Yes or No	Question 1 Comment
Response: The RC SDT thanks you for your comment. R2: We have revised the wording to clarify the intent: Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure of its normal Interpersonal Communications capabilities that lasts 30 minutes or longer. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i> R4: The Measure 4 for Requirement R4 was revised to: M4. Each Distribution Provider and Generator Operator shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent that it had Interpersonal Communications capabilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information. (R4.) Data retention for R4, M4 was added to the revised standard.		
Northwest LSE Group	No	The RC STD has done a commendable effort. However, it is questionable how expanding the applicability to include LSEs, DPs, & PSEs that are non-scheduling/tagging entities will increase reliability of the BES. In fact, we believe that increasing the applicability could do just the opposite. Many of these entities that are only registered as a LSE, DP, and/or PSE do not have a 24/7 desk/dispatch facility to receive RC/BA/TOP reliability directives, and are too small (10s of MW) to effectively assist during a reliability crisis. In addition, the Regional Entities (WECC in this case) are overwhelmed as it is, asking them to take on even more audit responsibilities is unrealistic, and not worth the effort. In addition, for the small Registered Entity, what would constitute compliance with R3 & R4 if no TOP/BA real-time directives were received? Everyone employed speaks English and there is at least one phone on the premises? Will the small DP and/or LSE be required to monitor its communication system 24/7 with competent personnel for an unlikely TOP/BA directive?
Response: The RC SDT thanks you for your comment. The LSE, DP and PSE were added as applicable entities to R3 as suggested by other stakeholders in the last posting. The Distribution Provider and Generator Operator are in R4 per FERC Order 693 directives. The measures for the requirements specify what would constitute evidence needed to demonstrate compliance. Note that R3 and R4 are not focused solely on communication related to “directives.” Requirement R3 is focused on all “. . . inter-entity Bulk Electric System (BES) reliability communications . . . “ The drafting team feels that R4 as written allows flexibility to the entities in meeting the performance requirement. Note that R4 only applies to Distribution Providers and Generator Operators, not to LSEs.		
American Transmission Company	No	We believe that the team needs to define the term “interpersonal communications capabilities”. It’s our understanding that the term refers to how entities will communicate (i.e. phone, cell phone, video conferencing, email or satellite phone) with each other, but that is not being clearly communicated by the requirement. A clear definition of the term “interpersonal communication capabilities” will likely provide needed clarity to the requirement.

Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Yes or No	Question 1 Comment
		Requirement 1 seems to imply that an entity will be judge based on a single test of its alternative communication system within any given quarter, and if that test fails they must develop a mitigation plan. Our concern is that the requirement should allow for multiple testing and only if all or a reoccurring issue is found should you document and fix the issue. (Example: An entity performs weekly tests of its alternative communication system. One of the test's fails. All other tests, following the failed test, are successful. Would the entity have to develop a mitigation plan based on the one failure, or are the other successful tests sufficient to show compliance?) In R2, we assume that the 30 minutes or longer in parenthesis is intended to describe the length of the outage. To clarify, we suggest that the language be changed to: Each RC, TOP and BA shall notify impacted entities within 60 minutes of the detection of a failure of its normal interpersonal communication systems lasting longer than 30 minutes.
Response: The RC SDT thanks you for your comment. Several stakeholders have expressed a concern with the definition of interpersonal communications capabilities. The RC SDT concurs and has drafted a definition that will be posted for comment. R1: Other stakeholders also expressed concern with developing a mitigation plan in this requirement. The RC SDT has revised the requirement to: R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, its Alternative Interpersonal Communications capability used for communicating real-time operating information. If the test is unsuccessful, the entity shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communications capability. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i> The RC SDT feels that this will address your comment. R2: We concur and have revised the requirement as you suggest.		
Northeast Power Coordinating Council	No	Interpersonal communication includes more than voice, such as instant messaging, text messaging and email. This Standard needs a definition of interpersonal communication. Having alternative interpersonal communications should be specified as a requirement. Work communication within Québec must be in French according to the law. It is understood and agreed that communication outside Québec with adjacent entities would be, and in fact is already, in English. Accordingly, R3 should be modified as the proposition below: R3. Unless dictated by law or otherwise agreed to,
Response: The RC SDT thanks you for your comment. The RC SDT agrees that there is a need for a definition of Interpersonal Communications Capability. We have developed a draft definition that will be posted for comment which meets the FERC Order 693 directive to: Includes adequate flexibility for compliance with the reliability standard, adoption of new technologies and cost-effective solutions. The RC SDT agrees with your comment regarding the alternate interpersonal communications capability and has revised the requirement to read: R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, its Alternative Interpersonal		

Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Yes or No	Question 1 Comment
Communications capability used for communicating real-time operating information. If the test is unsuccessful, the entity shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communications capability. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i> We concur with your suggestion regarding R3 and have made the suggested revision.		
SERC OC Standards Review Group	No	The STD should clarify what types of communications are considered in the standard is it voice or data communications or both?
Response: The RC SDT thanks you for your comment. Interpersonal communication does not include data (see IRO-010-1) and includes more than voice, such as instant messaging, text messaging and email. The RC SDT has developed a draft definition of interpersonal communications capabilities that will be posted for comment which meets the FERC Order 693 directive to: Includes adequate flexibility for compliance with the reliability standard, adoption of new technologies and cost-effective solutions.		
IRC Standards Review Committee	No	(1) We do not believe a mitigation plan is necessary in R1. If the interpersonal communication capability fails during the quarterly test, the entity simply needs to fix it, document the fix and re-test. A mitigation plan is unnecessary and will only delay repairing the interpersonal communication capability as it would have to be completed first before fixing the system. If repairing the system would be a lengthy process, then a mitigation plan may be developed to document that the entity is in process to fix the system. There is no associated requirement to have an alternate interpersonal communication capability along with R1 to test it. Thus, if a responsible entity did not have an alternate interpersonal communication capability, R1, in essence, does not apply. We suggest adding a requirement to have an alternate interpersonal communication capability to address this gap. Alternatively, the requirement to have an alternate interpersonal communication capability along with requirements to test and fix it could be stipulated in the Organization Certification Requirements. (2) In R2, we assume that the 30 minutes or longer in parenthesis is intended to describe the length of the outage. We think this would be clearer if the requirement were revised to: "Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure of its normal interpersonal communications capabilities lasting longer than 30 minutes." (3) R3 is not necessary. This requirement results in the waste of compliance resources managing and auditing documentation associated with it with no measurable improvement to reliability.
Response: The RC SDT thanks you for your comment. 1) The RC SDT agrees with your comment regarding the mitigation plan and the requirement for alternate interpersonal communications capability and has revised the requirement to read: R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, its Alternative Interpersonal Communications capability used for communicating real-time operating information. If the test is unsuccessful, the entity shall take action within 60 minutes to		

Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Yes or No	Question 1 Comment
restore the identified alternative or identify a substitute Alternative Interpersonal Communications capability. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i> 2) We concur with your comment and have revised the requirement accordingly. 3) The RC SDT does not agree with your assertion regarding R3. There is a reliability need to speak a common language, especially in issuing and receiving directives. There are several areas of the continent where this could be a reliability gap if there is no requirement.		
Midwest ISO Standards Collaborators	No	We do not believe a mitigation plan is necessary in R1. If the interpersonal communication capability fails during the quarterly test, the entity simply needs to fix it, document the fix and re-test. A mitigation plan is unnecessary and will only delay repairing the interpersonal communication capability as it would have to be completed first before fixing the system. In R2, we assume that the 30 minutes or longer in parenthesis is intended to describe the length of the outage. We think this would be clearer if the requirement were revised to: "Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure of its normal interpersonal communications capabilities lasting longer than 30 minutes." R3 is not necessary as it would be impossible to meet many other requirements if a common language such as English was not used. This requirement results in the waste of compliance resources managing and auditing documentation associated with it.
Response: The RC SDT thanks you for your comment. 1) The RC SDT agrees with your comment regarding the mitigation plan and the requirement for alternate interpersonal communications capability and has revised the requirement to read: R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, its Alternative Interpersonal Communications capability used for communicating real-time operating information. If the test is unsuccessful, the entity shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communications capability. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i> 2) We concur with your comment and have revised the requirement accordingly. 3) The RC SDT does not agree with your assertion regarding R3. There is a reliability need to speak a common language, especially in issuing and receiving directives. There are several areas of the continent where this could be a reliability gap if there is no requirement.		
ReliabilityFirst Corporation	No	FERC 693 excludes distribution providers if they are not a user, owner or operator of BES. This should be reflected in R4 of the standard
Response: The RC SDT thanks you for your comment. FERC Order 693 endorses the NERC Statement of Compliance Registry criteria (paragraph 512) and also adopted the proposal to require the ERO to modify COM-001 to apply to distribution providers and generator operators (paragraph 493).		

Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Yes or No	Question 1 Comment
E.ON U.S.	No	E.ON U.S. suggests deleting “interpersonal” from the term “interpersonal communications capabilities”. The need for and meaning of the term “interpersonal” isn’t clear. Does it infer communications must be to/from a specific individual rather than to/from another reliability entity? Verbal vs electronic communications? All non-data communications? E.ON U.S. believes that the term “interpersonal” must be clarified if it is to remain in the standard. In the proposed R1 “how extensive must the quarterly testing be “ establish contact or verify all functions? Does the term “alternative” include the “normal” communication medium or only the “backup” mediums? Does the alternative imply ALL possible communication alternatives? E.ON U.S. suggests replacing the term “alternative” with “planned backup” or similar. Quarterly testing needs to be limited to only established/planned backup communication methods not any potential “alternative” communication method.
Response: The RC SDT thanks you for your comment. The RC SDT agrees with several stakeholders that there is a need for a definition of Interpersonal Communications Capability. We have developed a draft definition that will be posted for comment which meets the FERC Order 693 directive to: Includes adequate flexibility for compliance with the reliability standard, adoption of new technologies and cost-effective solutions. The testing requirement is to ensure that the alternative (not “normal”) interpersonal communications capability works as a minimum. Entities may go above and beyond the requirement if they desire. The requirement was edited to identify the alternative and test it. R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, its alternative Interpersonal Communication capability used for communicating real-time operating information. If the test is unsuccessful, the entity shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communications capability. <i>[Violation Risk Factor: Lower][Time Horizon: Real-time Operations]</i>		
Manitoba Hydro	No	do not believe a mitigation plan is necessary in R1. If the interpersonal communication capability fails during the quarterly test, the entity simply needs to fix it, document the fix and re-test. A mitigation plan is unnecessary as it would delay repairing the interpersonal communication capability. R2 assumed that the 30 minutes or longer in parenthesis is intended to describe the length of the outage. We think this would be clearer if the requirement were revised to: Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure of its normal interpersonal communications capabilities lasting longer than 30 minutes? R3 is not necessary as it would be impossible to meet many other requirements if a common language such as English was not used. This requirement results in the waste of compliance resources managing and auditing documentation associated with it.
Response: The RC SDT thanks you for your comment. 1) The RC SDT agrees with your comment regarding the mitigation plan and the requirement		

Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Yes or No	Question 1 Comment
for alternate interpersonal communications capability and has revised the requirement to read: R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, its Alternative Interpersonal Communications capability used for communicating real-time operating information. If the test is unsuccessful, the entity shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communications capability. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i> 2) We concur with your comment and have revised the requirement accordingly. 3) The RC SDT does not agree with your assertion regarding R3. There is a reliability need to speak a common language, especially in issuing and receiving directives. There are several areas of the continent where this could be a reliability gap if there is no requirement.		
Georgia Transmission Corporation	No	Per the NERC Reliability Standards Development Procedure, under the definition of a Reliability Standard? The obligations or requirements must be material to reliability and measurable? With regards to R3. - It goes without saying that inter-entity BES reliability communications must be in a common language between the entities for understanding operation instructions. From an audit/measurability standpoint, the evidence to the requirement would not converge to a finite amount of material. The amount of evidence required to demonstrate compliance of this requirement would be a huge administrative burden. It seems this concept (for use of the English language) could be captured under the "Entity Tasks and Interrelationships" section of the NERC Reliability Functional Model which defines the set of functions that must be performed to ensure the reliability of the bulk electric system. It also explains the relationship between and among the entities responsible for performing the tasks within each function. Additionally, this concept (for use of the English language) could further be explained under each applicable registration type (BA, GOP, TSP, LSE, PSE, and DP) in the NERC Reliability Functional Model. The Second option for R3 is to remove the Requirement from the continent wide Standards and have the effected entities/regions create a "Regional Standard" where entities involved in inter-entity BES reliability communications have a history of language barrier concerns. As a separate issue to R3, it also seems conflicting that a written requirement would provide the option of "Unless agreed to otherwise". This option described in the language of the requirement implies that it is not a requirement but an option which further supports the suggestions above.
Response: The RC SDT thanks you for your comment. The RC SDT does not agree with your assertion regarding R3. There is a reliability need to speak a common language, especially in issuing and receiving directives. There are several areas of the continent where this could be a reliability gap if there is no requirement. The Reliability Functional Model is not an enforceable standard.		
Illinois Municipal Electric Agency	No	The IMEA supports comments submitted by the MISO Standards Collaboration Group indicating R3 is not necessary. Similarly, IMEA questions the necessity of R4. Therefore, we question the need to expand the applicability of COM-001 to DP, LSE, and PSE since R3 and R4 are the only two Requirements applicable to those functions.

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Organization	Yes or No	Question 1 Comment
Response: The RC SDT thanks you for your comment. The RC SDT does not agree with your assertion regarding R3. There is a reliability need to speak a common language, especially in issuing and receiving directives. There are several areas of the continent where this could be a reliability gap if there is no requirement. R4 is included per FERC Order 693 directive.		
Exelon	No	Agree with the revisions with the following exception/recommendation: COM-001: purpose is to address communication facilities / capabilities (technical/hardware). COM-002: purpose is to address effectiveness (protocols).COM-001: R.1-3 address telecommunication facility requirements. R4 requires English use. Recommend the drafting team move COM-001 R4 (use English) to COM-002 where effectiveness of communications (protocols) between entities is addressed.
Response: The RC SDT thanks you for your comment. COM-001 Requirement R3 (English use) is being incorporated into COM-003-1 by the Operations Personnel Communications Protocols SDT (Project 2007-02). It will be retired from this standard upon approval of COM-003-1. We see no benefit to moving it to COM-002 at this time.		
Hydro-Québec TransEnergie (HQT)	No	Interpersonal communication includes more than voice, such as instant messaging, text messaging and email. This Standard needs a definition of interpersonal communication. Having alternative interpersonal communications should be specified as a requirement since there is actually no requirement to have that alternative way of communication in the first place. Work communication within Québec must be in French according to the law. It is understood and agreed that communication outside Québec with adjacent entities would be, and is in fact already, in English. Accordingly, R3 should be modified as the proposition below: R3. Unless determined by law or otherwise agreed to,
Response: The RC SDT thanks you for your comment. The RC SDT agrees that there is a need for a definition of Interpersonal Communications Capability. We have developed a draft definition that will be posted for comment which meets the FERC Order 693 directive to: Includes adequate flexibility for compliance with the reliability standard, adoption of new technologies and cost-effective solutions. The RC SDT agrees with your comment regarding the alternate interpersonal communications capability and has revised the requirement to read: R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, its Alternative Interpersonal Communications capability used for communicating real-time operating information. If the test is unsuccessful, the entity shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communications capability. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i> We concur with your suggestion regarding R3 and have made the suggested revision.		
Duke Energy	No	R1 requires an entity to “develop a mitigation plan” if a test of alternative communications capabilities is unsuccessful. We believe that this phrase should be changed to “take action”, reflecting that an entity’s response to an unsuccessful test may

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Organization	Yes or No	Question 1 Comment
		be to simply call or email a repair order. The phrase "develop a mitigation plan" implies that an entity must establish a backup to the alternative communications capabilities rather than just restore the alternative communications capabilities.
Response: The RC SDT thanks you for your comment. We concur with your comment regarding the mitigation plan and have revised the requirement to: R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, its alternative Interpersonal Communication capability used for communicating real-time operating information. If the test is unsuccessful, the entity shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communications capability. <i>[Violation Risk Factor: Lower][Time Horizon: Real-time Operations]</i>		
Northeast Utilities	No	It is understood that the use of the term "interpersonal communications" and "interpersonal communications capabilities" were selected by the RC SDT to better reflect the intent of the Standard. However, NU reviewers are concerned over the new terminology and believe that it is unclear and not universally accepted to mean the same thing to all parties. NU's belief is that the original use of the terms "telecommunications" and "telecommunications facilities" are clearer and universally understood. NU recommends that the original terms be re-instated or the term "interpersonal communications" be replaced to reflect the intent of the Standard is to ensure "voice and text equipment" is adequate for communicating real-time operating information. R1 ? the requirement has evolved to test alternative equipment, versus a requirement to have primary and alternative equipment. Standard should require entities to have the equipment such as in the -1 version.R2 is to notify impacted entities in the event of a loss of normal communications. With backup communications operating correctly do we assume there is no impact and therefore notification is not required? This is unclear from a compliance perspective and unnecessary if backup communications are available. Alternative communications often go several layers deep including cell phones, satellite phones, radio, etc.
Response: The RC SDT thanks you for your comment. Several stakeholders have expressed a concern about the definition of interpersonal communications. The RC SDT is proposing a definition that will be posted for comment to address those concerns as well as your comment. R1: The intent of the requirement is as you suggest. This requirement has been revised to: R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, its Alternative Interpersonal Communications capability used for communicating real-time operating information. If the test is unsuccessful, the entity shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communications capability. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i> Notification of a failure of the normal interpersonal communications is still required by R2. The testing requirement is for one designated alternative. No notification is required for the failure of a non-designated alternative.		

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Organization	Yes or No	Question 1 Comment
Independent Electricity System Operator	No	We suggest the SDT review the applicability to Transmission Service Providers, Load-Serving Entities and Purchasing Entities from a real time operating perspective. We do not believe they are active participants in real time operation for which they require to have the same communication capability as the RCs, TOPs, BAs and DPs. Interpersonal communication includes more than voice, such as instant messaging, text messaging and email. This Standard needs a definition of interpersonal communication. Having alternative interpersonal communications should also be specified as a requirement. Work communication within Quebec must be in French according to the law. It is understood and agreed that communication outside Québec with adjacent entities would be, and already is, in English. Accordingly, R3 should be modified as proposed below: R3. Unless dictated by law or otherwise agreed to, R4: We believe “Interconnection” should be replaced by “interconnection” since the former is not a defined term.
Response: The RC SDT thanks you for your comment. TSP, LSE and PSE are not required to have the same Interpersonal communication as RC, TOP or BA. The only requirement applicable to TSP, LSE and PSE is R3 (English language). The RC SDT agrees that there is a need for a definition of Interpersonal Communications Capability. We have developed a draft definition that will be posted for comment which meets the FERC Order 693 directive to: Includes adequate flexibility for compliance with the reliability standard, adoption of new technologies and cost-effective solutions. The RC SDT agrees with your comment regarding the alternate interpersonal communications capability and has revised the requirement to read: R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, its Alternative Interpersonal Communications capability used for communicating real-time operating information. If the test is unsuccessful, the entity shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communications capability. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i> We concur with your suggestion regarding R3 and have made the suggested revision. R4: Interconnection is a defined term in the NERC Glossary of Terms (Updated on April 20, 2009).		
MRO NSRS	No	(1) The MRO NSRS does not believe a mitigation plan is necessary in R1. If the interpersonal communication capability fails during the quarterly test, the entity simply needs to fix it, document the fix and re-test. A mitigation plan is unnecessary and will only delay repairing the interpersonal communication capability as it would have to be completed first before fixing the system. Please create a definition for the interpersonal communication capability (or systems) term used in the response to comments to draft 1 in the summary of consideration for question 1. (2) In R2, MRO NSRS assumes that the 30 minutes or longer in parenthesis is intended to describe the length of the outage. MRO NSRS thinks this would be clearer if the requirement were revised to: “Each Reliability Coordinator,

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Organization	Yes or No	Question 1 Comment
		Transmission Operator and Balancing Authority shall notify impacted entities within 60 minutes of the detection of a failure of its normal interpersonal communications capabilities lasting longer than 30 minutes.” (3) R3 is not necessary as it would be impossible to meet many other requirements if a common language such as English was not used. This requirement results in the waste of compliance resources managing and auditing documentation associated with it.
Response: The RC SDT thanks you for your comment. 1) The RC SDT agrees with your comment regarding the mitigation plan and the requirement for alternate interpersonal communications capability and has revised the requirement to read: R1. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, its Alternative Interpersonal Communications capability used for communicating real-time operating information. If the test is unsuccessful, the entity shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communications capability. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations]</i> The team has drafted a definition for both the term “Interpersonal Communication” and the term, “Alternative Interpersonal Communication.” 2) We concur with your comment and have revised the requirement accordingly. 3) The RC SDT does not agree with your assertion regarding R3. There is a reliability need to speak a common language, especially in issuing and receiving directives. There are several areas of the continent where this could be a reliability gap if there is no requirement.		
Xcel Energy	No	(1) While an improvement from the terminology used in version 1, the term “interpersonal communications” is still vague. We feel the intent of the drafting team was to include non-verbal communication as well, like email. However, as drafted, this point is not clear. We feel a definition is needed in order avoid disparity in its interpretation. (2) It appears that the requirement for RCs, TOPs and BAs to have communication capabilities (whether primary or backup/alternative) was removed from the standard. Yet, R1 requires the RC, TOP and BA to test alternative communications capabilities. Requirements to have primary and backup/alternative communication capabilities should be explicitly stated. (3) Additionally, we feel that the DP and GOP should have testing requirements for their communication capabilities with their TOP and BA.
Response: The RC SDT thanks you for your comment. 1) The RC SDT agrees that there is a need for a definition of Interpersonal Communications Capability. We have developed a draft definition that will be posted for comment which meets the FERC Order 693 directive to: Includes adequate flexibility for compliance with the reliability standard, adoption of new technologies and cost-effective solutions. 2) The RC SDT does not agree with your assertion regarding R1. The requirement for alternate interpersonal communications capability implies that primary interpersonal communications are in place.		

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Organization	Yes or No	Question 1 Comment
3) The DP and GOP were added as applicable entities in R4 per FERC Order 693 directives. The RC SDT does not agree with your assertion regarding the need for testing requirements. However, your concerns may be addressed in the Measure 4 revision: M4. Each Distribution Provider and Generator Operator shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent that it had Interpersonal Communications capabilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information. (R4.)		
Western Area Power Administration	Yes	R4 should say "Generator Operator" rather than "Generation Operator"
Response: The RC SDT thanks you for your comment. We have made this revision.		
American Electric Power	Yes	AEP does generally agree with the revisions, but the use of the term "interpersonal communication capabilities" needs a NERC-approved definition. Otherwise, what is in scope? Are e-mail or text messages acceptable, and, if so, what type of guaranteed delivery is necessary?
Response: The RC SDT thanks you for your comment. The RC SDT agrees that there is a need for a definition of Interpersonal Communications Capability. We have developed a draft definition that will be posted for comment which meets the FERC Order 693 directive to: Includes adequate flexibility for compliance with the reliability standard, adoption of new technologies and cost-effective solutions.		
FirstEnergy	Yes	We agree with many of the changes made to the standard including the change of title to reflect communications (voice and text messages). The parenthesis around 30 minutes or longer should be removed as parenthesis by definition mean a word, phrase, or sentence inserted in a passage to explain or modify the thought. This phrase is more than an explanation of the term failure. It sets forth a time requirement that is an integral part of R1. We suggest rewording the requirement as "Each RC, TOP, and BA shall notify impacted entities within 60 minutes of a failure of its normal interpersonal communications capabilities that lasts 30 minutes or longer."
Response: The RC SDT thanks you for your comment. We concur with your comment and have revised the requirement accordingly.		
Bonneville Power Administration	Yes	
PacifiCorp	Yes	
Southern Company	Yes	

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Organization	Yes or No	Question 1 Comment
Calpine Corporation	Yes	

2. Do you agree with the revisions made to the Measures in COM-001-2 as shown in the posted Standard? If not, please explain in the comment area.

Summary Consideration: Most commenters agreed with the measures for COM-001. The measures were revised based on revisions to the requirements as well as comments received below. Several stakeholders suggested removing the mitigation plan from R1 and M1. The RC SDT agreed and made the revision. M3 and M4 were revised as:

M3. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Purchasing-Selling Entity, and Distribution Provider shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, that will be used to determine that its personnel used English as the language for all inter-entity BES reliability communications between and among operating personnel responsible for the real-time generation control or operation of the interconnected BES. If a language other than English is used, each party shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, of agreement to use the alternate language or the law that requires the use of an alternate language. (R3.)

M4. Each Distribution Provider and Generator Operator shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent that it had Interpersonal Communications capabilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information (R4).

Organization	Yes or No	Question 2 Comment
Northwest LSE Group	No	To demonstrate compliance the small Registered Entities will be in the position of proving a negative: i.e., there is no real-time BES operational communication from or to any other entity. Currently, for the smaller entities, communication with the Transmission Operator or Balancing Authority is strictly for operational safety and local reliability of service, not operational reliability for the BES as defined by NERC. It is not clear how the small entity will show compliance. If R4 requires the small load-only DP and/or LSE to have 24/7 monitoring of its phone, and contracted answering service is unable to contact anyone, will this be a violation?
Response: The RC SDT thanks you for your comment. R4 is applicable only to registered Distribution Providers and Generator Operators. The RC SDT has revised the measure to prevent having to prove a negative: M4. Each Distribution Provider and Generator Operator shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent that it had Interpersonal Communications capabilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information		

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Organization	Yes or No	Question 2 Comment
There is no 24/7 monitoring requirement in R4.		
Northeast Power Coordinating Council	No	See our comment for R3 in Q1. Accordingly, M3 should be modified as the proposition below: M3. "that will be used to determine that personnel used English "or another language" as the language for all inter-entity Bulk Electric System reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. If a language other than English is used, both parties shall have and provide upon request, evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, of agreement shall be provided to explain the use of the alternate language. (R3.) M3 allows a language other than English. Must the agreement for non-English be in place in advance of the call?
Response: The RC SDT thanks you for your comment. The RC SDT has revised the measure to conform to revisions in the requirement: M3. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, that will be used to determine that personnel used English as the language for all inter-entity BES reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected BES. If a language other than English is used, both parties shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, of agreement to use the alternate language or the law that requires the use of an alternate language. The RC SDT feels that agreement is not required prior to the call, but only prior to the conversation using the alternate language.		
Bonneville Power Administration	No	Issue #1: Measure M3 The measure states that entities "shall have and provide" evidence that "personnel used English as the language for all" communications. This infers that all communications must be documented in some form or fashion and that any outage of the normal communication system must be met with alternative processes which will meet this measure, even if the alternative is the preparation of handwritten notes of each person's conversations, noting that the communications occurred in English. Unfortunately, there have been times where our Dictaphone stopped recording phone calls, and nobody knew it for days! This measure sets us up for a violation! It's just a matter of time.
Response: The RC SDT thanks you for your comment. The measure as written is consistent with the requirement. The RC SDT did not receive any other comments to modify this measure.		
IRC Standards Review Committee	No	Conforming changes are required to the Measures based on the suggested modifications to the requirements in question 1.
Response: The RC SDT thanks you for your comment. Changes were made to the Measures to conform to revisions of the requirements.		

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Organization	Yes or No	Question 2 Comment
Midwest ISO Standards Collaborators	No	Conforming changes are required to the Measures based on the suggested modifications to the requirements in question 1.
Response: The RC SDT thanks you for your comment. Changes were made to the Measures to conform to revisions of the requirements.		
Central Lincoln	No	Comments: M4 is of little help regarding R4. How does an entity perform this demonstration, especially in the case of an off-site audit? If left to the regions, there will be no consistency.
Response: The RC SDT thanks you for your comment. Based on comments received on R4 and M4, the RC SDT has revised M4 to: M4. Each Distribution Provider and Generator Operator shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent that it had Interpersonal Communications capabilities with its Transmission Operator and Balancing Authority for the exchange of Interconnection and operating information. (R4.)		
ReliabilityFirst Corporation	No	No measures are posted for R4 of the revised standard
Response: The RC SDT thanks you for your comment. A measure M4 is in both the redline and clean version of the posted standard.		
E.ON U.S.	No	E.ON U.S. believes that he M1 must be clarified to address whether the testing entity is responsible to develop and implement a mitigation plan when a test is unsuccessful due to an issue at the other end (i.e. non-testing entity).
Response: The RC SDT thanks you for your comment. We have removed the mitigation plan from the requirement and measure.		
Manitoba Hydro	No	Conforming changes are required to the Measures based on the suggested modifications to the requirements in question 1.
Response: The RC SDT thanks you for your comment. Changes were made to the Measures to conform to revisions of the requirements.		
Georgia Transmission Corporation	No	See comments to Question 1 in regards to measurability.
Response: The RC SDT thanks you for your comment. Please see response to question 1.		

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Organization	Yes or No	Question 2 Comment
Illinois Municipal Electric Agency	No	Conforming changes are required to the Measures based on the suggested modifications to the requirements in Question 1.
Response: The RC SDT thanks you for your comment. Changes were made to the Measures to conform to revisions of the requirements.		
Exelon	No	See answer to #1
Response: The RC SDT thanks you for your comment. See response to question 1.		
Hydro-Québec TransÉnergie (HQT)	No	Comments: See our comment for R3 in Q1. Accordingly, M3 should be modify to read as the proposition below: M3. “ that will be used to determine that personnel used English “or another language determine otherwise” as the language for all inter-entity Bulk Electric System reliability communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. If a language other than English is used, upon request, evidence shall be provided to explain the use of the alternate language. (R3.)M3 allows a language other than English. Must the agreement for non-English be in place in advance of the call?
Response: The RC SDT thanks you for your comment. The RC SDT has revised the measure to conform to revisions in the requirement: M3. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, that will be used to determine that its personnel used English as the language for all inter-entity BES reliability communications between and among operating personnel responsible for the real-time generation control or operation of the interconnected BES. If a language other than English is used, both parties shall have and provide upon request evidence that could include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, of agreement to use the alternate language or the law that requires the use of an alternate language. The RC SDT feels that agreement is not required prior to the call, but only prior to the conversation using the alternate language.		
Duke Energy	No	Replace the phrase “develop a mitigation plan” with the phrase “take action” per our comment on Requirement R1 above. Also, the DP and GOP should be deleted from the Data Retention section requirements for R1/M1 and R2/M2. Need to add a Data Retention requirement for R4/M4 for the DP and GOP.
Response: The RC SDT thanks you for your comment. The measure M1 was revised to conform to suggested revisions to R1. We have also revised the Data Retention section.		
Independent Electricity System	No	M3 and M4 may need to be revised depending on the response to our comments under Q1, above.

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Organization	Yes or No	Question 2 Comment
Operator		
Response: The RC SDT thanks you for your comment. Conforming revisions were made to the measures based on revisions to the requirements.		
MRO NSRS	No	Conforming changes are required to the Measures based on the suggested modifications to the requirements in question 1.
Response: The RC SDT thanks you for your comment. Changes were made to the Measures to conform to revisions of the requirements.		
Xcel Energy	No	Measures should be modified to reflect changes to requirements suggested in question 1.
Response: The RC SDT thanks you for your comment. Changes were made to the Measures to conform to revisions of the requirements.		
American Transmission Company	No	See our comment to question 1
Response: The RC SDT thanks you for your comment. See response to question 1.		
JEA	Yes	M1 - very nice, probably we will also be held responsible for completing the mitigation plans, so perhaps you should go ahead and add that so no one gets caught without sufficient evidence in that regard M2 – fine M3 - this measure would indicate that operators have the authority to agree among themselves to speak other languages, rather than a more formal agreement between entities, which is how I read the language of the requirement. If that is not what is meant, then I would suggest the examples include Memorandums of Agreement or Understanding, Contracts or other more formal mechanisms. M4 - fine
Response: The RC SDT thanks you for your comment. M1: We removed the mitigation plan from R1 and M1. M3: The requirement does not preclude individuals from using an alternate language as long as they agree to do so prior to the conversation.		
FirstEnergy	Yes	However, it is not clear whether to show compliance the voice recordings and associated transcripts are of the test done or of the conversations across those facilities.
Response: The RC SDT thanks you for your comment. Since the requirement is to test, the evidence provided should be sufficient to show that the test		

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Organization	Yes or No	Question 2 Comment
was performed and any appropriate follow up actions taken (in case of failure).		
Western Area Power Administration	Yes	M4 should say "Generator Operator" rather than "Generation Operator"
Response: The RC SDT thanks you for your comment. We have made this revision.		
SERC OC Standards Review Group	Yes	
Liberty Electric Power LLC	Yes	
WECC Reliability Coordinator	Yes	
PacifiCorp	Yes	
Calpine Corporation	Yes	
Southern Company	Yes	
American Electric Power	Yes	
Northeast Utilities	Yes	

3. Do you agree with the revisions made to the Violation Severity Levels in COM-001-2 as shown in the posted Standard? If not, please explain in the comment area.

Summary Consideration: Stakeholders suggested adding more VSLs for R2. The RC SDT agreed and drafted additional VSLs reflecting time and the number of entities notified. Other changes to the VSLs were made based on revisions to the requirements.

Organization	Yes or No	Question 3 Comment
Northwest LSE Group	No	With the vague verbiage of R4 coupled with the High and Severe VSL, it is important to clarify R4 with the small DP in mind, and possibly include Lower and Moderate VSLs for smaller load-only DP violations.
Response: The RC SDT thanks you for your comment. Based on the requirement, the RC SDT does not feel that additional VSLs can be written for R4. The intent of the requirement is missed if the responsible entity does not have Interpersonal Communication Capabilities with both its TOP or its BA.		
Northeast Power Coordinating Council	No	see M3 comment for question 2
Response: The RC SDT thanks you for your comment. See response to question 2.		
IRC Standards Review Committee	No	(1) Conforming changes are required to the VSLs based on the suggested modifications to the requirements in question 1. (2) FERC expressed its desire in the June 2008 order on VSLs to have as many VSLs as possible. We suggest since R2 also has a time component in the requirement four VSLs could be written based on the timeliness of the notification as well as the number of impacted entities that were not notified. The VSLs should reflect both components.
Response: The RC SDT thanks you for your comment. 1) Conforming changes were made to the VSLs based on the modifications to the requirements. 2) We have added VSLs based on the time requirements.		
Midwest ISO Standards Collaborators	No	Conforming changes are required to the VSLs based on the suggested modifications to the requirements in question 1. In addition, we suggest since R2 has a time component in the requirement, four VSLs could be written based on the timeliness of the notification. This would be consistent with the FERC's expressed desire in the June 2008 order on VSLs in which they stated that as many VSLs should be developed as possible.
Response: The RC SDT thanks you for your comment. Conforming changes were made to the VSLs based on the modifications to the requirements.		

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Organization	Yes or No	Question 3 Comment
We have added VSLs based on the time requirements.		
Central Lincoln	No	The severity levels have little or no relationship to reliability. Failure to provide a evidence of an agreement per R3, for example, has no impact on reliability by itself; yet it carries the maximum VSL. In reality, the impact would only be severe if the use of an alternate language resulted in a miscommunication.
Response: The RC SDT thanks you for your comment. The VSLs are a metric applied after a requirement has been violated. The intent is to provide a relative measure of how far the action or inaction was from the threshold set in the requirement. Some requirements lend themselves to a relative measure of meeting the threshold (i.e. “almost met”, 12 minutes when the requirement was 10 minutes, etc), and some do not. Those that do not are often termed “binary” requirements (either you meet the threshold or you do not). The relative risk to the bulk electric system of not meeting a requirement is specifically reflected in the requirement’s VRF. The relative size of a registered entity is beyond the scope of the standard drafting team and is addressed through the NERC Statement of Compliance Registry Criteria or taken into account as a mitigating factor through the Regional compliance enforcement programs.		
E.ON U.S.	No	E.ON U.S. suggests that R1 be modified to include the language that when an RC, BA and/or TOP issue a directive it must state: “This is a directive” and the entity receiving the directive must state: “I understand this is a directive”. E.ON U.S. also requests that language be added to the requirement that states that this communication protocol is only for reliability related directives and not for other operational directives.
Response: The RC SDT thanks you for your comment. The RC SDT does not agree with your assertion regarding R1. The purpose of R1 is to ensure that operating entities have adequate Interpersonal Communications capabilities.		
Manitoba Hydro	No	Conforming changes are required to the VSLs based on the suggested modifications to the requirements in question 1. In addition, since R2 has a time component in the requirement four VSLs could be written based on the timeliness of the notification.
Response: The RC SDT thanks you for your comment. Conforming changes were made to the VSLs based on the modifications to the requirements. We have also added VSLs based on the time requirements.		
Georgia Transmission Corporation	No	Again, Requirement 3 seems to be an option.
Response: The RC SDT thanks you for your comment. The RC SDT does not agree with your assertion regarding R3. There is a reliability need to speak a common language, especially in issuing and receiving directives.		

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Organization	Yes or No	Question 3 Comment
Illinois Municipal Electric Agency	No	Conforming changes are required to the VSLs based on the suggested modifications to the requirements in Question 1.
Response: The RC SDT thanks you for your comment. Conforming changes were made to the VSLs based on the modifications to the requirements.		
Hydro-Québec TransEnergie (HQT)	No	see M3 comment for question 2
Response: The RC SDT thanks you for your comment. See response to question 2.		
Duke Energy	No	Replace the phrase “develop a mitigation plan” with the phrase “take action to restore the capabilities” per our comment on Requirement R1 above.
Response: The RC SDT thanks you for your comment. Mitigation plan was removed from the requirement.		
Independent Electricity System Operator	No	The VSLs for R3 may have to be changed based on the outcome of our comments in Q2 regarding the language of communication.
Response: The RC SDT thanks you for your comment. Conforming changes were made to the VSLs based on the modifications to the requirements.		
MRO NSRS	No	Conforming changes are required to the VSLs based on the suggested modifications to the requirements in question 1. In addition, the MRO NSRS suggests since R2 has a time component in the requirement four VSLs could be written based on the timeliness of the notification. This would be consistent with the FERC’s expressed desire in the June 2008 order on VSLs in which they stated that as many VSLs should be developed as possible.
Response: The RC SDT thanks you for your comment. Conforming changes were made to the VSLs based on the modifications to the requirements. We have also added VSLs based on the time requirements.		
SERC OC Standards Review Group	Yes	
Bonneville Power Administration	Yes	

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Organization	Yes or No	Question 3 Comment
FirstEnergy	Yes	
JEA	Yes	
Liberty Electric Power LLC	Yes	
WECC Reliability Coordinator	Yes	
PacifiCorp	Yes	
Calpine Corporation	Yes	
Western Area Power Administration	Yes	
Southern Company	Yes	
ReliabilityFirst Corporation	Yes	
American Electric Power	Yes	
Northeast Utilities	Yes	

4. Do you agree with the revisions made to the Requirements in COM-002-3 as shown in the posted Standard? If not, please explain in the comment area.

Summary Consideration: Stakeholder consensus has been achieved with respect to the retirement of R1 (the requirement for the TOP and BA to each have data and voice communication with RCs, BAs and TOPs). In response to the majority of the comments, the drafting team has added a new R1 to require that “Reliability Directives” be identified as such, revised and rearranged the two requirements from the last posting so that the new R2 focuses on repeating the intent of a reliability directive and the new R3 focuses on responding to that repeated directive. The drafting team is also coordinating with the RTO SDT and the OPCP SDT (Project 2007-02) on the definition and usage of the term “Reliability Directive”.

The new R1 through R3 are:

R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time]

R2. Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat the intent of the Reliability Directive back to the issuer of the Reliability Directive. [Violation Risk Factor: High][Time Horizon: Real-Time]

R3. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that identifies an action as a Reliability Directive shall acknowledge the response from the recipient of the Reliability Directive in R2 as correct or reissue the Reliability Directive to resolve any misunderstandings. [Violation Risk Factor: High][Time Horizon: Real-Time]

The proposed definition for Reliability Directive is:

Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.

Organization	Yes or No	Question 4 Comment
Northwest LSE Group	No	It would be advantageous to exempt certain smaller Registered Entities (LSE, DP, & PSE) that are non-scheduling/tagging entities. In addition to not having a scheduling/tagging desk, many of these entities do not have a 24/7 desk to receive RC/BA/TOP reliability directives/calls, and are too small (10s of MW) to even be substantially significant in a reliability crisis. Instead of making this Standard applicable to all DPs, LSEs, and PSEs, we suggest that the RC, BAs, and TOPs to yearly publish those LSEs, DPs, and PSEs responsible for responding to emergency reliability directives. Also, it would be advisable for the RC, BA, and TOP giving a reliability directive to clearly preface the instruction with “The following is an emergency reliability directive” to differentiate from normal operations communications. Many smaller entities

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Organization	Yes or No	Question 4 Comment
		do not have the resources to install reliable voice recording equipment, but having access to such recordings would be beneficial towards compliance documentation; thus, it would be helpful to require the directive issuing RC, BA, or TOP to provide a digital copy of the voice recording, or transcript if available on request to the recipient of the directive. Short of a recording or transcript of the recording, it will be difficult to determine how a small entity without recorded line would show compliance other than writing down the directive as it is given and reading it back to the issuer. If the directive is lengthy, this will slow down the process and probably defeat the purpose and value of quick action. Further, there is no guarantee that the receiver will accurately retain a complicated directive if not immediately documented in some way to allow review. Last of all, what is meant by the word “intent”? Must the recipient understand and demonstrate the “why” the directive is given and the intended “outcome,” or merely paraphrase the directive to demonstrate understanding? If the recipient repeats word for word the directive back to the issuer without any other indication that the directive is understood, is this a violation?? Response: The RC SDT thanks you for your comment. The requirements of COM-002 for LSE, DP and PSE simply state that the entity has to repeat the intent of the directive back. The issue you raise concerning smaller entities is valid, but this standard is not the venue at which to make this argument. Registration criteria are outside the scope of this project. We have included a new requirement R1: R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i> The RC SDT is proposing a new definition for Reliability Directive to differentiate it from normal operations communications. Our proposed definition is: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency. The RTO SDT (Project 2007-03) is also working on a similar path and the RC SDT is coordinating with that team. The word “intent” was chosen so that the recipient did not have to repeat the directive verbatim and to also indicate an understanding of the directive. If a recipient repeats the directive verbatim, it is not a violation of the requirement, as it would also capture the intent.
Northeast Power Coordinating Council	No	Support the intent but not the existing language. Do not support Requirements that include some examples since the examples can be confused with the Requirement. Do not support one written Requirement that has two requirements. Recommend the following Requirements: A new R1 - Each Entity shall have Operational Procedure requiring that communications directives be repeated back to the issuer. R2 leave as is. A new R3 If not repeated, then issuer shall request the receiving Entity to repeat the communication directive. A new R4 The issuer will acknowledge the correctness of the repetition of the communications directive. Response: The RC SDT thanks you for your comment. The RC SDT does not see a reliability benefit to having an Operational Procedure requirement, as

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Organization	Yes or No	Question 4 Comment
it would be redundant since the standard COM-002 would be mandatory and enforceable and requires the actions in the Operational Procedure that you suggest. The RC SDT feels that we have the same requirements that you suggest but in a different arrangement.		
SERC OC Standards Review Group	No	The term “emergency” has a broad definition and other standards use “adverse conditions” or “adverse reliability impact”. There should be a consistency of terms when describing a system condition. The STD should include a definition of “directive” that includes more than “Emergency” operational conditions. Should this requirement be modified to include the term “Directive” and the definition of this term added to the NERC Glossary?
Response: The RC SDT thanks you for your comment. The RC SDT is proposing a new definition for Reliability Directive to differentiate it from normal operations communications. The RC SDT appreciates the baggage that comes with the defined term “Emergency”. However, it is the best fit with the normal messaging that has historically occurred in the bulk electric reliability community. Our proposed definition is: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency. This term has been included in the requirements of COM-002. The RTO SDT (Project 2007-03) is also working on a similar path and the RC SDT is coordinating with that team.		
Midwest ISO Standards Collaborators	Yes	We largely agree with the changes to the requirements and believe it goes a long way towards resolving the issue NERC has created recently with interpreting operating instructions as directives. This makes it clear that only directives that are required for operating emergencies require three way communication. We believe that the SDT could further support resolution to this directive issue by developing a definition for directive. We propose the following definition: Directive or Directive A verbal communication by a Reliability Coordinator, Transmission Operator, or Balancing Authority that requires action by the recipient to prevent or mitigate an Adverse Reliability Impact. In requirement 1, we do believe that another word than “require” should be used. Consider using “request”. An RC, BA, and TOP can't force the recipient of the directive to repeat it back. They can ask or request it be repeated back though.
Response: The RC SDT thanks you for your comment. 1) The RC SDT is proposing a new definition for Reliability Directive to differentiate it from normal operations communications. Our proposed definition is: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency. This term has been included in the requirements of COM-002. The RTO SDT (Project 2007-03) is also working on a similar path and the RC SDT is coordinating with that team. 2) The RC SDT has revised the requirement to remove that part since original R2 required the recipient to repeat the intent of the directive.		

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Organization	Yes or No	Question 4 Comment
Central Lincoln	No	The inclusion of load serving entities and distribution providers does not address any present BES reliability gap.
Response: The RC SDT thanks you for your comment. Loads are under the direct control of Load Serving Entities while underfrequency relays are often under the direct control of distribution providers. Current NERC standards do not address the possibility that a Reliability Directive may be issued to either of these entities. The requirements of COM-002 for LSE and DP simply state that the entity has to repeat the intent of the directive back since these entities may receive reliability directives.		
JEA	No	R1: just to avoid possible auditor misunderstandings the SDT might consider replacing the words "or repeat the original statement" to "reissue the directive" so that the RC does not get into trouble if the second statement is not verbatim of the first. This also helps clarify that another statement is required from the recipient along with a final acknowledgement from the RC that the intent is correct.
Response: The RC SDT appreciates your comment. You have identified a potential problem; the RC SDT agrees with your comment and has replaced the words "repeat the original statement" with "reissue the Reliability Directive".		
Liberty Electric Power LLC	No	The proposed standard does not require the RC, TO, or BA to declare an emergency to the GO when issuing a directive. There has been confusion at times in the past as to whether the entity is issuing a directive based on economics or due to an emergency. The standard should be amended to require the RC/TO/BA to state the directive is due to a declared emergency. The GO is required to repeat back the intent of an emergency directive, but is not required to repeat back the intent of economic directive. This can lead to a finding of a severe VSL non-compliance on the part of the GO due to a failure of the RC/TO/BA to clearly state the nature of the directive.
Response: The RC SDT thanks you for your comment. The RC SDT is proposing a new definition for Reliability Directive to differentiate it from normal operations communications. Our proposed definition is: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency. This term has been included in the requirements of COM-002. The RTOSDT (Project 2007-03) is also working on a similar path and the RC SDT are coordinating with that team. A new R1 has been developed that states: When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i>		
ReliabilityFirst	No	FERC 693 excludes distribution providers if they are not a user, owner or operator of BES. This should be reflected in R2 of

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Organization	Yes or No	Question 4 Comment
Corporation		the standard
Response: The RC SDT thanks you for your comment. Any distribution provider excluded by FERC Order 693 would not be held to the standard since standards only apply to registered entities. FERC Order 693 endorses the NERC Statement of Compliance Registry criteria (paragraph 512) and also adopted their proposal to require the ERO to modify COM-002 to apply to distribution providers and generator operators (paragraph 512). The Functional Model describes the real-time relationships between entities. Among those relationships, the DP: Implements voltage reduction and sheds load as directed by the Transmission Operator or Balancing Authority Such directives fall under COM-002 requirements.		
Illinois Municipal Electric Agency	No	IMEA questions the necessity of expanding the applicability of COM-002 as proposed in R2, particularly to the DP, LSE, and PSE functions. IMEA recommends accomplishing the intent of COM-002-3 R2 by simply referring to COM-002-3 R1 in IRO-001-2 R2 which requires those entities to comply with the RC directive. Thus it would be understood that the functional entity had repeated the directive in order to comply with it; thereby avoiding the necessity of expanding applicability to another reliability standard.
Response: The RC SDT thanks you for your comment. The RC SDT feels that there is a difference between complying with a directive and communicating the directive effectively. The requirements of COM-002 for LSE, PSE and DP simply state that the entity has to repeat the intent of the directive back since these entities may receive reliability directives. The drafting team feels that the current draft adds clarity to the requirements.		
Exelon	No	See answer # 1
Response: The RC SDT thanks you for your comment. See response to answer #1.		
Hydro-Québec TransEnergie (HQT)	No	Support the intent but not the existing language. Do not support Requirements that include some examples since the examples can be confused with the Requirement. Do not support one written Requirement that has two requirements. Recommend the following Requirements A new R1 - Each Entity shall have Operational Procedure requiring that communications directives be repeated back to the issuer R2 leave as is. A new R3 If not repeated, then issuer shall request the receiving Entity to repeat the communication directive. A new R4 The issuer will acknowledge the correctness of the repetition of the communications directive
Response: The RC SDT thanks you for your comment. There are no examples in any of the requirements of COM-002-3 as posted. There are no compound requirements remaining in COM-002-3 as posted. The RC SDT does not see a reliability benefit to having an Operational Procedure requirement, as it would be redundant since the standard COM-002 would be mandatory and enforceable and requires the actions in the Operational Procedure that you suggest. The RC SDT feels that we have the same requirements that you suggest but in a different arrangement that is internally consistent.		

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Organization	Yes or No	Question 4 Comment
Indiana Municipal Power Agency	No	The requirements do not consider a pre-recorded communication that might be sent out from the Transmission Operator to Generator Operators or any other entity. If this communication is a directive associated with a real-time operational emergency condition (depending on the judgment used by an entity or auditor), it does not make sense to repeat back a pre-recorded message on the phone. It might be good to clearly state in the standard that pre-recorded messages do not need to be repeated back.
Response: The RC SDT thanks you for your comment. The RC SDT is proposing a new definition for Reliability Directive to differentiate it from normal operations communications. Our proposed definition is: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency. This term has been included in the requirements of COM-002. The RC SDT can not envision a situation, regardless of the technology, where a Reliability Directive would be issued without confirmation from the recipient and acknowledgement of accuracy. However, even if there were an occasion as suggested by your comment, the bulk electric system can only remain reliable by coordinating actions between reliability entities. A pre-recorded communication is a broadcast, not a coordinating activity. The RTO SDT (Project 2007-03) is also working on a similar path and the RC SDT are coordinating with that team.		
Duke Energy	No	We agree with adding the clarification that these requirements refer to “emergency” communications, but we think the word “Emergency” should be capitalized to further clarify that it is a defined term in the NERC Glossary. Also, the phrase “require the recipient of the verbal directive to repeat the intent of the directive back” should be changed to “have the recipient of the verbal directive repeat the intent of the directive back”. This avoids making the issuer of the directive make a statement requiring a repeat back unless the recipient actually fails to repeat back as normally expected.
Response: The RC SDT thanks you for your comment. We have removed the word “emergency” and are proposing a definition of Reliability Directive which includes the defined term “Emergency” and which is being posted for comment. The RC SDT agrees with the intent of your comment. The phrase you mention has been removed from R1 as it is required by R2. We have made other edits to tighten the requirements as well.		
Consumers Energy Company	No	COM-002 R2 specifies the Generator Operator that receives a directive from the Transmission Operator, Reliability Coordinator or Balancing Authority must repeat the intent of the directive back to the Transmission Operator. COM-002 M2 specifies that evidence must be retained in the form of either voice recordings or transcripts by the generator operator. Since the Transmission Operator, Reliability Coordinator and Balancing Authority already have voice recording capability (centrally located), it is not necessary for the Generator to also install voice recording capability at each generating station. We suggest the wording of COM-002 be changed such that only the Transmission Operator, Reliability Coordinator and Balancing

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Organization	Yes or No	Question 4 Comment
		Authority be required to keep voice recordings or transcripts.
Response: The RC SDT thanks you for your comment. While recordings may be available from other entities, a Generator Operator has mandatory requirements with which it must comply. Generator Operators must have evidence that they complied with the requirement. The evidence mentioned in the measures is a suggestion of possible methods of evidence. We have revised the measure to include "...which could include, but is not limited to, voice recordings, transcripts of voice recordings or operator logs..."		
Independent Electricity System Operator	No	(i) We suggest the word "emergency" be capitalized since it is a defined term which generally covers the conditions under which directives are issued. (ii) We further suggest that to avoid confusion between operating instructions and directives, the term directive should be defined as suggested below: Directive or Directive A verbal communication by a Reliability Coordinator, Transmission Operator, or Balancing Authority that requires complying action by the recipient to prevent or mitigate an Adverse Reliability Impact. (iii) Since R1 contains two requirements, there may be some benefit in separating these since that would make the VSLs clearer, i.e. separate the requirements placed on the issuer of the directive to (a) request the recipient to repeat the intent of the directive and (b) to acknowledge the response of the recipient as correct.
Response: The RC SDT thanks you for your comment. i) We have removed the word "emergency" and are proposing a definition of Reliability Directive which includes the defined term "Emergency" and which is being posted for comment. ii) The RC SDT is proposing a definition of Reliability Directive that will be posted for comment. Our proposed definition is: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency. iii) The RC SDT agrees and has modified R1. Since R2 requires the recipient to repeat the intent of the directive, we have removed the part of R1 that states the issues shall require the recipient to repeat the directive. This removed the compound requirement.		
MRO NSRS	No	The MRO NSRS largely agrees with the changes to the requirements and believes it goes a long way towards resolving the issue NERC has created recently with interpreting operating instructions as directives. This makes it clear that only directives that are required for operating emergencies require three way communication. MRO NSRS believes that the SDT could further support resolution to this directive issue by developing a definition for directive. MRO NSRS proposes the following definition: Directive or Directive – A verbal communication by a Reliability Coordinator, Transmission Operator, or Balancing Authority

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Organization	Yes or No	Question 4 Comment
		that requires action by the recipient to prevent or mitigate an Adverse Reliability Impact. In requirement 1, MRO NSRS does believe that another word than “require” should be used. Consider using “request”. An RC, BA, and TOP can’t force the recipient of the directive to repeat it back. They can ask or request it be repeated back though.
Response: The RC SDT thanks you for your comment. 1) The RC SDT is proposing a new definition for Reliability Directive to differentiate it from normal operations communications. Our proposed definition is: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency. This term has been included in the requirements of COM-002. The RTOSDT (Project 2007-03) is also working on a similar path and the RC SDT is coordinating with that team. We have removed the “require” part of R1 since R2 is an enforceable requirement for repeating the directive.		
American Transmission Company	No	are supportive of the language regarding “directives” which clarifies that directives are those which involve operating emergencies. However, in R1, we believe that the word “requires” should be changed to “request”. An entity can request that another entity repeat back a directive but we cannot “require” it.
Response: The RC SDT thanks you for your comment. The RC SDT is proposing a definition of Reliability Directive that will be posted for comment. Our proposed definition is: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency. We have removed the “require” part of R1 since R2 is an enforceable requirement for repeating the directive.		
IRC Standards Review Committee	Yes	(1) We largely agree with the changes to the requirements and believe it goes a long way towards resolving the issue NERC has created recently with interpreting operating instructions as Directives. This makes it clear that only Directives that are required for operating emergencies require three way communication. We believe that the SDT could further support resolution to this Directive issue by developing a definition for Directive. We propose the following definition: Directive A verbal communication by a Reliability Coordinator, Transmission Operator, or Balancing Authority that requires action by the recipient to prevent or mitigate an Adverse Reliability Impact. Please note that AESO already has this term defined. The above suggested definition may be different from the AESO’s definition. (2) In requirement 1, we do believe that another word than “require” should be used. Consider using “request”. An RC, BA,

Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Yes or No	Question 4 Comment
		and TOP can't force the recipient of the Directive to repeat it back. They can ask or request it be repeated back though.
Response: The RC SDT thanks you for your comment. 1) The RC SDT is proposing a new definition for Reliability Directive to differentiate it from normal operations communications. Our proposed definition is: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency. This term has been included in the requirements of COM-002. The RTO SDT (Project 2007-03) is also working on a similar path and the RC SDT is coordinating with that team. 2) The RC SDT has revised the requirement to remove that part since original R2 required the recipient to repeat the intent of the directive.		
Calpine Corporation	Yes	Calpine supports three part communications when verbal directives are issued during real-time operational emergency conditions. Calpine believes all issued directives should be explicitly identified as such.
Response: The RC SDT thanks you for your comment. A new R1 has been developed that states: When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i>		
Western Area Power Administration	Yes	This is a very good improvement. Some Regional Entities were interpreting every communication from a control room as a "directive" and stating that "directives" were equal to any "normal instruction" that related to operations of the power system. Making it clear that the directives are associated with emergency conditions is a big improvement. The drafting team may wish to consider additional clarification, such as, "The entity that issues a verbal directive shall make it known during the communication that, "This is a directive"? . All parties to the communication would be clear that the real-time situation was an emergency condition, and that the requirements for repeating the intent were in effect.
Response: The RC SDT thanks you for your comment. The RC SDT is proposing a new definition for Reliability Directive to differentiate it from normal operations communications. Our proposed definition is: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency. This term has been included in the requirements of COM-002. The RTO SDT (Project 2007-03) is also working on a similar path and the RC SDT is coordinating with that team. A new R1 has been developed that states:		

Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Yes or No	Question 4 Comment
When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i>		
American Electric Power	Yes	AEP does generally agree with the revisions, but we have concerns with the much wider scope of three part communications that expand the required voice or transcript evidence. There is no rationale provided for changing the text in R1 and M1, and adding a new R2 and M2. We would recommend that these items remain as stated in Version 2.
Response: The RC SDT thanks you for your comment. The RC SDT's intent was to create a consistent set of noncompound requirements and to provide clarity according to the scope of the drafting team.		
Manitoba Hydro	Yes	For the most part agree with the changes to the requirements and believe it goes a long way towards resolving the issue NERC has created recently with interpreting operating instructions as directives. This makes it clear that only directives that are required for operating emergencies require three way communication. The SDT could further support resolution to this directive issue by developing a definition for directive. In requirement 1, I would use another word than "require". Consider using "request". An RC, BA, and TOP can't force the recipient of the directive to repeat it back. They can ask or request it be repeated back though.
Response: The RC SDT thanks you for your comment. 1) The RC SDT is proposing a new definition for Reliability Directive to differentiate it from normal operations communications. Our proposed definition is: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency. This term has been included in the requirements of COM-002. The RTOSDT (Project 2007-03) is also working on a similar path and the RC SDT is coordinating with that team. 2) The RC SDT has revised the requirement to remove that part since original R2 required the recipient to repeat the intent of the directive.		
FirstEnergy	Yes	1. We agree with the clarification in R1 that a directive per COM-002-3 is a "verbal directive associated with real-time operational emergency conditions". We understand this to be a "Reliability" directive used during times of emergency or in situations where reliability may be an issue. Also, with this clarification, it confirms that the term "directive", as used in this standard, does not include "Operational" directives issued by System Operators during normal system conditions to change the status of an element such as a circuit breaker. 2. The industry does not appear to have a clear, consistent definition of what constitutes a directive. We suggest the standard require the person issuing a directive to use the phrase "I am directing you to ?", "I am ordering you to ?" or something similar

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Organization	Yes or No	Question 4 Comment
		to invoke the three part communication requirement. 3. Since this standard deals with communications and coordination during emergency conditions, it may be helpful to change the title of the standard to "Communications and Coordination Emergency Conditions". 4. The phrase "the intent of the directive" could be difficult to comply with and measure. The words "the intent of" should be removed from Requirements R1 and R2.
Response: The RC SDT thanks you for your comment. 1) The RC SDT is proposing a new definition for Reliability Directive to differentiate it from normal operations communications. Our proposed definition is: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency. This term has been included in the requirements of COM-002. The RTO SDT (Project 2007-03) is also working on a similar path and the RC SDT is coordinating with that team. 2) We agree and have included a new R1 that states: When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i> 3) The RC SDT disagrees. This standard covers all interpersonal communications, not just emergency communications. The title stays as is. 4) The phrase was included so that the recipient did not have to repeat the directive verbatim and to also indicate an understanding of the directive. If a recipient repeats the directive verbatim, it is not a violation of the requirement, as it would also capture the intent. The goal of the RC SDT is to assure continued reliability without creating a trap by requiring word-for-word repetition.		
Northeast Utilities	Yes	
Xcel Energy	Yes	
Bonneville Power Administration	Yes	
WECC Reliability Coordinator	Yes	
PacifiCorp	Yes	

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Organization	Yes or No	Question 4 Comment
Southern Company	Yes	
Georgia Transmission Corporation	Yes	

5. Do you agree with the revisions made to the Measures in COM-002-3 as shown in the posted Standard? If not, please explain in the comment area.

Summary Consideration: Stakeholder consensus has been achieved with respect to the retirement of R1 and M1 from the last approved version of this standard. In accord with the majority of commenters, the drafting team made changes to the Measures to bring them into conformance with the adopted suggestions from question 4 for improving the Requirements. Specifically, a new R1 was added to require that reliability directives be identified as such – and the two requirements from the last posting were rephrased and rearranged for clarity. The Measures were changed to match the revised requirements.

Organization	Yes or No	Question 5 Comment
Illinois Municipal Electric Agency		Conforming changes are required to the Measures based on the suggested modifications to the requirements in Question 4.
Response: The RC SDT thanks you for your comment. The measures were revised to reflect changes to the requirements.		
Hydro-Québec TransEnergie (HQT)	No	Address the new proposed Requirements above in Question 4.
Northeast Power Coordinating Council	No	Addressed the new proposed Requirements above in Question 4.
Response: The RC SDT thanks you for your comment. The measures were revised to reflect changes to the requirements.		
Duke Energy	No	Change “emergency” to “Emergency” per comment on R1 above. Also change the phrase “required the recipient of the verbal directive to repeat” to “had the recipient of the verbal directive repeat” per our comment on R1 above.
Response: The RC SDT thanks you for your comment. We have removed the word “emergency” and are proposing a definition of Reliability Directive which includes the defined term “Emergency” and which is being posted for comment.		
Northwest LSE Group	No	Only in making the Measures agree with the suggested changes to the requirements above.
Response: The RC SDT thanks you for your comment. See response to Question 4. The measures have been revised to reflect changes to the requirements.		

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Organization	Yes or No	Question 5 Comment
Central Lincoln	No	M2 goes beyond R2 in requiring recordings. This will be cost prohibitive for small entities that have little impact on the BES. Telephone recording equipment will be needed on company phones, and some way to handle the recording of directives and responses that occur after hours on home or cell phones must be handled. Drafters seem to have missed the fact that not all the applicable entities have 24/7 dispatch centers.
Response: The RC SDT thanks you for your comment. The measure lists possible examples of evidence to prove compliance with the requirement. It does not impose any additional requirements or the purchase of recording systems. We have revised the measure to include "...which could include, but is not limited to, voice recordings, transcripts of voice recordings or operator logs..."		
JEA	No	Not all entities have recorded lines. The standard does not directly require the to record their lines, but the measure implies it. It seems that a written log should be sufficient. Since both sides of the conversation gets audited, the auditors will have ample opportunity to check up on both sides.
Response: The RC SDT thanks you for your comment. The measure lists possible examples of evidence to prove compliance with the requirement. It does not impose any additional requirements or the purchase of recording systems. We have revised the measure to include "...which could include, but is not limited to, voice recordings, transcripts of voice recordings or operator logs..."		
Northeast Utilities	No	NU agrees with expanding the applicability of the Standard beyond the Reliability Coordinators, Balancing Authorities and Transmission Operators to ensure that the recipient of a verbal directive repeats back the directive to the issuer (R2). Despite NU's agreement with R2, NU believes that M2 is duplicative to the intent of M1 and unnecessarily requires the installation of voice recording capabilities at the entities other than a RC, BA or TOP. It is our belief that the voice recordings of the RC, BA and TOP (M1) provide the evidentiary support required by all applicable entities.
Response: The RC SDT thanks you for your comment. The measure lists possible examples of evidence to prove compliance with the requirement. It does not impose any additional requirements or the purchase of recording systems. We have revised the measure to include "...which could include, but is not limited to, voice recordings, transcripts of voice recordings or operator logs..."		
Independent Electricity System Operator	No	Comments: Some changes may be necessary based on the SDT's response to our suggestion in Q4.
Response: The RC SDT thanks you for your comment. See response to your comments on question 4.		
MRO NSRS	No	MRO NSRS largely agrees with the measures with the exception that a conforming change needs to be made to M1 if the suggestion regarding "require" in Q4 is accepted.

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Organization	Yes or No	Question 5 Comment
Response: The RC SDT thanks you for your comment. “Require” was removed from the requirement and the measure edited appropriately.		
American Transmission Company	No	See our comments to question 4
Response: The RC SDT thanks you for your comment. See response to your comments on question 4.		
IRC Standards Review Committee	Yes	We largely agree with the measures with the exception that a conforming change needs to be made to M1 if the suggestion regarding “require” in Q4 is accepted.
Midwest ISO Standards Collaborators	Yes	We largely agree with the measures with the exception that a conforming change needs to be made to M1 if the suggestion regarding “require” in Q4 is accepted.
Response: The RC SDT thanks you for your comment. “Require” was removed from the requirement and the measure edited appropriately.		
American Electric Power	Yes	As described in the question 4 response, there is no rationale provided for changing the text in R1 and M1, and adding a the new R2 and M2. We would recommend that these items remain as stated in Version 2.
Response: The RC SDT thanks you for your comment. See response to question 4.		
Manitoba Hydro	Yes	For the most part agree with the measures with the exception that a conforming change needs to be made to M1 if the suggestion regarding “require” in Q4 is accepted.
Response: The RC SDT thanks you for your comment. “Require” was removed from the requirement and the measure edited appropriately.		
SERC OC Standards Review Group	Yes	
Bonneville Power Administration	Yes	
FirstEnergy	Yes	

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Organization	Yes or No	Question 5 Comment
Liberty Electric Power LLC	Yes	
WECC Reliability Coordinator	Yes	
PacifiCorp	Yes	
Calpine Corporation	Yes	
Western Area Power Administration	Yes	
Southern Company	Yes	
ReliabilityFirst Corporation	Yes	
Georgia Transmission Corporation	Yes	

6. Do you agree with the revisions made to the Violation Severity Levels in COM-002-3 as shown in the posted Standard? If not, please explain in the comment area.

Summary Consideration: Several stakeholders suggested revisions to the VSLs based on suggested revisions to the requirements. The RC SDT made changes to the VSLs to conform to revisions to the requirements.

Organization	Yes or No	Question 6 Comment
Northwest LSE Group	No	Only in making the Measures agree with the suggested changes to the requirements above.
Response: The RC SDT thanks you for your comment. The Measures have been revised to reflect changes to the requirements.		
Northeast Power Coordinating Council	No	Address the new proposed Requirements.
Response: The RC SDT thanks you for your comment. The RC SDT feels that we have the same requirements that you suggest but in a different arrangement. The new proposed Requirements have been addressed.		
Bonneville Power Administration	No	Comments: Issue #1: Violation Severity Level. The Moderate and Severe VSLs for Requirement R1 can lead to confusion. For instance, the Moderate VSL states that the responsible entity "did not acknowledge the recipient was correct in the repeated directive OR (emphasis theirs) failed to repeat the intent of the original statement to resolve any misunderstandings. "What is it saying here? Is it dinging the responsible entity for making no response at all to the recipient after they repeated the intent of the message? Or is that what the Severe VSL is dinging for when it includes an AND rather than an OR in the statement? I can't tell what the drafting team was intending with their statements, but one of the statements seem to infer that the responsible entity can actually be dinged for not doing both, acknowledging the recipient as being correct in their response and at the very same time repeating the intent of the original statement to resolve any misunderstandings because the recipient was incorrect in their response. This then argues that the recipient can be both correct and incorrect at the same time. I didn't think that was possible "similar to binary code" either you get a one or a zero, but not both and never neither! I would argue that the drafting team should rewrite their VSLs to succinctly state that the responsible entity failed to respond after the recipient repeated the intent of the message. With that in mind, either the Moderate or the Severe VSL will be rewritten in an understandable way and the other VSL will disappear in the realms of impossible things.
Response: The RC SDT thanks you for your comment. We have eliminated the Moderate VSL and only have the Severe.		

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Organization	Yes or No	Question 6 Comment
IRC Standards Review Committee	No	If the suggestion regarding “require” in Q4 is accepted, conforming changes to the VSL need to made. Additionally, we believe the Moderate and Severe VSLs are confusing based on repeating the language exactly in the requirement. In most cases, repeating the language of the requirement is best but we believe a deviation is warranted here. The intent of Moderate appears to be that the RC, TOP or BA did not acknowledge the repeat of the Directive was correct and the repeat was correct. In the Severe, we believe the intent appears to be that the RC, TOP or BA did not acknowledge the repeat of the Directive was correct but the repeat was incorrect. We agree that these distinctions make sense but offer the following changes to clarify the intent. Moderate VSL: The responsible entity issued a verbal Directive associated with real-time operating emergency conditions and the recipient repeated the intent of the Directive correctly, but the responsible entity did not acknowledge the recipient was correct. Severe VSL: The responsible entity issued a verbal Directive associated with real-time operating emergency conditions and the recipient repeated the intent of the Directive incorrectly, but the responsible entity failed to repeat the intent of the original statement to resolve any misunderstandings.
Response: The RC SDT thanks you for your comment. We have modified all the requirements in a way that addresses your comments. Conforming changes to the VSLs have been made.		
Midwest ISO Standards Collaborators	No	If the suggestion regarding “require” in Q4 is accepted, conforming changes to the VSL need to made. Additionally, we believe the Moderate and Severe VSLs are confusing based on repeating the language exactly in the requirement. In most cases, repeating the language of the requirement is best but we believe a deviation is warranted here. The intent of Moderate appears to be that the RC, TOP or BA did not acknowledge the repeat of the directive was correct and the repeat was correct. In the Severe, we believe the intent appears to be that the RC, TOP or BA did not acknowledge the repeat of the directive was correct but the repeat was incorrect. We agree that these distinctions make sense but offer the following changes to clarify the intent. Moderate VSL: The responsible entity issued a verbal directive associated with real-time operating emergency conditions and the recipient repeated the intent of the directive correctly, but the responsible entity did not acknowledge the recipient was correct. Severe VSL: The responsible entity issued a verbal directive associated with real-time operating emergency conditions and the recipient repeated the intent of the directive incorrectly, but the responsible entity failed to repeat the intent of the original statement to resolve any misunderstandings.
Response: The RC SDT thanks you for your comment. We have modified all the requirements in a way that addresses your comments. Conforming changes to the VSLs have been made.		
American Electric Power	No	AEP is concerned that the severe VSL assigned to Requirement 2 is excessive and should be reconsidered.
Response: The RC SDT thanks you for your comment. We believe that R2 is a binary requirement which results in a Severe VSL. The entity either performed the requirement or did not.		

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Organization	Yes or No	Question 6 Comment
Manitoba Hydro	No	If the suggestion regarding “require” in Q4 is accepted, conforming changes to the VSL need to made. Additionally, believe the Moderate and Severe VSLs are confusing based on repeating the language exactly in the requirement. In most cases, repeating the language of the requirement is best but we believe a deviation is warranted here. The intent of Moderate appears to be that the RC, TOP or BA did not acknowledge the repeat of the directive was correct and the repeat was correct. In the Severe, we believe the intent appears to be that the RC, TOP or BA did not acknowledge the repeat of the directive was correct but the repeat was incorrect. We agree that these distinctions make sense but offer the following changes to clarify the intent. Moderate VSL: The responsible entity issued a verbal directive associated with real-time operating emergency conditions and the recipient repeated the intent of the directive correctly, but the responsible entity did not acknowledge the recipient was correct. Severe VSL: The responsible entity issued a verbal directive associated with real-time operating emergency conditions and the recipient repeated the intent of the directive incorrectly, but the responsible entity failed to repeat the intent of the original statement to resolve any misunderstandings.
Response: The RC SDT thanks you for your comment. We have modified all the requirements in a way that addresses your comments. Conforming changes to the VSLs have been made.		
Illinois Municipal Electric Agency	No	Conforming changes are required to the VSLs based on the suggested modifications to the requirements in Question 4.
Response: The RC SDT thanks you for your comment. The RC SDT feels that there is a difference between complying with a Reliability Directive and communicating the Reliability Directive effectively. The requirements of COM-002 for LSE, PSE and DP simply state that the entity has to repeat the intent of the directive back since these entities may receive Reliability Directives. The drafting team feels that the current draft adds clarity to the requirements. The VSLs were revised to match the revised requirements.		
Hydro-Québec TransEnergie (HQT)	No	address the new proposed Requirements.
Response: The RC SDT thanks you for your comment. The RC SDT does not see a reliability benefit to having an Operational Procedure requirement, as it would be redundant since the Standard COM-002 would be mandatory and enforceable and requires the actions in the Operational Procedure that you suggest. The RC SDT feels that we have the same requirements that you suggest but in a different arrangement.		
Duke Energy	No	Change “emergency” to “Emergency” in the VSLs per our comment on R1 above. Also, we don’t see a tangible difference between the Moderate and Severe VSLs, and the High VSL should really be the Severe VSL. We suggest having just a High and a Severe VSL as follows:” High VSL: “The responsible entity issued a verbal directive associated with real-time operating Emergency conditions and had the recipient repeat back the intent of the directive, but did not either acknowledge the recipient was correct in the repeated directive or failed to repeat the intent of the original statement to resolve any misunderstandings.” Severe VSL: “The responsible entity issued a verbal directive associated with real-time operating

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Organization	Yes or No	Question 6 Comment
		Emergency conditions, but did not have the recipient repeat back the intent of the directive.”
Response: The RC SDT thanks you for your comment. We have removed the word “emergency” and are proposing a definition of Reliability Directive which will be posted for comment. Our proposed definition is: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency. We have removed the “require” part of R1 since R2 is an enforceable requirement for repeating the directive. Conforming changes to the VSLs have been modified.		
Independent Electricity System Operator	No	The sequence of communication required under R1 is intended to ensure that directives from the issuing entities are clearly understood. The earlier this sequence is broken, the greater the uncertainty that this goal is achieved and the greater should be the severity level. Thus, failure to request that the recipient entity repeat the intent of the directive “ the earliest step in the sequence - should attract the “Severe” VSL. Also, failing to repeat the original directive when there is any misunderstanding, again, in our view, leaves the intent of the directive equally unclear and should also attract a “Severe” VSL. Failing to acknowledge the recipient was correct in the repeating the intent of the directive “ the last step in the sequence “ is already assigned a “Moderate” VSL and this should not be repeated in the “Severe” VSL. We therefore suggest that the two conditions under “High” and “Severe” in R1 be combined as one under “Severe” as follows: The responsible entity issued a verbal directive associated with real-time operating emergency conditions but did not require the recipient to repeat the intent of the directive; OR The responsible entity issued a verbal directive associated with real-time operating emergency conditions and required the recipient to repeat the intent of the directive, but failed to repeat the intent of the original statement to resolve any misunderstandings.
Response: The RC SDT thanks you for your comment. In the revised standard, R2 requires the recipient to repeat the intent of the directive. We have removed the part of R1, (now R3), that states the issuer shall “require” the recipient to repeat the directive. We have made revisions to the VSLs to match the requirements.		
MRO NSRS	No	If the suggestion regarding “require” in Q4 is accepted, conforming changes to the VSL need to made. Additionally, MRO NSRS believes the Moderate and Severe VSLs are confusing based on repeating the language exactly in the requirement. In most cases, repeating the language of the requirement is best but we believe a deviation is warranted here. The intent of Moderate appears to be that the RC, TOP or BA did not acknowledge the repeat of the directive was correct and the repeat was correct. In the Severe, MRO NSRS believes the intent appears to be that the RC, TOP or BA did not acknowledge the repeat of the directive was correct but the repeat was incorrect. MRO NSRS agrees that these distinctions make sense but offer the following changes to clarify the intent. Moderate VSL: The responsible entity issued a verbal directive associated with real-time operating emergency conditions and the recipient repeated the intent of the directive correctly, but the responsible entity did not acknowledge the recipient

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Organization	Yes or No	Question 6 Comment
		was correct. Severe VSL: The responsible entity issued a verbal directive associated with real-time operating emergency conditions and the recipient repeated the intent of the directive incorrectly, but the responsible entity failed to repeat the intent of the original statement to resolve any misunderstandings.
Response: The RC SDT thanks you for your comment. The RC SDT is proposing a definition of Reliability Directive that will be posted for comment. Our proposed definition is: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency. We have removed the “require” part of R1 since R2 is an enforceable requirement for repeating the directive. Conforming changes to the VSLs have been modified.		
SERC OC Standards Review Group	Yes	If R1 changes as suggested in Question 4, the VSLs will need to be changed also.
Response: The RC SDT thanks you for your comment. The RC SDT is proposing a new definition for Reliability Directive to differentiate it from normal operations communications. Our proposed definition is: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency. The VSLs have been revised to reflect the proposal.		
FirstEnergy	Yes	
JEA	Yes	
Liberty Electric Power LLC	Yes	
WECC Reliability Coordinator	Yes	

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Organization	Yes or No	Question 6 Comment
PacifiCorp	Yes	
Calpine Corporation	Yes	
Western Area Power Administration	Yes	
Southern Company	Yes	
ReliabilityFirst Corporation	Yes	
Georgia Transmission Corporation	Yes	
Northeast Utilities	Yes	

7. Do you agree with the revisions to the definition of Adverse Reliability Impacts (IRO-001-2)? If not, please explain in the comment area.

Summary Consideration: Stakeholders suggested removing the word “outages” after “cascading” as per the NERC Glossary of Terms and a FERC Directive issued December 27, 2007. The RC SDT made the revision. There were no other suggested revisions to the definition.

Organization	Yes or No	Question 7 Comment
Northeast Power Coordinating Council	No	Remove the word “outages” that appears after “cascading” as per NERC Glossary and FERC Directive ssued Dec. 27, 2007.
Hydro-Québec TransEnergie (HQT)	No	Remove the word “outages” that appears after “cascading” as per NERC Glossary and FERC Directive issued Dec. 27, 2007.
Northeast Utilities	No	Remove the word “outages” that appears after “cascading” as per NERC Glossary and FERC Directive issued Dec. 27, 2007.
Independent Electricity System Operator	No	Comments: Remove the word “outages” that appears after “cascading” as per NERC Glossary and FERC Directive issued Dec. 27, 2007.
Response: The RC SDT thanks you for your comment. The RC SDT agrees and has removed “outages”. We have also capitalized “Cascading”		
FirstEnergy	Yes	If the term "cascading" used in the definition is referring to the NERC-defined term, it should be capitalized.
Response: The RC SDT thanks you for your comment. The RC SDT agrees and has capitalized “Cascading”		
IRC Standards Review Committee	Yes	The drafting team should consider that NERC is moving away from using the term "cascading outages". FERC has directed NERC to rescind this definition, and use the defined term "cascading" instead.
Response: The RC SDT thanks you for your comment. The RC SDT agrees and has removed “outages”. We have also capitalized “Cascading”		
SERC OC Standards Review Group	No	What is the difference between “Adverse Reliability Impacts” and the definition of an IROL? Is this going to replace an IROL?

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Organization	Yes or No	Question 7 Comment
Response: The RC SDT thanks you for your comment. Adverse Reliability Impacts is already a defined term that the RC SDT is proposing to revise. IROL is a limit, while ARI is the impact of events. ARI will not replace IROL.		
Northwest LSE Group	Yes	
Bonneville Power Administration	Yes	
Midwest ISO Standards Collaborators	Yes	
Liberty Electric Power LLC	Yes	
WECC Reliability Coordinator	Yes	
PacifiCorp	Yes	
Calpine Corporation	Yes	
Western Area Power Administration	Yes	
Southern Company	Yes	
ReliabilityFirst Corporation	Yes	
American Electric Power	Yes	

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Organization	Yes or No	Question 7 Comment
Manitoba Hydro	Yes	
Georgia Transmission Corporation	Yes	
Illinois Municipal Electric Agency	Yes	
Duke Energy	Yes	
MRO NSRS	Yes	
Xcel Energy	Yes	
American Transmission Company	Yes	

8. Do you agree with the revisions to the Requirements in IRO-001-2 as shown in the posted Standard? If not, please explain in the comment area.

Summary Consideration: Stakeholders generally agreed with the revisions to the requirements. Several stakeholders suggested adding the words “an issued” before “directive in R3. The RC SDT agreed and made the change. No further revisions were made to the requirements.

Organization	Yes or No	Question 8 Comment
Northwest LSE Group	No	To reduce the compliance burden on smaller entities that would never receive a Reliability Coordinator directive and reduce needless Regional Entity auditing, it would be most helpful to require the RC to publish its list of entities responsible for receiving reliability directives. Also, any Registered Entity should be able to request copies of digital audio recordings or transcripts of the audio recordings if available from the RC.
Response: The RC SDT thanks you for your comment. An RC may issue a directive to any registered entity within its footprint. The burden of compliance is assigned by the NERC registration process and is outside of the scope of this drafting team. The requirements of IRO-001 do not preclude an entity from requesting copies of digital audio recordings or transcripts from the RC.		
Northeast Power Coordinating Council	No	Add “an issued” to the wording as shown following: The Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and/or Purchasing-Selling Entity shall immediately confirm the ability to comply with the directive or inform the its Reliability Coordinator upon recognition of its inability to perform the issued directive.
Response: The RC SDT thanks you for your comment. The RC SDT agrees and has added “an issued” before directive. We have also changed directive to Reliability Directive and included the definition at the beginning of IRO-001 and COM-002 Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.		
SERC OC Standards Review Group	No	If R2 of IRO-001-1 is retired, what process is in place to ensure that reliability plans are kept up to date and are reviewed to approve footprint changes?
Response: The RC SDT thanks you for your comment. As stated in the posted implementation of IRO-001, this is covered in NERC Rules of Procedure, Section 503, item 2.2:		

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Organization	Yes or No	Question 8 Comment
“Regional entities shall verify that all balancing authorities and transmission operators are under the responsibility of a reliability coordinator”. The RC SDT proposed retiring R2 and R5 as the regional reliability plan is a “how” document that shows how an RC will comply with all other NERC Standards, making this requirement redundant.		
FirstEnergy	No	Regarding the retirement of IRO-001-1 R7 We are not convinced that this requirement is redundant with IRO-014-1 R1. The existing requirement requires the RC to "have clear, comprehensive coordination agreements with adjacent RCs to ensure that SOL or IROL violation mitigation requiring actions in adjacent RC areas are coordinated". IRO-014-1 R1 requires agreements for coordination of actions between RCs to support Interconnection reliability, but it does not specifically require "clear" and "comprehensive" agreements to mitigate SOL or IROL violations. For IRO-001-1 R7 to be properly retired, the "mitigation of SOL and IROL violations" should be explicitly stated in IRO-014-2 R1 as one of the items to be addressed in the RC's Operating Procedure, Process, or Plan.
Response: The RC SDT thanks you for your comment. The RC SDT believes that R1.6 of IRO-014-2 addresses your concern as the procedures, processes or plans include: Authority to act to prevent and mitigate conditions which could cause Adverse Reliability Impacts to other Reliability Coordinator Areas. The definitions of each are: IROL: A System Operating Limit that, if violated, could lead to instability, uncontrolled separation, or Cascading Outages that adversely impact the reliability of the Bulk Electric System. Adverse Reliability Impacts: The impact of an event that results in Bulk Electric System instability; uncontrolled separation or Cascading.		
Midwest ISO Standards Collaborators	No	We agree with many of the changes. However, we believe R5 is not necessary for reliability. We agree the RC should notify impacted entities when the transmission problem has been mitigated; however, if the RC fails to notify the impacted entities, it will not result in an Adverse Reliability Impact. Thus, it is not necessary as a sanctionable requirement.
Response: The RC SDT thanks you for your comment. The RC SDT concurs that Adverse Reliability Impacts will not result from an RC not notifying impacted entities when a problem has been mitigated. However, impacted entities may have taken actions when the problem arose. These entities need to be informed that the problem has been mitigated so that they can return to normal operations. R5 notifies entities when the system is in a stable state and facilitates Interpersonal Communication between entities.		
Liberty Electric Power LLC	No	Similar objection to COM-002-3: There should be a requirement to the RC to declare the nature of the directive, emergency or economic.
Response: The RC SDT thanks you for your comment. The reliability standards do not address economic issues. The RC SDT has developed a		

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Organization	Yes or No	Question 8 Comment
proposed definition of Reliability Directive that should address your concern. Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.		
Manitoba Hydro	No	R5 does not make sense as it doesn't create an adverse reliability impact should the RC fail to notify impacted entities.
Response: The RC SDT thanks you for your comment. The RC SDT concurs that Adverse Reliability Impacts will not result from an RC not notifying impacted entities when a problem has been mitigated. However, impacted entities may have taken actions when the problem arose. These entities need to be informed that the problem has been mitigated so that they can return to normal operations. R5 let's entities know when the system is in a stable state and facilitates Interpersonal Communication between entities.		
Illinois Municipal Electric Agency	No	IMEA supports the comments submitted by the MISO Standards Collaboration Group. In addition, while we agree with the proposed revisions to IRO-001-2 R2, IMEA recommends (as indicated in our comments to Question 4) that a reference be made to COM-002-3 R1 in IRO-001-2 R2. By including this reference, it is understood the applicable entities successfully repeated the directive in order to comply with the directive.
Response: The RC SDT thanks you for your comment. The RC SDT concurs that Adverse Reliability Impacts will not result from an RC not notifying impacted entities when a problem has been mitigated. However, impacted entities may have taken actions when the problem arose. These entities need to be informed that the problem has been mitigated so that they can return to normal operations. R5 notifies entities when the system is in a stable state and facilitates Interpersonal Communication between entities. We have included our proposed definition of Reliability Directive in both COM-002 and IRO-001 and used the term in the appropriate requirements. This will provide the linkage you suggest.		
Hydro-Québec TransEnergie (HQT)	No	Add "an issued" to the wording as shown following: Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity shall inform its Reliability Coordinator upon recognition of its inability to perform "an issued" directive.
Response: The RC SDT thanks you for your comment. The RC SDT agrees and has added "an issued" before directive. We have also changed directive to Reliability Directive and included the definition at the beginning of IRO-001 and COM-002. Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.		
Northeast Utilities	No	The intent of R3 is not clear - i.e., " shall inform its Reliability Coordinator upon recognition of its inability to perform a directive". Does this requirement pre-suppose a directive has been given? Suggest adding clarifying language that

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Organization	Yes or No	Question 8 Comment
		indicates that the requirement is applicable subsequent to a directive being received. It is our belief that the wording of Measure M3 supports the suggested changes to R3.
Response: The RC SDT thanks you for your comment. R3 has been revised to add clarity per your comment: R3. Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity shall inform its Reliability Coordinator upon recognition of its inability to perform an issued Reliability Directive. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations]</i>		
Independent Electricity System Operator	No	Comments: Change “inability to perform a directive.” to “inability to perform an issued directive.”
Response: The RC SDT thanks you for your comment. The RC SDT agrees and has added “an issued” before directive. We have also changed directive to Reliability Directive and included the definition at the beginning of IRO-001 and COM-002. Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency		
MRO NSRS	No	MRO NSRS agrees with many of the changes. However, we believe R5 is not necessary for reliability. MRO NSRS agrees the RC should notify impacted entities when the transmission problem has been mitigated; however, if the RC fails to notify the impacted entities, it will not result in an Adverse Reliability Impact. Thus, it is not necessary as a sanctionable requirement.
Response: The RC SDT thanks you for your comment. The RC SDT concurs that Adverse Reliability Impacts will not result from an RC not notifying impacted entities when a problem has been mitigated. However, impacted entities may have taken actions when the problem arose. These entities need to be informed that the problem has been mitigated so that they can return to normal operations. R5 notifies entities when the system is in a stable state and facilitates Interpersonal Communication between entities.		
Xcel Energy	No	R6 – while this requirement has merits, it does not appear to fall under the stated purpose of the standard “To establish requirements for issuance of and complying with Reliability Coordinator directives or notification within the Reliability Coordinator Areas.”. Either the purpose should be modified or this requirement should be placed in a more appropriate location, e.g. IRO-002-2 (along with R8).
Response: The RC SDT thanks you for your comment. The RC SDT moved this requirement into IRO-001 from IRO-002 rather than have a single requirement standard.		

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Organization	Yes or No	Question 8 Comment
Western Area Power Administration	Yes	Suggest changing the word "complying" to "compliance" in the purpose statement.
Response: The RC SDT thanks you for your comment. The RC SDT had made the suggested edit.		
Bonneville Power Administration	Yes	
WECC Reliability Coordinator	Yes	
PacifiCorp	Yes	
Calpine Corporation	Yes	
Southern Company	Yes	
ReliabilityFirst Corporation	Yes	
American Electric Power	Yes	
Georgia Transmission Corporation	Yes	
Duke Energy	Yes	
American Transmission Company	Yes	

9. Do you agree with the revisions to the Measures in IRO-001-2 as shown in the posted Standard? If not, please explain in the comment area.

Summary Consideration: Stakeholders agreed with the measures for IRO-001-2. The measure M3 was revised to reflect the revision to R3 and the word, “directive” was changed to the defined term, “Reliability Directive” in M1 through M3. No other revisions were suggested for the measures.

Organization	Yes or No	Question 9 Comment
Northwest LSE Group	No	Only in making the Measures agree with the suggested changes to the requirements above.
Response: The RC SDT thanks you for your comment. The measures were revised as appropriate to reflect revisions to the requirements.		
SERC OC Standards Review Group	No	The measures should indicate how long records should be kept to verify compliance with the requirements.
Response: The RC SDT thanks you for your comment. This is covered in the Data Retention section of the Standard.		
Midwest ISO Standards Collaborators	No	Measurement 5 needs to be struck if R5 is struck per question 8.
Response: The RC SDT thanks you for your comment. The RC SDT retained R5 and M5. Please see discussion above in Q8.		
Manitoba Hydro	No	Measure for R5 would need to be struck should R5 be struck as per question 8.
Response: The RC SDT thanks you for your comment. The RC SDT retained R5 and M5. Please see discussion above in Q8.		
Illinois Municipal Electric Agency	No	IMEA supports the comments submitted by the MISO Standards Collaboration Group.
Response: The RC SDT thanks you for your comment. The RC SDT retained R5 and M5. Please see discussion above in Q8.		

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Organization	Yes or No	Question 9 Comment
MRO NSRS	No	Measurement 5 needs to be struck if R5 is struck per question 8.
Response: The RC SDT thanks you for your comment. The RC SDT retained R5 and M5. Please see discussion above in Q8.		
Northeast Power Coordinating Council	Yes	
Bonneville Power Administration	Yes	
FirstEnergy	Yes	
IRC Standards Review Committee	Yes	
Liberty Electric Power LLC	Yes	
WECC Reliability Coordinator	Yes	
PacifiCorp	Yes	
Calpine Corporation	Yes	
Western Area Power Administration	Yes	
Southern Company	Yes	
ReliabilityFirst	Yes	

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Organization	Yes or No	Question 9 Comment
Corporation		
American Electric Power	Yes	
Georgia Transmission Corporation	Yes	
Hydro-Québec TransEnergie (HQT)	Yes	
Duke Energy	Yes	
Northeast Utilities	Yes	
Independent Electricity System Operator	Yes	
American Transmission Company	Yes	

10. Do you agree with the revisions to the Violation Severity Levels in IRO-001-2 as shown in the posted Standard? If not, please explain in the comment area.

Summary Consideration: Several stakeholders suggested revisions to the VSLs for R4 and R5. The RC SDT concurs that improvements are warranted for the VSLs for R4 and R5. The VSLs have been changed accordingly. The VSL for R3 was revised to add the word “issued” before Reliability Directive to match the revised requirement. The VSLs for R4 and R5 were modified to clarify that if the responsible entity did not notify any others, then this is a Severe VSL.

Organization	Yes or No	Question 10 Comment
Northwest LSE Group	No	Only in making the Measures agree with the suggested changes to the requirements above.
Response: The RC SDT thanks you for your comment. The measures were revised to reflect changes to the requirements as necessary.		
Northeast Power Coordinating Council	No	(i) R4: Since failing to issue an alert to 3 entities already attracts a “High” VSL, not doing so for ANY (i.e. failing to issue an alert to all entities) or more than three should attract a “Severe” VSL. We suggest to change the High VSL to: “failed to issue an alert to three, but not all, impacted”. and the Severe VSL to: “failed to issue an alert to any or more than three impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. Some examples may help to make our intent clearer: If there were 3 BAs, TOPs etc. and none were alerted, this would be a “Severe” violation. If there were 6 BAs, TOPs etc. and 3 were not alerted, this would be a “High” violation. In this last case, if 4 BAs, TOPs etc. were not alerted, this would be a “Severe” violation. (ii) (ii) R5: Similar changes as in R4 should also apply to High and Severe in R5.
Response: The RC SDT thanks you for your comment. We concur that improvements are warranted for the VSLs for R4 and R5. The VSLs have been revised per your suggestion accordingly.		
Midwest ISO Standards Collaborators	No	The Commission stated in their order on VSLs in June of 2008 their preference for as many VSLs as possible. We believe two VSLs are possible for R1 based on whether the RC is acting or directing actions to prevent versus mitigate. Failure to mitigate should be Severe. Failure to prevent should be High because if the RC fails to act or direct action to prevent, the Adverse Reliability Impact may still not happen if system conditions change. For the Moderate VSL of R2, please remove the clause “but not all”. It is not necessary.
Response: The RC SDT thanks you for your comment. The VSL for R1 was revised as recommended. There is not a Moderate VSL for R2.		
Liberty Electric Power LLC	No	The VSL's have a "Severe" VSL attached to a GO who fails to inform the RC when the Go becomes aware it is are unable to fully comply with a directive. However, the RC failing to inform two TO's - who potentially could have many

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Organization	Yes or No	Question 10 Comment
		GOs supplying power to their systems - of an emergency is only a "Moderate" VSL.
Response: The RC SDT thanks you for your comment. The VSLs for R4 and R5 have been revised to more closely fit the intent of the requirements.		
E.ON U.S.	No	E.ON U.S. suggests that the VSL for R4 should be binary with the Severe VSL for failing to notify all entities as per R4. Partially meeting R4 is not consistent with the language in R4. E.ON U.S. also suggests that the VSL for R5 should be binary with the Severe VSL for failing to notify all entities as per R5. Partially meeting R5 is not consistent with the language in R5 but the reliability impact of partially meeting R5 is low.
Response: The RC SDT thanks you for your comment. The requirements R4 and R5 are not binary in nature and therefore do not meet the VSL guideline for binary. We have revised the High and Severe VSLs for R4 and R5 (see comment of NPCC above).		
Manitoba Hydro	No	Believe two VSLs are possible for R1 based on whether the RC is acting or directing actions to prevent versus mitigate. Failure to mitigate should be Severe. Failure to prevent should be High because if the RC fails to act or direct action to prevent, the Adverse Reliability Impact may still not happen if system conditions change. For the Moderate VSL of R2, please remove the clause "but not all". It is not necessary.
Response: The RC SDT thanks you for your comment. We concur with your suggestion to split the single VSL into two separate VSLs, one addressing prevention and one mitigation. The VSLs for R1 have been changed accordingly.		
Illinois Municipal Electric Agency	No	IMEA supports the comments submitted by the MISO Standards Collaboration Group.
Response: The RC SDT thanks you for your comment. Please review the response to MISO SCG comments.		
Hydro-Québec TransEnergie (HQT)	No	(i) R4: Since failing to issue an alert to 3 entities already attracts a "High" VSL, not doing so for ANY (i.e. failing to issue an alert to all entities) or more than three should attract a "Severe" VSL. We suggest to change the High VSL to: "failed to issue an alert to three, but not all, impacted". and the Severe VSL to: "failed to issue an alert to any or more than three impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. Some examples may help to make our intent clearer: If there were 3 BAs, TOPs etc. and none were alerted, this would be a "Severe" violation. If there were 6 BAs, TOPs etc. and 3 were not alerted, this would be a "High" violation. In this last case, if 4 BAs, TOPs etc. were not alerted, this would be a "Severe" violation. (ii) R5: Similar changes as in R4 should also apply to High and Severe in R5.
Response: The RC SDT thanks you for your comment. We concur that improvements are warranted for the VSLs for R4 and R5. The VSLs have been		

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Organization	Yes or No	Question 10 Comment
revised as you suggest.		
Northeast Utilities	No	(i) R4: Since failing to issue an alert to 3 entities already attracts a “High” VSL, not doing so for ANY (i.e. failing to issue an alert to all entities) or more than three should attract a “Severe” VSL. We suggest to change the High VSL to: “failed to issue an alert to three, but not all, impacted”. and the Severe VSL to: “failed to issue an alert to any or more than three impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. Some examples may help to make our intent clearer: If there were 3 BAs, TOPs etc. and none were alerted, this would be a “Severe” violation. If there were 6 BAs, TOPs etc. and 3 were not alerted, this would be a “High” violation. In this last case, if 4 BAs, TOPs etc. were not alerted, this would be a “Severe” violation.(ii) R5: Similar changes as in R4 should also apply to High and Severe in R5.
Response: The RC SDT thanks you for your comment. We concur that improvements are warranted for the VSLs for R4 and R5. The VSLs have been revised as you suggested.		
Independent Electricity System Operator	No	(i) R1: For clarity, we suggest changing “it” to “that”.R4: Since failing to issue an alert to 3 entities already attracts a “High” VSL, not doing so for ANY (i.e. failing to issue an alert to all entities) or more than three should attract a “Severe” VSL. We suggest to change the High VSL to: “failed to issue an alert to three, but not all, impacted”. and the Severe VSL to: “failed to issue an alert to any or more than three impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. Some examples may help to make our intent clearer: If there were 3 BAs, TOPs etc. and none were alerted, this would be a “Severe” violation. If there were 6 BAs, TOPs etc. and 3 were not alerted, this would be a “High” violation. In this last case, if 4 BAs, TOPs etc. were not alerted, this would be a “Severe” violation.(ii) R5: Similar changes as in R4 should also apply to High and Severe in R5.
Response: The RC SDT thanks you for your comment. We concur that improvements are warranted for the VSLs for R4 and R5. The VSLs have been revised as you suggested.		
MRO NSRS	No	The Commission stated in their order on VSLs in June of 2008 their preference for as many VSLs as possible. MRO NSRS believes two VSLs are possible for R1 based on whether the RC is acting or directing actions to prevent versus mitigate. Failure to mitigate should be Severe. Failure to prevent should be High because if the RC fails to act or direct action to prevent, the Adverse Reliability Impact may still not happen if system conditions change. For the Moderate VSL of R2, please remove the clause “but not all”. It is not necessary.
Response: The RC SDT thanks you for your comment. We concur with your suggestion to split the single VSL into two separate VSLs, one addressing prevention and one mitigation. The VSLs for R1 have been changed accordingly. There is not a Moderate VSL for R2.		

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Organization	Yes or No	Question 10 Comment
SERC OC Standards Review Group	Yes	
Bonneville Power Administration	Yes	
FirstEnergy	Yes	
PacifiCorp	Yes	
Calpine Corporation	Yes	
Western Area Power Administration	Yes	
Southern Company	Yes	
ReliabilityFirst Corporation	Yes	
American Electric Power	Yes	
Georgia Transmission Corporation	Yes	
Duke Energy	Yes	

11. Do you agree with the revisions to the Requirements in IRO-014-2 as shown in the posted Standard? If not, please explain in the comment area.

Summary Consideration: Stakeholders suggested revising R8 to include provisions for avoiding implementing actions that would violate safety, equipment or regulatory or statutory requirements. The RC SDT agreed and added this to the requirement. Other stakeholders suggested adding "For conditions or activities that impact other Reliability Coordinator Areas,..." at the beginning of R1 and R3. The RC SDT agreed and added this to the requirements. The Time Horizons for R2 were revised as suggested to "*Same Day Operations and Operations Planning*". Several stakeholders expressed concerns regarding having R6-R8 as separate requirements. The intent of R6, R7, and R8 is to handle those things that arise that may not have had a plan identified in advance. The RC SDT contends the requirements are adequate as written.

Organization	Yes or No	Question 11 Comment
Northwest LSE Group		Abstain
Northeast Power Coordinating Council	No	The intents of Requirements R7 and R8 are addressed in R6, and do not add anything. Suggest removing R7 and R8.
Response: The RC SDT thanks you for your comment. The RC SDT developed R5-R8 of IRO-014 from original IRO-016, R1. This was done to eliminate a compound requirement (a requirement that contained multiple separate requirements). Each requirement is different and requires different specific actions. Please see the posted implementation plan for IRO-014 for details. http://www.nerc.com/docs/standards/sar/IRO-014-2_Implementation_Plan_Clean_2009July9.pdf		
SERC OC Standards Review Group	No	Does the STD intend to give a Reliability Coordinator the authority to direct reliability outside their reliability area? This appears to be in conflict with IRO-001.
Response: The RC SDT thanks you for your comment. IRO-014 deals with coordinating plans, processes and procedures ahead of time. The requirements state that RCs will follow these agreed to plans, processes or procedures.		
FirstEnergy	No	See our comments from Questions 8. If IRO-001 R7 is retired and deemed covered by IRO-014 R1, then IRO-014 R1 should include the "mitigation of SOL and IROL violations" as one of the items to be addressed in the RC's Operating Procedure, Process, or Plan.

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Organization	Yes or No	Question 11 Comment
Response: The RC SDT thanks you for your comment. Please see response to question 8. The RC SDT did not make any revisions as this issue is covered by R1.6 relating to Adverse Reliability Impacts.		
IRC Standards Review Committee	No	(1) R2 appropriately requires the RC experiencing the Adverse Reliability Impact to distribute its Operating Procedure, Process or Plan to other RCs required to take action. However, placing the burden on the same RC to obtain the agreement of impacted RCs may not be appropriate since the RC experiencing the Adverse Reliability Impact may not be able to force impacted RC to concur. We suggest the SDT to consider: a. Remove the bullet to require agreement from the impacted RC; b. Add a new requirement that the impacted RC shall acknowledge the Operating Procedure, Process or Plan with agreement or disagreement. In the event of disagreement, a reliability or legal reason or failure to implement comparable actions should be given. (2) We realize that R7 implies that the RC experiencing the Adverse Reliability Impact has come up with an alternative plan when its initial plan was not agreed to, but the alternative may still be disagreed by the impacted RC. Simply implementing the alternative plan, as stipulated in R8, could expose the impacted RC to operate in an unreliable or unsafe domain. We therefore request the SDT to assess if any requirements need to be introduced to resolve this difference with due regard to reliability concerns in both RC areas when agreement cannot be reached even on the alternative plan.
Response: The RC SDT thanks you for your comment. 1) R2 deals with procedures, processes and plans identified and developed ahead of time. If the plan of one RC requires action from another RC, the RC SDT feels it is necessary to get agreement from the second RC to take action, otherwise the plan is not a plan that will maintain reliability. The intent of R6, 7, and 8 is to handle those things that arise that may not have had a plan identified in advance. The RC SDT believes the requirements are adequate as written. 2) We have modified R8 to allow RCs to avoid implementing actions that violate safety, equipment or regulatory or statutory requirement. R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan unless such actions would violate safety, equipment, or regulatory or statutory requirements. . <i>[Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i>		
Midwest ISO Standards Collaborators	No	Requirements R2 and R8 need additional work. R2 appropriately requires the RC experiencing the Adverse Reliability Impact to distribute its Operating Procedure, Process or Plan to other RCs required to take action. However, it inappropriately places the burden on the same RC to obtain the agreement of impacted RCs. No RC can be forced to agree. Rather R2 should remove the bullet to require agreement from the impacted RC and a new requirement should be written to require the impacted RC to acknowledge the Operating Procedure, Process or Plan with agreement or disagreement. In the event of disagreement, a reliability or legal reason or failure to implement comparable actions should be given as the reason for not agreeing with the Operating Process, Procedure or Plan. This contributes to reliability by forcing the impacted RC to take action if the action is reasonable.

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Organization	Yes or No	Question 11 Comment
		Further, the drafting team needs to clarify that R2 also applies to the mitigation plan in R7. Because R7 requires the RC experiencing the Adverse Reliability Impact to develop the mitigation plan, the mitigation plan may not be agreed to by the impacted RC. The impacted RC may have a perfectly valid reliability, statutory, legal, or regulatory reason for not agreeing to the mitigation plan. R8 still obligates the RC to implement the mitigation plan developed in R7 though it may be contrary to reliability. R8 needs to allow the RC to refuse to implement the mitigation plan if the impacted RC has a reliability, statutory, legal or regulatory reason. Further the drafting team should consider if the impacted RC could refuse because the RC experiencing the Adverse Reliability Impact has not implemented comparable measures in their own area. R8 as written could allow an RC to simply pass cost on to the neighboring RC in the name of reliability. For example, the RC may not want to order a unit to be committed to avoid certain startup costs but they ask the neighboring RC to start up a unit in their footprint.
Response: The RC SDT thanks you for your comment. R2 deals with procedures, processes and plans identified and developed ahead of time. If the plan of one RC requires action from another RC, the RC SDT feels it is necessary to get agreement from the second RC to take action, otherwise the plan is not a plan that will maintain reliability. The intent of R6, R7, and R8 is to handle those things that arise that may not have had a plan identified in advance. The RC SDT believes the requirements are adequate as written. R7/R8: We have modified R8 to allow RCs to avoid implementing actions that violate safety, equipment or regulatory or statutory requirement. R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan unless such actions would violate safety, equipment, or regulatory or statutory requirements. . <i>[Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i> The second comment deals with economic issues and not with reliability. We cannot address economic issues, but it would be reasonable to expect that plans developed in advance could include equity considerations. Also, it is possible to postulate a scenario where the RC experiencing the Adverse Reliability Impact may not have actions to take that are effective and the other impacted RC could have very effective actions to take and should take them regardless of whether the RC developing the mitigation plan has taken comparable measures in its own area.		
Southern Company	No	IRO-001-1 Requirement 3 states that, "The Reliability Coordinator shall have clear decision-making authority to act and to direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing- Selling Entities within its Reliability Coordinator Area to preserve the integrity and reliability of the Bulk Electric System." This does not give one RC the authority to direct another RC. Requirement 7 and 8 would allow one RC to give a directive to another RC if they disagree. This would allow an RC with bad information to require another RC to carry out a mitigation plan that could degrade system reliability. For example, RC1 identifies a possible SOL violation in RC2s reliability area due to RC1s generation pattern. RC1 and RC2 can't agree that there is a problem. In order to mitigate the SOL a mitigation plan is developed by RC1 that requires RC2 to redispatch generation and reconfigure transmission in RC2's area so that the generation and transmission in RC1's area won't have

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Organization	Yes or No	Question 11 Comment
		to be redispached or reconfigured. Suggested rewording of R7 and R8 R7. When Reliability Coordinators can not agree that a problem exists a mitigation plan will be developed by each Reliability Coordinator that will restore system reliability in their respective reliability areas. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations] R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed to relieve the identified Adverse Reliability Impact in their reliability area when the impacted Reliability Coordinators can not agree that a problem exists. [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]
Response: The RC SDT thanks you for your comment. IRO-014 deals with coordinating plans, processes and procedures ahead of time. The requirements state that RCs will follow these plans processes or procedures. We have modified R8 to allow RCs to avoid implementing actions that violate safety, equipment or regulatory or statutory requirement. The intent of R6, R7, and R8 is to handle those things that arise that may not have had a plan identified in advance. R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan unless such actions would violate safety, equipment, or regulatory or statutory requirements. . [Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]		
Manitoba Hydro	No	Requirements R2 and R8 need additional work. R2 appropriately requires the RC experiencing the Adverse Reliability Impact to distribute its Operating Procedure, Process or Plan to other RCs required to take action. However, it inappropriately places the burden on the same RC to obtain the agreement of impacted RCs. No RC can be forced to agree. Rather R2 should remove the bullet to require agreement from the impacted RC and a new requirement should be written to require the impacted RC to acknowledge the Operating Procedure, Process or Plan with agreement or disagreement. In the event of disagreement, a reliability or legal reason or failure to implement comparable actions should be given as the reason for not agreeing with the Operating Process, Procedure or Plan. This contributes to reliability by forcing the impacted RC to take action if the action is reasonable. Further, the drafting team needs to clarify that R2 also applies to the mitigation plan in R7. Because R7 requires the RC experiencing the Adverse Reliability Impact to develop the mitigation plan, the mitigation plan may not be agreed to by the impacted RC. The impacted RC may have a perfectly valid reliability, statutory, legal, or regulatory reason for not agreeing to the mitigation plan. R8 still obligates the RC to implement the mitigation plan developed in R7 though it may be contrary to reliability. R8 needs to allow the RC to refuse to implement the mitigation plan if the impacted RC has a reliability, statutory, legal or regulatory reason. Further the drafting team should consider if the impacted RC could refuse because the RC experiencing the Adverse Reliability Impact has not implemented comparable measures in their own area. R8 as written could allow an RC to simply pass cost on to the neighboring RC in the name of reliability. For example, the RC may not want to order a unit to be committed to avoid certain startup costs but they ask the neighboring RC to start up a unit in their footprint.

Organization	Yes or No	Question 11 Comment
Response: The RC SDT thanks you for your comment. R2 deals with procedures, processes and plans identified and developed ahead of time. If the plan of one RC requires action from another RC, the RC SDT feels it is necessary to get agreement from the second RC to take action, otherwise the plan is not a plan that will maintain reliability. The intent of R6, R7, and R8 is to handle those things that arise that may not have had a plan identified in advance. The RC SDT contends the requirements are adequate as written. R8: We have modified R8 to allow RCs to avoid implementing actions that violate safety, equipment or regulatory or statutory requirement. R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan unless such actions would violate safety, equipment, or regulatory or statutory requirements. . <i>[Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i> The second comment deals with economic issues and not with reliability. We cannot address economic issues, but it would be reasonable to expect that plans developed in advance could include equity considerations. Also, it is possible to postulate a scenario where the RC experiencing the Adverse Reliability Impact may not have actions to take that are effective and the other impacted RC could have very effective actions to take and should take them regardless of whether the RC developing the mitigation plan has taken comparable measures in its own area.		
Hydro-Québec TransEnergie (HQT)	No	The intents of Requirements R7 and R8 are addressed in R6, and do not add anything. Suggest removing R7 and R8.
Response: The RC SDT thanks you for your comment. The RC SDT developed R5-R8 of IRO-014 from original IRO-016, R1. This was done to eliminate a compound requirement. Each requirement is different and requires different specific actions. Please see the posted implementation plan for IRO-014 for details. http://www.nerc.com/docs/standards/sar/IRO-014-2_Implementation_Plan_Clean_2009July9.pdf		
Duke Energy	No	R1 introduces the concept of “impacted Reliability Coordinators” which is unclear. Revise R1 as follows: R1. For conditions or activities that may impact other Reliability Coordinator Areas, each Reliability Coordinator shall have Operating Procedures, Processes, or Plans for notification, exchange of information or coordination of actions with those impacted Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following: R2 Time Horizon should not include Long-term Planning. R3 is unclear. Revise R3 as follows: R3. For conditions or activities that may impact other Reliability Coordinator Areas, each Reliability Coordinator shall make notifications and exchange reliability-related information with those impacted Reliability Coordinators using its predefined Operating Procedures, Processes, or Plans, or other available means to

Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Yes or No	Question 11 Comment
		accomplish the notifications and exchange of reliability-related information. R4 could be interpreted to require a weekly conference call even if there is no need for a call. Revise R4 as follows: R4. When there are conditions or activities that may impact other Reliability Coordinator areas, each Reliability coordinator shall participate in agreed upon conference calls, at least weekly, and other communication forums with those impacted Reliability Coordinators.” R5 “ Insert the word “all” before impacted Reliability Coordinators for clarity.” R6, R7 and R8 are interrelated and unclear. Combine these three requirements into one clear requirement as follows: R6. When the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators, the Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan and each impacted Reliability Coordinator shall implement the plan.
Response: The RC SDT thanks you for your comment. R1: We have revised R1 to include the phrase “For conditions or activities that impact other Reliability Coordinator Areas,...” We removed the word “may” to tighten up the requirement. R2: The RC SDT removed Long term Planning and revised the Time Horizon of R2 to match that of R1: <i>Same Day Operations and Operations Planning</i> R3: We have revised R3 to include the phrase “For conditions or activities that impact other Reliability Coordinator Areas,...” We removed the word “may” to tighten up the requirement. R4: The collective experience of the RC SDT members indicates a clear need to have at least weekly conference calls among impacted Reliability Coordinators among impacted Reliability Coordinators. R5: The RC SDT agrees and added the word “all” as suggested. R6-8: These requirements were developed from IRO-016, R1 which was a compound requirement (it contained multiple requirements for different actions in a single requirement). The RC SDT separated these into distinct requirements for clarity and measurability.		
Northeast Utilities	No	The intents of Requirements R7 and R8 are addressed in R6, and do not add anything. Suggest removing R7 and R8.
Response: The RC SDT thanks you for your comment. The RC SDT developed R5-R8 of IRO-014 from original IRO-016, R1. This was done to eliminate a compound requirement (it contained multiple requirements for different actions in a single requirement. Each requirement is different and requires different specific actions. Please see the posted implementation plan for IRO-014 for details. http://www.nerc.com/docs/standards/sar/IRO-014-2_Implementation_Plan_Clean_2009July9.pdf		

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Organization	Yes or No	Question 11 Comment
Independent Electricity System Operator	No	(i) Definition of Adverse Reliability Impact is duplicated as it is already defined in IRO-001-2 (ii) We do not see the need for R7 and R8 since R6 already stipulates the necessary actions to be taken, it is not necessary for the Reliability Coordinator with the identified Adverse Reliability Impact to develop (re-develop?) a mitigation plan when the impacted Reliability Coordinators did not agree that the problem exists. What may be needed is the insertion of “shall develop a mitigation plan” before “notify impacted Reliability Coordinators” in R5. We suggest removing these requirements (R7 and R8).
Response: The RC SDT thanks you for your comment. i)...The SDT acknowledges that the definition of Adverse Reliability Impact is duplicated in IRO-001-2 and in IRO-014-2. The SDT repeated it in the two standards to facilitate review and consistency. When the standards are approved, the definition will be moved into the NERC Glossary of Terms...only once. ii) The RC SDT developed R5-R8 of IRO-014 from original IRO-016, R1. This was done to eliminate a compound requirement (it contained multiple requirements for different actions in a single requirement. Each requirement is different and requires different specific actions. Please see the posted implementation plan for IRO-014 for details. http://www.nerc.com/docs/standards/sar/IRO-014-2_Implementation_Plan_Clean_2009July9.pdf		
MRO NSRS	No	In bullet 2.1 of Requirement R2, what does the requirement that all RCs that are required to take action must agree to it really mean? Does this mean that if the RCs don't agree that in reality an Operating Procedure, Process or Plan doesn't really exist and thus is not subject to R2? Further, how can one RC require another RC to agree with an Operating Procedure, Process or Plan? Either they agree or they don't. Isn't what is really needed is a requirement for the impacted RC to review and acknowledge the plan? That is give it a thumbs up or a thumbs down? In requirement R4, the clause “at least weekly” should be struck. If the RCs agree that a bi-weekly call is sufficient unless conditions change significantly why must they be held to a weekly standard. Our experience has been that most RCs participate in daily calls anyway based on an agreed need. Please strike IRO-014-2 R7 as it is redundant with IRO-001-2 R1. IRO-001-2 R1 already requires that RC with the identified Adverse Reliability Impact to act or direct actions to prevent or mitigate the magnitude or duration of the event. MRO NSRS does not believe IRO-014-2 R8, yet properly considers why the RCs may not agree on a mitigation plan. If RC A develops a mitigation plan for an identified Adverse Reliability Impact on their system and RC B does not agree with RC A's mitigation plan, RC B will be in violation of R8 if they do not follow the mitigation plan. What if the mitigation plan has an Adverse Reliability Impact on RC B's footprint? They should not have to follow the mitigation plan.
Response: The RC SDT thanks you for your comment. Requirement R2 addresses processes, procedures, and plans developed in advance. Such plans reasonably can be expected to contain agreement. The goal is to ensure reliability; refusal to agree based upon equity issues is unacceptable. If inability to agree is based upon differing opinions as to whether the problem exists, then the coordination requirements are out of		

Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Yes or No	Question 11 Comment
compliance. Technical assessments reasonably can be expected to predict the same effects upon the system. The collective experience of the RC SDT members indicates a clear need to have at least weekly conference calls. IRO-014-2 R7 applies to scenarios and coordination between RCs. IRO-001-2 R1 applies to scenarios and coordination between an RC and TOPs, BAs, GOPs, TSPs, LSEs, DPs, and PSEs within its RC Area. The SDT believes it is appropriate to leave both requirements in place. R8: We have modified R8 to allow RCs to avoid implementing actions that violate safety, equipment or regulatory or statutory requirement. R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan unless such actions would violate safety, equipment, or regulatory or statutory requirements. . <i>[Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i>		
Bonneville Power Administration	Yes	
Liberty Electric Power LLC	Yes	
WECC Reliability Coordinator	Yes	
PacifiCorp	Yes	
Calpine Corporation	Yes	
Western Area Power Administration	Yes	
ReliabilityFirst Corporation	Yes	
American Electric Power		Not applicable.

Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Yes or No	Question 11 Comment
Georgia Transmission Corporation		N/A
Response: The RC SDT thanks you for your comment.		

12. Do you agree with the revisions to the Measures in IRO-014-2 as shown in the posted Standard? If not, please explain in the comment area.

Summary Consideration: Stakeholders agreed with the Measures, except to make conforming changes for revisions to the requirements (M1, M3 and M8). The RC SDT has revised the measures based on the new requirements. One stakeholder suggested revision to the Data Retention for R5-R8. Data Retention was revised for R5 to 12 months, however the RC SDT believes that three years is the correct period for R6-8.

Organization	Yes or No	Question 12 Comment
Northwest LSE Group		Abstain
Northeast Power Coordinating Council	No	The intents of Measures M7 and M8 are addressed in M6, and do not add anything. Suggest removing M7 and M8.
Response: The RC SDT thanks you for your comment. R7 and R8 were not removed, therefore the measures will remain in place.		
IRC Standards Review Committee	No	Conforming changes to the Measurements will be required if changes as suggested in Question 11 are introduced.
Response: The RC SDT thanks you for your comment. The measures were revised to conform to the revised requirements.		
Midwest ISO Standards Collaborators	No	Conforming changes to the Measurements will be required for accepted changes from question 11.
Manitoba Hydro	No	Conforming changes to the Measurements will be required for accepted changes from question 11.
Response: The RC SDT thanks you for your comment. The measures were revised to conform to the revised requirements.		
Hydro-Québec TransEnergie (HQT)	No	The intents of Measures M7 and M8 are addressed in M6, and do not add anything. Suggest removing M7 and M8.

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Organization	Yes or No	Question 12 Comment
Response: The RC SDT thanks you for your comment. R7 and R8 were not removed, therefore the measures will remain in place		
Duke Energy	No	Need to revise the Measures to coincide with the recommended changes to the requirements in #11 above. Also under Data Retention, 12 months of evidence is needed for R3, R4 and M3, M4. However 3 years plus the current year is required for R5 through R8 and M5 through M8. We see no reason the data requirements to be different and believe 12 months is the proper amount of data retention.
Response: The RC SDT thanks you for your comment. The measures were revised to conform to the revised requirements. The RC SDT concurs with the suggested revision to Data Retention for R5. The infrequency of occurrences of R6-8 clearly support a 3 year retention period.		
Northeast Utilities	No	The intents of Measures M7 and M8 are addressed in M6, and do not add anything. Suggest removing M7 and M8.
Response: The RC SDT thanks you for your comment. R7 and R8 were not removed, therefore the measures will remain in place		
Independent Electricity System Operator	No	Depending on the response of the SDT, changes to M5 to M8 may be required.
Response: The RC SDT thanks you for your comment. The measures were revised to conform to the revised requirements		
MRO NSRS	No	Conforming changes to the Measurements will be required for accepted changes from question 11.
Response: The RC SDT thanks you for your comment. The measures were revised to conform to the revised requirements		
SERC OC Standards Review Group	Yes	
Bonneville Power Administration	Yes	
FirstEnergy	Yes	
Liberty Electric Power LLC	Yes	

Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Yes or No	Question 12 Comment
WECC Reliability Coordinator	Yes	
PacifiCorp	Yes	
Calpine Corporation	Yes	
Western Area Power Administration	Yes	
Southern Company	Yes	
ReliabilityFirst Corporation	Yes	
American Electric Power		Not applicable.
Georgia Transmission Corporation		N/A

13. Do you agree with the revisions to the Violation Severity Levels in IRO-014-2 as shown in the posted Standard? If not, please explain in the comment area.

Summary Consideration: Several stakeholders suggested developing four VSLs for R5. Typically, in the course of BES operations, impacted Reliability Coordinators will be a small number. The SDT effort in this regard, was to write the VSLs to represent both the large and small scenario containing an Adverse Reliability Impact. The essence of the severe VSL is that the RC did not notify any (as in no one) impacted RC's. As such, it should be severe. The essence of the moderate VSL is that the RC notified one other RC, however did not notify the remaining impacted RC's. The SDT felt the VSL's appropriately addressed the large and small scenarios. Other stakeholders suggested four VSLs for R4. The essence of R4 is written to require impacted RC's to talk at least weekly and is singular in nature. VSL's can not be written for conference calls that exceed the singular requirement.

Organization	Yes or No	Question 13 Comment
Northwest LSE Group		Abstain
Northeast Power Coordinating Council	No	(i) Arguably, all four VSLs could be developed as opposed to just having the Moderate and Severe, if the VSLs are graded according to the number of impacted RCs that need to be notified. For example, Low for missing one, Moderate for missing two, High for missing three, Severe for missing four or more. (ii) We do not have any issue with the binary nature of the VSLs for R6, R7 and R8, but they may need to be revised (wording change and/or removal) depending on the SDT's response to our comments under Q11.
Response: The RC SDT thanks you for your comment. Typically, in the course of BES operations, impacted Reliability Coordinators will be a small number. The SDT effort in this regard, was to write the VSLs to represent both the large and small scenario containing an Adverse Reliability Impact. The essence of the severe VSL is that the RC did not notify any (as in no one) impacted RC's. As such, it should be severe. The essence of the moderate VSL is that the RC notified one other RC, however did not notify the remaining impacted RC's. The SDT felt the VSL's appropriately addressed the large and small scenarios. The RC SDT developed R5-R8 of IRO-014 from original IRO-016, R1. This was done to eliminate a compound requirement (a single requirement that contained multiple requirements). Each requirement is different and requires different specific actions. Please see the posted implementation plan for IRO-014 for details; as such, the VSL's remain.		
IRC Standards Review Committee	No	(1) In the Commission's June 2008 order on VSLs, they expressed their preference for having as many VSLs as possible. We believe that four VSLs could be written for R4 based on the number of conference calls that are participated in. We also believe this would be consistent with the Commission's guideline 4 because the requirement is written in the plural, that is conference calls, so all conference calls must be considered in aggregate. Thus, failure to participate in more than

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Organization	Yes or No	Question 13 Comment
		one conference call does not represent distinct violations but a single violation. (2) Four VSLs should be written for R5 based on the number of RCs notified. Furthermore, the current Severe VSL is redundant with the Moderate VSL. Failure to notify one RC meets both VSL since Severe uses the word any. Note: CAISO abstains from these comments.
Response: The RC SDT thanks you for your comment. 1) The Commission's June 2008 stated a preference for as many as possible, however the SDT believes the essence of this statement was to write multiple VSLs only where appropriate, not to do so simply because it is possible. Further, the essence of R4 is written to require impacted RC's to talk at least weekly and is singular in nature. VSL's can not be written for conference calls that exceed the singular requirement. 2) Typically, in the course of BES operations, impacted Reliability Coordinators will be a small number. The SDT effort in this regard, was to write the VSLs to represent both the large and small scenario containing an Adverse Reliability Impact. The essence of the severe VSL is that the RC did not notify any (as in no one) impacted RC's. As such, it should be severe. The essence of the moderate VSL is that the RC notified one other RC, however did not notify the remaining impacted RC's. The SDT felt the VSL's appropriately addressed the large and small scenarios.		
Midwest ISO Standards Collaborators	No	In the Commission's June 2008 order on VSLs, they expressed their preference for having as many VSLs as possible. We believe that four VSLs could be written for R4 based on the number of conference calls that are participated in. We also believe this would be consistent with the Commission's guideline 4 because the requirement is written in the plural, that is conference calls, so all conference calls must be considered in aggregate. Thus, failure to participate in more than one conference call does not represent distinct violations but a single violation. Four VSLs should be written for R5 based on the number of RCs notified. Furthermore, the current Severe VSL is redundant with the Moderate VSL. Failure to notify one RC meets both VSL since Severe uses the word any.
Response: The RC SDT thanks you for your comment. The Commission's June 2008 stated a preference for as many as possible, however the SDT believes the essence of this statement was to write multiple VSLs only where appropriate, not to do so simply because it is possible. Further, the essence of R4 is that it is written to require impacted RC's to talk at least weekly and is singular in nature. VSL's can not be written for conference calls that exceed the singular requirement. Typically, in the course of BES operations, impacted Reliability Coordinators will be a small number. The SDT effort in this regard, was to write the VSL to represent both the large and small scenario containing an Adverse Reliability Impact. The essence of the severe VSL is that the RC did not notify any (as in no one) impacted RC's. As such, it should be severe. The essence of the moderate VSL is that the RC notified one other RC, however did not notify the remaining impacted RC's. The SDT felt the VSL's appropriately addressed the large and small scenarios.		
Southern Company	No	Reliability problems identified in other reliability areas are based on modeling information obtained from another reliability region. The fact that one RC will not agree that the model of an adjacent RC's reliability area may be more accurate than their model of the adjacent reliability area is no reason to impose a severe violation on the RC with the more accurate

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Organization	Yes or No	Question 13 Comment
		model of their own reliability region. Example: RC1 identifies a contingency overload of a transformer bank in an adjacent reliability area. The transformer bank was replaced the week before with a larger bank. When RC1 contacts RC2, RC2 explains that the bank overload is not valid because of the replacement. RC2 does not identify a problem due to the fact that the model RC2 is using has been updated with the new transformer bank. RC1 will not agree and requires RC2 to open a tie line with another reliability area to relieve the contingency overload. If RC2 does not follow the instructions of RC1, making the interconnection weaker to relieve a problem that does not exist, RC2 is out of compliance and a severe violation will be imposed.
Response: The RC SDT thanks you for your comment. The scenario you describe is essentially a modeling problem, as such the discrepancy would be vetted and corrected during the discovery phase. Further, an RC1 cannot tell RC2 how to rate facilities owned by entities within the RC2 area. The SDT believes that your scenario would play out like this: RC1 calls RC2 and says, “we show an overload on transformer bank X.” RC2 says, “we do not, what rating are you using?” RC1 replies with the old rating, RC2 states that it is wrong, and here is the correct rating, which RC1 implements, problem solved. RC1 cannot come back and say the rating that you have for transformer bank X is incorrect. Each entity within the RC Area (TO or GO) is responsible for the rating of the facilities it owns. (Taking the scenario even farther, if RC1 believes that the TO or GO has an incorrect rating, then RC1 can challenge the rating methodology of that TO or GO under the FAC standards.)		
Manitoba Hydro	No	Believe that four VSLs could be written for R4 based on the number of conference calls that are participated in. Four VSLs should be written for R5 based on the number of RCs notified. Furthermore, the current Severe VSL is redundant with the Moderate VSL. Failure to notify one RC meets both VSL since Severe uses the word any.
Response: The RC SDT thanks you for your comment. In regards to R4: The essence of R4 is that it is written to require impacted RC's to talk at least weekly and is singular in nature. VSL's can not be written for conference calls that exceed the singular requirement. In regards to R5: Typically, in the course of BES operations, impacted Reliability Coordinators will be a small number. The SDT effort in this regard, was to write the VSL to represent a typical scenario containing an Adverse Reliability Impact. The essence of the severe VSL is that the RC did not notify any (as in no one) impacted RC's. As such, it should be severe. The essence of the moderate VSL is that the RC notified one other RC, however did not notify the remaining impacted RC's.		
Hydro-Québec TransEnergie (HQT)	No	(i) Arguably, all four VSLs could be developed as opposed to just having the Moderate and Severe, if the VSLs are graded according to the number of impacted RCs that need to be notified. For example, Low for missing one, Moderate for missing two, High for missing three, Severe for missing four or more. (ii) We do not have any issue with the binary nature of the VSLs for R6, R7 and R8, but they may need to be revised (wording change and/or removal) depending on the SDT's response to our comments under Q11.
Response: The RC SDT thanks you for your comment. Typically, in the course of BES operations, impacted Reliability Coordinators will be a		

Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Yes or No	Question 13 Comment
small number. The SDT effort in this regard, was to write the VSL to represent both the large and small scenario containing an Adverse Reliability Impact. The essence of the severe VSL is that the RC did not notify any (as in no one) impacted RC's. As such, it should be severe. The essence of the moderate VSL is that the RC notified one other RC, however did not notify the remaining impacted RC's. The SDT felt the VSL's appropriately addressed the large and small scenarios. The RC SDT developed R5-R8 of IRO-014 from original IRO-016, R1. This was done to eliminate a compound requirement (a single requirement that contained multiple requirements). Each requirement is different and requires different specific actions. Please see the posted implementation plan for IRO-014 for details; as such, the VSL's remain.		
Duke Energy	No	Need to revise the VSLs to coincide with recommended changes to the requirements in #11 above.
Response: The RC SDT thanks you for your comment. The VSLs were modified to align with changes made to the requirements. Please see the response to #11. The SDT adopted several, but not all of your suggestions.		
Northeast Utilities	No	(i) Arguably, all four VSLs could be developed as opposed to just having the Moderate and Severe, if the VSLs are graded according to the number of impacted RCs that need to be notified. For example, Low for missing one, Moderate for missing two, High for missing three, Severe for missing four or more.(ii) We do not have any issue with the binary nature of the VSLs for R6, R7 and R8, but they may need to be revised (wording change and/or removal) depending on the SDT's response to our comments under Q11.
Response: The RC SDT thanks you for your comment. Typically, in the course of BES operations, impacted Reliability Coordinators will be a small number. The SDT effort in this regard, was to write the VSL to represent both the large and small scenario containing an Adverse Reliability Impact. The essence of the severe VSL is that the RC did not notify any (as in no one) impacted RC's. As such, it should be severe. The essence of the moderate VSL is that the RC notified one other RC, however did not notify the remaining impacted RC's. The SDT felt the VSL's appropriately addressed the large and small scenarios. The RC SDT developed R5-R8 of IRO-014 from original IRO-016, R1. This was done to eliminate a compound requirement (a single requirement that contained multiple requirements). Each requirement is different and requires different specific actions. Please see the posted implementation plan for IRO-014 for details; as such, the VSL's remain.		
Independent Electricity System Operator	No	(i) Arguably, all four VSLs could be developed as opposed to just having the Moderate and Severe if the VSLs are graded according to then number of impacted RCs that need to be notified. For example, Low for missing one, Moderate for missing two, High for missing three, Severe for missing four or more.(ii) We do not have any issue with the binary nature of the VSLs for R6, R7 and R8, but they may need to be revised (wording change and/or removal) depending on the SDT's response to our comments under Q11.
Response: The RC SDT thanks you for your comment. Typically, in the course of BES operations, impacted Reliability Coordinators will be a		

Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Yes or No	Question 13 Comment
small number. The SDT effort in this regard, was to write the VSL to represent both the large and small scenario containing an Adverse Reliability Impact. The essence of the severe VSL is that the RC did not notify any (as in no one) impacted RC's. As such, it should be severe. The essence of the moderate VSL is that the RC notified one other RC, however did not notify the remaining impacted RC's. The SDT felt the VSL's appropriately addressed the large and small scenarios. The RC SDT developed R5-R8 of IRO-014 from original IRO-016, R1. This was done to eliminate a compound requirement (a single requirement that contained multiple requirements). Each requirement is different and requires different specific actions. Please see the posted implementation plan for IRO-014 for details; as such, the VSL's remain.		
MRO NSRS	No	In the Commission's June 2008 order on VSLs, they expressed their preference for having as many VSLs as possible. The MRO NSRS believes that four VSLs could be written for R4 based on the number of conference calls that are participated in. We also believe this would be consistent with the Commission's guideline 4 because the requirement is written in the plural, that is conference calls, so all conference calls must be considered in aggregate. Thus, failure to participate in more than one conference call does not represent distinct violations but a single violation. Four VSLs should be written for R5 based on the number of RCs notified. Furthermore, the current Severe VSL is redundant with the Moderate VSL. Failure to notify one RC meets both VSL since Severe uses the word any.
Response: The RC SDT thanks you for your comment. The Commission's June 2008 stated a preference for as many as possible, however the SDT believes the essence of this statement was to write multiple VSLs only where appropriate, not to do so simply because it is possible. Further, the essence of R4 is written to require impacted RC's to talk at least weekly and is singular in nature. VSL's can not be written for conference calls that exceed the singular requirement. Typically, in the course of BES operations, impacted Reliability Coordinators will be a small number. The SDT effort in this regard, was to write the VSLs to represent both the large and small scenario containing an Adverse Reliability Impact. The essence of the severe VSL is that the RC did not notify any (as in no one) impacted RC's. As such, it should be severe. The essence of the moderate VSL is that the RC notified one other RC, however did not notify the remaining impacted RC's. The SDT felt the VSL's appropriately addressed the large and small scenarios.		
SERC OC Standards Review Group	Yes	
Bonneville Power Administration	Yes	
FirstEnergy	Yes	

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Organization	Yes or No	Question 13 Comment
Liberty Electric Power LLC	Yes	
WECC Reliability Coordinator	Yes	
PacifiCorp	Yes	
Calpine Corporation	Yes	
Western Area Power Administration	Yes	
ReliabilityFirst Corporation	Yes	
American Electric Power		Not applicable.
Georgia Transmission Corporation		N/A

14.If you have any other comments, not expressed in questions above, for the RC SDT on any of the other changes made to this set of standards and their associated implementation plans, please provide them here.

Summary Consideration: Stakeholders suggested removing the Distribution provider and Generator Operator from the Data Retention section for R1 of COM-001. Since these are not applicable entities in R1, they were removed from Data Retention for the requirement.

Organization	Question 14 Comment
Northeast Power Coordinating Council	NPCC appreciates the work of the Drafting Team. No additional comments.
Response: The RC SDT thanks you for your comment.	
SERC OC Standards Review Group	"The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Standards Review group only and should not be construed as the position of SERC Reliability Corporation, its board or its officers."
Response: The RC SDT thanks you for your comment.	
Bonneville Power Administration	Issue #2: Data Retention Why would the Distribution Provider and Generator Operator be required to store historical data (three years in the case of Requirement R1 and Measure M1; twelve months in the case of Requirement R2 and Measure M2) to show that these requirements and measures have been successfully implemented when these two entities (Distribution Provider and Generator Operator) aren't even included either in Requirements R1 and R2 or in Measure M1 and M2?It would appear that they should only have to provide historical data for three months as required by the data retention time for Requirement 3 and Measure 3. Issue #1: Data Retention: The first bullet in this section states that all entities are responsible for retaining documents associated with all Requirements and Measures associated with this standard. In reality, Requirements R1, R4, R5 and R6 and the corresponding Measures are the responsibility of the Reliability Coordinator. Requirements R2 and R3 and their corresponding Measures are implemented by the Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider, Transmission Service Provider, Purchasing-Selling Entity and the Load Serving Entity. The Data Retention section should be rewritten to reflect this so that entities are not required to maintain documents that they aren't suppose to even possess in some cases.
Response: The RC SDT thanks you for your comment. COM-001 removed DP and GOP from the data retention section regarding R1 and R2. IRO-001-2 changed "all" to "applicable."	

Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Question 14 Comment
IRC Standards Review Committee	AESO abstains from commenting on VSLs. VSLs for Alberta will be developed by provincial authorities.
Response: The RC SDT thanks you for your comment.	
E.ON U.S.	COM-001-2 R1 and R2 and the associated M1 and M2 are only applicable to the RC, TOP and BA but the “Data Retention” for R1/R2 and M1/M2 require the DP and GOP to retain data for the Requirements and Measures. E.ON U.S. suggests that the requirement for data retention of the DP and GOP be eliminated from the standard.
Response: The RC SDT thanks you for your comment. COM-001 removed DP and GOP from the data retention section regarding R1 and R2.	
Illinois Municipal Electric Agency	In order to minimize the number of reliability standards and the details covered in requirements - particularly those dealing with communications - it is recommended that an up-front provision/requirement be included as part of the compliance registration process that certain functional entities (e.g., DP, LSE, PSE, etc.) shall be responsible for providing the necessary information to transact services and for complying with the directives/requests of certain functional authorities (e.g., BA, PC, RC, etc.) in order to maintain/enhance reliability of the BES.
Response: The RC SDT thanks you for your comment. The registration process is not in the scope of this SDT project	
Northeast Utilities	Northeast Utilities appreciates the work of the Drafting Team. No additional comments.
Response: The RC SDT thanks you for your comment.	
Independent Electricity System Operator	In our comments on the previous posting, we expressed a disagreement with a proposed to remove IRO-005, in particular the latter part of R13, which stipulated that: In instances where there is a difference in derived limits, the Reliability Coordinator and its Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities shall always operate the Bulk Electric System to the most limiting parameter. Our rationale was that The FAC standards cover the methodology used in calculating SOLs and IROLs. Regardless of how these limits are calculated, in practice there always exists the possibility that different entities may come up with SOLs/IROLs, especially of the inter-ties, that could be different. Operating to the lowest SOLs/IROLs when more than one set exists is a necessary requirement for reliable operation. The SDT responded by suggesting that this requirement is redundant with FAC-014 which -014 states the requirement for developing and sharing SOL and IROL between the RC, PA, TP and TOP in both the planning and operating time frames. However, this response fails to address the situation where during operation, the situation of disagreeing SOLs or IROLs does arise. FAC-014 or any other standards do not currently have a requirement to ensure that all entities operate to the lower limit before the difference is resolved. This leaves room for unreliable operation. We suggest the SDT to consider restating this requirement somewhere. Note that this requirement is similar to R6 of IRO-014

Consideration of Comments on Project 2006-06 Reliability Coordination

Organization	Question 14 Comment
	that when in doubt, the more conservative approach should be taken. If it is necessary to have an R6 to deal with an uncertain identification/notification of an Adverse Reliability Impact, we don't see why it is not necessary to operate to a lower SOL or IROL when there is an unresolved difference.
Response: The RC SDT thanks you for your comment. The SDT team still feels this is covered in FAC-010, 011, and 14. For real-time operations, as you mention, this is covered with IRO-014, R6	

Standard Development Roadmap

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed:

1. Draft SAR Version 1 posted January 15, 2007
2. Draft SAR Version 1 Comment Period ended February 14, 2007
3. Draft SAR Version 2 and comment responses on SAR version 1 posted March 19, 2007
4. Draft Version 2 SAR comment period ended April 17, 2007
5. SAR version 2 and comment responses for SAR version 2 accepted by SC and SDT appointed in June 2007.
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7. Draft Version 2 of standards and response to comments September 16, 2008–May 26, 2009.
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9. RCSDT coordinated with OPCP SDT and RTO SDT on definitions relating to directives and three part communication and Draft Version 3 of standards and response to comments August 9–November 20, 2009.

Proposed Action Plan and Description of Current Draft:

The SDT began working on revisions to the standards in August 2007. The current posting contains revisions based on stakeholder comments on the second draft. The team is seeking comments on the revised standards.

Future Development Plan:

Anticipated Actions	Anticipated Date
1. Respond to comments on third posting	March 2010
2. Post Standards for pre-ballot period.	April 2010
3. Standards posted for initial and recirculation ballots.	May 2010
4. Standards sent to BOT for approval.	July 2010
5. Standards filed with regulatory authorities.	September 2010

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

The RC SDT proposes modifying the following approved definition:

Adverse Reliability Impact : The impact of an event that results in Bulk Electric System instability; uncontrolled separation or Cascading.

Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.

This defined term is contained in draft COM-002-2 and IRO-001-2.

As a reference, we have included the existing definition of Emergency:

Emergency: Any abnormal system condition that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System.

A. Introduction

1. **Title:** Reliability Coordination – Responsibilities and Authorities
2. **Number:** IRO-001-2
3. **Purpose:** To establish requirements for issuance of and compliance with Reliability Coordinator Reliability Directives or notification within the Reliability Coordinator Areas.
4. **Applicability**
 - 4.1. Reliability Coordinators.
 - 4.2. Transmission Operators.
 - 4.3. Balancing Authorities.
 - 4.4. Generator Operators.
 - 4.5. Transmission Service Providers.
 - 4.6. Load-Serving Entities.
 - 4.7. Distribution Providers.
 - 4.8. Purchasing-Selling Entities.
5. **Effective Date:** In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees approval.

B. Requirements

- R1. Each Reliability Coordinator shall act or issue Reliability Directives for actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts. *[Violation Risk Factor: High][Time Horizon: Real-time Operations and Same Day Operations]*
- R2. Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity shall comply with its Reliability Coordinator's Reliability Directives unless such actions would violate safety, equipment, or regulatory or statutory requirements. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations]*
- R3. Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity shall inform its Reliability Coordinator upon recognition of its inability to perform an issued Reliability Directive. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations]*
- R4. Each Reliability Coordinator that identifies an expected or actual threat with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

- R5.** Each Reliability Coordinator that identifies an expected or actual threat with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when the transmission problem has been mitigated. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*
- R6.** Each Reliability Coordinator shall provide its Operating Personnel with the authority to veto planned outages to its own analysis tools. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

C. Measures

- M1.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it has acted, or issued Reliability Directive(s), to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts within its Reliability Coordinator Area. (R1)
- M2.** Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider and Purchasing-Selling Entity shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it complied with its Reliability Coordinator's Reliability Directive(s) unless such actions would have violated safety, equipment, or regulatory or statutory requirements. (R2)
- M3.** Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider or Purchasing-Selling Entity shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it that it informed the Reliability Coordinator of its inability to comply with its Reliability Coordinator's issued Reliability Directive(s). (R3)
- M4.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it notified all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when it identified a real or potential threat with Adverse Reliability Impacts, within its Reliability Coordinator Area. (R4)
- M5.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it notified all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when a real or potential threat with Adverse Reliability Impacts within its Reliability Coordinator Area had been mitigated. (R5)
- M6.** Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a documented procedure or equivalent evidence that will be used to confirm that the Reliability Coordinator has provided its Operating Personnel with the authority to veto planned outages of its own analysis tools. (R6)

D. Compliance

- 1.** Compliance Monitoring Process
 - 1.1.** Compliance Enforcement Authority

Regional Entity

1.2. Compliance Monitoring and Enforcement Processes:

Compliance Audits

Self-Certifications

Spot Checking

Compliance Violation Investigations

Self-Reporting

Complaints

1.3. Data Retention

The Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider, Transmission Service Provider, Purchasing-Selling Entity or Load Serving Entity shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- o The Reliability Coordinator, Transmission Operator, Balancing Authority, Generator operator, Distribution Provider, Transmission Service Provider, Purchasing-Selling Entity or Load Serving Entity shall retain its current, in force document and any documents in force since the last compliance audit for applicable Requirements and Measures.
- o If a Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider, Transmission Service Provider, Purchasing-Selling Entity or Load Serving Entity is found non-compliant, it shall keep information related to the non-compliance until found compliant.
- o The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

1.4. Additional Compliance Information

None.

2. Violation Severity Levels

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	N/A	N/A	The Reliability Coordinator failed to act or issue Reliability Directive(s) for actions to be taken to prevent Adverse Reliability Impacts.	The Reliability Coordinator failed to act or issue Reliability Directive(s) for actions to be taken to mitigate the magnitude or duration of Adverse Reliability Impacts.
R2	N/A	N/A	N/A	The responsible entity did not follow the Reliability Coordinator's Reliability Directive.
R3	N/A	N/A	N/A	The responsible entity failed to inform its Reliability Coordinator upon recognition of the inability to perform the issued Reliability Directive.
R4	The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to one, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.	The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to two, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.	The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to three, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.	The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to any or more than three impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.
R5	The Reliability Coordinator failed to notify one, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.	The Reliability Coordinator failed to notify two, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.	The Reliability Coordinator failed to notify three, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.	The Reliability Coordinator failed to notify any or more than three impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.

Standard IRO-001-2 Reliability Coordination — Responsibilities and Authorities

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R6	N/A	N/A	N/A	The Reliability Coordinator failed to provide its Operating Personnel with the authority to veto planned outages of its own analysis tools.

regional
reliability
plan is a
“how”
document
that shows

Standard IRO-001-2 Reliability Coordination — Responsibilities and Authorities

E. Regional Variances

None identified.

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
1	April 4, 2007	Approved by FERC — Effective Date	New
2	TBD	Revised per SAR for project 2006-6, reliability Coordination; added VRFs and VSLs as approved from VRF and VSL projects	Revised

Standard Development Roadmap

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed:

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Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

The RC SDT proposes modifying the following approved definition:

Adverse Reliability Impact – The impact of an event that results in Bulk Electric System frequency-related instability; ~~unplanned tripping of load or generation; or uncontrolled separation or Cascading outages that affects a widespread area of the Interconnection.~~

Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.

This defined term is contained in draft COM-002-2 and IRO-001-2.

As a reference, we have included the existing definition of Emergency:

Emergency: Any abnormal system condition that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System.

A. Introduction

1. **Title:** Reliability Coordination – Responsibilities and Authorities
2. **Number:** IRO-001-2
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 - 4.3. Balancing Authorities.
 - 4.4. Generator Operators.
 - 4.5. Transmission Service Providers.
 - 4.6. Load-Serving Entities.
 - 4.7. Distribution Providers.
 - 4.8. Purchasing-Selling Entities.
5. **Effective Date:** In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees approval.

B. Requirements

- R1. Each Reliability Coordinator shall act or issue Reliability Directives for ~~direct~~ actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts. *[Violation Risk Factor: High][Time Horizon: Real-time Operations and Same Day Operations]*
- R2. Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity shall comply with its Reliability Coordinator's Reliability Directives unless such actions would violate safety, equipment, or regulatory or statutory requirements. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations]*
- R3. Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity shall inform its Reliability Coordinator upon recognition of its inability to perform an issued Reliability Directive. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations]*
- R4. Each Reliability Coordinator that identifies an expected or actual threat with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

- R5.** Each Reliability Coordinator that identifies an expected or actual threat with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when the transmission problem has been mitigated. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*
- R6.** Each Reliability Coordinator shall provide its Operating Personnel with the authority to veto planned outages to its own analysis tools. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

C. Measures

- M1.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it has acted, or issued [Reliability Directive\(s\)](#), to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts within its Reliability Coordinator Area. (R1)
- M2.** Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider and Purchasing-Selling Entity shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it complied with its Reliability Coordinator's [Reliability Directive\(s\)](#) unless such actions would have violated safety, equipment, or regulatory or statutory requirements. (R2)
- M3.** Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider or Purchasing-Selling Entity shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it that it informed the Reliability Coordinator of its inability to comply with its Reliability Coordinator's [issued Reliability Directive\(s\)](#). (R3)
- M4.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it notified all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when it identified a real or potential threat with Adverse Reliability Impacts, within its Reliability Coordinator Area. (R4)
- M5.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it notified all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when a real or potential threat with Adverse Reliability Impacts within its Reliability Coordinator Area had been mitigated. (R5)
- M6.** Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a documented procedure or equivalent evidence that will be used to confirm that the Reliability Coordinator has provided its Operating Personnel with the authority to veto planned outages of its own analysis tools. (R6)

D. Compliance

- 1.** Compliance Monitoring Process
 - 1.1.** Compliance Enforcement Authority

Regional Entity

1.2. Compliance Monitoring and Enforcement Processes:

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The Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider, Transmission Service Provider, Purchasing-Selling Entity or Load Serving Entity shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- o The Reliability Coordinator, Transmission Operator, Balancing Authority, Generator operator, Distribution Provider, Transmission Service Provider, Purchasing-Selling Entity or Load Serving Entity shall retain its current, in force document and any documents in force since the last compliance audit for [applicable](#) Requirements and Measures.
- o If a Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider, Transmission Service Provider, Purchasing-Selling Entity or Load Serving Entity is found non-compliant, it shall keep information related to the non-compliance until found compliant.
- o The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

1.4. Additional Compliance Information

None.

2. Violation Severity Levels

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	N/A	N/A	<u>The Reliability Coordinator failed to act or issue Reliability Directive(s) for actions to be taken to prevent Adverse Reliability Impacts.</u> ~~N/A~~	The Reliability Coordinator failed to act or <u>issue Reliability Directive(s) for actions to be taken to prevent</u> ~~or~~ mitigate the magnitude or duration of Adverse Reliability Impacts.
R2	N/A	N/A	N/A	The responsible entity did not follow the Reliability Coordinator's <u>Reliability Directive</u> . ~~per requirement 2.~~
R3	N/A	N/A	N/A	The responsible entity failed to inform ~~the~~ <u>its</u> Reliability Coordinator upon recognition of the inability to perform the <u>issued Reliability Directive</u> .
R4	The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to one, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.	The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to two, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.	The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to three ~~or more~~ , but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.	The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to <u>any or more than three</u> ~~all~~ impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.

Requirement	Lower VSL	Moderate VSL	High VSL	Severe VSL
R5	The Reliability Coordinator failed to notify one, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.	The Reliability Coordinator failed to notify two, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.	The Reliability Coordinator failed to notify three ~~or more~~ , but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.	The Reliability Coordinator failed to notify <u>any or more than three</u> ~~all~~ impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.
R6	N/A	N/A	N/A	The Reliability Coordinator failed to provide its Operating Personnel with the authority to veto planned outages of its own analysis tools.

E. Regional Variances

None identified.

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
1	April 4, 2007	Approved by FERC — Effective Date	New
2	TBD	Revised per SAR for project 2006-6, reliability Coordination; added VRFs and VSLs as approved from VRF and VSL projects	Revised

Implementation Plan for IRO-001-2 — Reliability Coordination — Responsibilities and Authorities

Revisions to Defined Terms in the NERC Glossary:

The Reliability Coordination Standard Drafting Team proposes modifying the following approved definition:

Adverse Reliability Impact — The impact of an event that results in Bulk Electric System instability uncontrolled separation, or Cascading.

The RC SDT proposes the following new definition:

Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.

Prerequisite Approvals

- None

Conforming Changes to Requirements in Already Approved Standards

- IRO-005, R15 is being incorporated into IRO-001-2.
- IRO-002, R9 is being incorporated into IRO-001-2 and revised.

Revision Summary

The RC SDT revised the standard and is proposing retiring several requirements (R1, R2, R4, R5, R6, R7 and R10). Changes were made to eliminate redundancies between standards (existing and proposed), to align with NERC's Rules of Procedure and to address issues in FERC Order 693.

Revisions or Retirements to Already Approved Standards

The following tables identify the sections of approved standards that shall be retired or revised when this standard is implemented. If the drafting team is recommending the retirement or revision of a requirement, that text is blue.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R1. Each Regional Reliability Organization, subregion, or interregional coordinating group shall establish one or more Reliability Coordinators to continuously assess transmission reliability and coordinate emergency operations among the operating entities within the region and across the regional boundaries. <i>[Violation Risk Factor: High]</i>	None – The RC SDT proposes retiring this requirement.
Notes: The RC SDT proposes that original IRO-001-1, R1 should be retired from the standard and addressed in NERC Rules of Procedure, Section 503, item 2.2: “Regional entities shall verify that all balancing authorities and transmission operators are under the responsibility of a reliability coordinator”.	

Implementation Plan for IRO-001-2 — Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R2. The Reliability Coordinator shall comply with a regional reliability plan approved by the NERC Operating Committee. <i>[Violation Risk Factor: High]</i> R5. The Reliability Coordinator shall list within its reliability plan all entities to which the Reliability Coordinator has delegated required tasks. <i>[Violation Risk Factor: Lower]</i>	None – The RC SDT proposes retiring these requirements.
Notes: The RC SDT proposes retiring R2 and R5 as the regional reliability plan is a “how” document that shows how an RC will comply with all other NERC Standards, making this requirement redundant.	

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R3. The Reliability Coordinator shall have clear decision-making authority to act and direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities and Purchasing-Selling Entities within its Reliability Coordinator Area to preserve the integrity and reliability of the Bulk Electric System. These actions shall be taken without delay, but no longer than 30 minutes. <i>[Violation Risk Factor: High]</i>	IRO-001-2 R1. Each Reliability Coordinator shall act or issue Reliability Directives for actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations and Same Day Operations]</i>
Notes: • The RC SDT is proposing to remove the blue text in the first sentence. • The RC SDT is proposing that the last sentence of R3 be retired. The timing of RC response to events varies based on system conditions. The specific timing criteria for responses to IROLs are contained in other standards (e.g., TOP-007, R2). ▪ The Distribution Provider was added as an applicable entity per FERC Order 693.	

Implementation Plan for IRO-001-2 — Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R4. Reliability Coordinators that delegate tasks to other entities shall have formal operating agreements with each entity to which tasks are delegated. The Reliability Coordinator shall verify that all delegated tasks are understood, communicated, and addressed within its Reliability Coordinator Area. All responsibilities for complying with NERC and regional standards applicable to Reliability Coordinators shall remain with the Reliability Coordinator. <i>[Violation Risk Factor: Medium]</i>	None – retire the requirement RC SDT proposes that original IRO-001-1, R4 is redundant with NERC Rules of Procedure, section 500 and should be retired from the standard. Section 501 states: “The purpose of the compliance registry will be to clearly identify those entities that are responsible for compliance with reliability standards. Organizations listed on the registry will be responsible for knowing the content of and for complying with the NERC reliability standards.” Also, section 507, item 2 addresses written agreements; Joint registration pursuant to written agreement. “Where a JRO and any of its members or related entities agree, in writing, upon a division of compliance responsibility among them for one or more reliability standard(s) applicable to a particular function, and/or for one or more requirements within particular reliability standard(s), both the JRO and such member(s) or related entit(ies) shall register as an organization responsible for that function. The JRO and its member(s) or related entit(ies) must have a written agreement that clearly specifies their respective responsibilities, which shall be submitted as part of the joint registration. Neither NERC nor the regional entity shall be parties to any such agreement between a JRO and its member or related entit(ies), nor shall NERC or the regional entity have responsibility for reviewing or approving any such agreement, other than to verify that the agreement provides for an allocation or assignment of responsibilities consistent with the joint registration.”
Notes: The RC SDT recommends the retirement of IRO-001-1 R4.	

Implementation Plan for IRO-001-2 — Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R6. The Reliability Coordinator shall verify that all delegated tasks are carried out by NERC-certified Reliability Coordinator operating personnel. <i>[Violation Risk Factor: Medium]</i>	None – retire requirement because it is redundant with: PER-003-0 R1. Each Transmission Operator, Balancing Authority, and Reliability Coordinator shall staff all operating positions that meet both of the following criteria with personnel that are NERC certified for the applicable functions: R1.1. Positions that have the primary responsibility, either directly or through communications with others, for the real-time operation of the interconnected Bulk Electric System. R1.2. Positions directly responsible for complying with NERC standards.
Notes: The RC SDT recommends retiring IRO-001-1 R6 as it is redundant with PER-003-0 R1.	

Implementation Plan for IRO-001-2 — Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R7. The Reliability Coordinator shall have clear, comprehensive coordination agreements with adjacent Reliability Coordinators to ensure that System Operating Limit (SOL) or Interconnection Reliability Operating Limit (IROL) violation mitigation requiring actions in adjacent Reliability Coordinator Areas are coordinated. <i>[Violation Risk Factor: High]</i>	None – requirement should be retired because it is redundant with: IRO-014-1 R1. For conditions or activities that impact other Reliability Coordinator Areas, each Reliability Coordinator shall have Operating Procedures, Processes, or Plans for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following: .
Notes: The RC SDT recommends the retirement of IRO-001-1 R7 as this is redundant with IRO-014-1 R1.	

Implementation Plan for IRO-001-2 — Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R8: Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities shall comply with Reliability Coordinator directives unless such actions would violate safety, equipment, or regulatory or statutory requirements. Under these circumstances, the Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, or Purchasing-Selling Entity shall immediately inform the Reliability Coordinator of the inability to perform the directive so that the Reliability Coordinator may implement alternate remedial actions. <i>[Violation Risk Factor: High]</i>	IRO-001-2 R2. Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity shall comply with its Reliability Coordinator's Reliability Directives unless such actions would violate safety, equipment, or regulatory or statutory requirements. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations]</i> R3. Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider and Purchasing-Selling Entity shall inform its Reliability Coordinator upon recognition of its inability to perform an issued Reliability Directive. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations]</i> R4. Each Reliability Coordinator that identifies an expected or actual threat with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify, all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i>
Notes: The RC SDT added the Distribution Provider per FERC Order 693 and added the blue text shown in the requirements above. The RC SDT proposes the replacement of IRO-001-1, R8 with three requirements IRO-001-2, R2, R3, and R4. This will add clarity and measurability to the standard. The last part of the second sentence should be removed as it is implicit in R1, which states that the Reliability Coordination will act or direct actions to mitigate issues. Stakeholders indicated issues with the ability to measure compliance with the phrase, "without intentional delay" and this was removed. Relating to First Energy's comment in FERC Order 693, the requirements address both personnel safety and equipment. There is no reference to a chain of command in the requirements. The standard is written such that decision-making authority rests with the Reliability Coordinator. No further revisions to the standard are required.	

Implementation Plan for IRO-001-2 — Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R9. The Reliability Coordinator shall act in the interests of reliability for the overall Reliability Coordinator Area and the Interconnection before the interests of any other entity. <i>[Violation Risk Factor: High]</i>	None – retire the requirement as redundant.
Notes: The RC SDT proposes retiring this requirement. All Reliability Coordinator Standard Requirements are developed so that the Reliability Coordinator shall act in the interest of reliability for the RC Area and the Interconnection. Section 6 of the NERC Standard Development Procedure states that NERC develops and maintains Reliability Standards. Equity issues are covered under the Reliability Coordinator Standards of Conduct.	

Implementation Plan for IRO-001-2 — Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-002-1 R9. Each Reliability Coordinator shall control its Reliability Coordinator analysis tools, including approvals for planned maintenance. Each Reliability Coordinator shall have procedures in place to mitigate the effects of analysis tool outages. <i>[Violation Risk Factor: Medium]</i>	IRO-001-2 R6. Each Reliability Coordinator shall provide its Operating Personnel with the authority to veto planned outages to its own analysis tools. <i>[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i>
Notes: This requirement was moved from IRO-002 into IRO-001-2, R6.	

Implementation Plan for IRO-001-2 — Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 (this requirement was incorporated from IRO-005-2) R15. Each Reliability Coordinator who foresees a transmission problem (such as an SOL or IROL violation, loss of reactive reserves, etc.) within its Reliability Coordinator Area shall issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area without delay. The receiving Reliability Coordinator shall disseminate this information to its impacted Transmission Operators and Balancing Authorities. The Reliability Coordinator shall notify all impacted Transmission Operators, Balancing Authorities, when the transmission problem has been mitigated. <i>[Violation Risk Factor: High]</i>	IRO-001-2 R4. Each Reliability Coordinator that identifies a real or potential threat with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations]</i> R5. Each Reliability Coordinator that identifies an expected or actual threat with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when the transmission problem has been mitigated. <i>[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i>
Notes: This requirement was moved from IRO-005 into IRO-001-2, R4 and R5.	

Functions that Must Comply with the Requirements in the Standards:

Standard	Functions that Must Comply With the Requirements							
	Reliability Coordinator	Balancing Authority	Distribution Provider	Transmission Operator	Transmission Service Provider	Purchasing Selling Entity	Generator Operator	Load Serving Entity
IRO-001-2	X	X	X	X	X	X	X	X

Effective Dates:

In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees approval.

Implementation Plan for IRO-001-2 - Reliability Coordination — Responsibilities and Authorities

Revisions to Defined Terms in the NERC Glossary

The RC SDT proposes modifying the following approved definition:

Adverse Reliability Impact — The impact of an event that results in Bulk Electric System ~~frequency-related~~ instability; ~~unplanned tripping of load or generation; or~~ uncontrolled separation, or Cascading ~~outages~~, that affects a widespread area of the Interconnection.

The RC SDT proposes the following new definition:

Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.

Prerequisite Approvals

- None

Conforming Changes to Requirements in Already Approved Standards

- IRO-005, R15 is being incorporated into IRO-001-2.
- IRO-002, R9 is being incorporated into IRO-001-2 and revised.

Revision Summary

- The RC SDT revised the standard and is proposing retiring several requirements (R1, R2, R4, R5, R6, R7 and R10). Changes were made to eliminate redundancies between standards (existing and proposed), to align with NERCs Rules of Procedure and to address issues in FERC Order 693.

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Revisions or Retirements to Already Approved Standards

The following tables identify the sections of approved standards that shall be retired or revised when this standard is implemented. If the drafting team is recommending the retirement or revision of a requirement, that text is blue.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R1. Each Regional Reliability Organization, subregion, or interregional coordinating group shall establish one or more Reliability Coordinators to continuously assess transmission reliability and coordinate emergency operations among the operating entities within the region and across the regional boundaries. <i>[Violation Risk Factor: High]</i>	None – The RC SDT proposes retiring this requirement.
Notes: The RC SDT proposes that original IRO-001-1, R1 should be retired from the standard and addressed in NERC Rules of Procedure, Section 503, item 2.2: “Regional entities shall verify that all balancing authorities and transmission operators are under the responsibility of a reliability coordinator”.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R2. The Reliability Coordinator shall comply with a regional reliability plan approved by the NERC Operating Committee. <i>[Violation Risk Factor: High]</i> R5. The Reliability Coordinator shall list within its reliability plan all entities to which the Reliability Coordinator has delegated required tasks. <i>[Violation Risk Factor: Lower]</i>	None – The RC SDT proposes retiring these requirements.
Notes: The RC SDT proposes retiring R2 and R5 as the regional reliability plan is a “how” document that shows how an RC will comply with all other NERC Standards, making this requirement redundant.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R3. The Reliability Coordinator shall have clear decision-making authority to act and direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities and Purchasing-Selling Entities within its Reliability Coordinator Area to preserve the integrity and reliability of the Bulk Electric System. These actions shall be taken without delay, but no longer than 30 minutes. <i>[Violation Risk Factor: High]</i>	IRO-001-2 R1. ~~The Each~~ Reliability Coordinator shall act or issue Reliability Directives for ~~direct~~ actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations and Same Day Operations]</i>
Notes: • The RC SDT is proposing to remove the blue text in the first sentence. • The RC SDT is proposing that the last sentence of R3 be retired. The timing of RC response to events varies based on system conditions. The specific timing criteria for responses to IROLs are contained in other standards (e.g., TOP-007, R2). ▪ The Distribution Provider was added as an applicable entity per FERC Order 693.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R4. Reliability Coordinators that delegate tasks to other entities shall have formal operating agreements with each entity to which tasks are delegated. The Reliability Coordinator shall verify that all delegated tasks are understood, communicated, and addressed within its Reliability Coordinator Area. All responsibilities for complying with NERC and regional standards applicable to Reliability Coordinators shall remain with the Reliability Coordinator. <i>[Violation Risk Factor: Medium]</i>	None – retire the requirement RC SDT proposes that original IRO-001-1, R4 is redundant with NERC Rules of Procedure, section 500 and should be retired from the standard. Section 501 states: “The purpose of the compliance registry will be to clearly identify those entities that are responsible for compliance with reliability standards. Organizations listed on the registry will be responsible for knowing the content of and for complying with the NERC reliability standards.” Also, section 507, item 2 addresses written agreements; Joint registration pursuant to written agreement. “Where a JRO and any of its members or related entities agree, in writing, upon a division of compliance responsibility among them for one or more reliability standard(s) applicable to a particular function, and/or for one or more requirements within particular reliability standard(s), both the JRO and such member(s) or related entity(ies) shall register as an organization responsible for that function. The JRO and its member(s) or related entity(ies) must have a written agreement that clearly specifies their respective responsibilities, which shall be submitted as part of the joint registration. Neither NERC nor the regional entity shall be parties to any such agreement between a JRO and its member or related entity(ies), nor shall NERC or the regional entity have responsibility for reviewing or approving any such agreement, other than to verify that the agreement provides for an allocation or assignment of responsibilities consistent with the joint registration.”
Notes: The RC SDT recommends the retirement of IRO-001-1 R4.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R6. The Reliability Coordinator shall verify that all delegated tasks are carried out by NERC-certified Reliability Coordinator operating personnel. <i>[Violation Risk Factor: Medium]</i>	None – retire requirement because it is redundant with: PER-003-0 R1. Each Transmission Operator, Balancing Authority, and Reliability Coordinator shall staff all operating positions that meet both of the following criteria with personnel that are NERC certified for the applicable functions: R1.1. Positions that have the primary responsibility, either directly or through communications with others, for the real-time operation of the interconnected Bulk Electric System. R1.2. Positions directly responsible for complying with NERC standards.
Notes: The RC SDT recommends retiring IRO-001-1 R6 as it is redundant with PER-003-0 R1.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R7. The Reliability Coordinator shall have clear, comprehensive coordination agreements with adjacent Reliability Coordinators to ensure that System Operating Limit (SOL) or Interconnection Reliability Operating Limit (IROL) violation mitigation requiring actions in adjacent Reliability Coordinator Areas are coordinated. <i>[Violation Risk Factor: High]</i>	None – requirement should be retired because it is redundant with: IRO-014-1 R1. <u>For conditions or activities that impact other Reliability Coordinator Areas, e</u>~~The Each~~ Reliability Coordinator shall have Operating Procedures, Processes, or Plans ~~in place~~ for activities that require notification, exchange of information or coordination of actions with ~~one or more other impacted~~ Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall <u>collectively address the following:</u> ~~address Scenarios that affect other Reliability Coordinator Areas as well as those developed in coordination with other Reliability Coordinators.~~
Notes: The RC SDT recommends the retirement of IRO-001-1 R7 as this is redundant with IRO-014-1 R1.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R8: Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities shall comply with Reliability Coordinator directives unless such actions would violate safety, equipment, or regulatory or statutory requirements. Under these circumstances, the Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, or Purchasing-Selling Entity shall immediately inform the Reliability Coordinator of the inability to perform the directive so that the Reliability Coordinator may implement alternate remedial actions. <i>[Violation Risk Factor: High]</i>	IRO-001-2 R2. ~~Each~~ Transmission Operators, Balancing ~~Authorities~~ Authority, Generator Operators, Transmission Service Providers, Load-Serving ~~Entities~~ Entity, ~~Distribution Provider~~, and Purchasing-Selling ~~Entities~~ Entity shall ~~act without intentional delay to~~ comply with ~~its~~ Reliability Coordinator's ~~Reliability D~~irectives unless such actions would violate safety, equipment, or regulatory or statutory requirements. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations]</i> R3. ~~The~~ Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, ~~Distribution Provider~~ or and Purchasing-Selling Entity shall ~~immediately confirm the ability to comply with the directive or~~ inform ~~its~~ the Reliability Coordinator ~~upon recognition of the its~~ inability to perform ~~the an issued Reliability D~~irective. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations]</i> R4. Each Reliability Coordinator that identifies an expected or actual threat with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify, ~~without intentional delay,~~ all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i>
Notes: The RC SDT added the Distribution Provider per FERC Order 693 and added the blue text shown in the requirements above. The RC SDT proposes the replacement of IRO-001-1, R8 with three requirements IRO-001-2, R2, R3, and R4. This will add clarity and measurability to the standard. The last part of the second sentence should be removed as it is implicit in R1, which states that the Reliability Coordination will act or direct actions to mitigate issues. Stakeholders indicated issues with the ability to measure compliance with the phrase, “without intentional delay” and this was removed. Relating to First Energy’s comment in FERC Order 693, the requirements address both personnel safety and equipment. There is no reference to a chain of command in the requirements. The standard is written such that decision-making authority rests with the Reliability Coordinator. No further revisions to the standard are required.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R9. The Reliability Coordinator shall act in the interests of reliability for the overall Reliability Coordinator Area and the Interconnection before the interests of any other entity. <i>[Violation Risk Factor: High]</i>	None – retire the requirement as redundant.
Notes: The RC SDT proposes retiring this requirement. All Reliability Coordinator Standard Requirements are developed so that the Reliability Coordinator shall act in the interest of reliability for the RC Area and the Interconnection. Section 6 of the NERC Standard Development Procedure states that NERC develops and maintains Reliability Standards. Equity issues are covered under the Reliability Coordinator Standards of Conduct.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

<u>Already Approved Standard</u>	<u>Proposed Replacement Requirement(s)</u>
<u>IRO-002-1</u> <u>R9. Each Reliability Coordinator shall control its Reliability Coordinator analysis tools, including approvals for planned maintenance. Each Reliability Coordinator shall have procedures in place to mitigate the effects of analysis tool outages. [Violation Risk Factor: Medium]</u>	<u>IRO-001-2</u> <u>R6. Each Reliability Coordinator shall provide its Operating Personnel with the authority to veto planned outages to its own analysis tools. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</u>
<u>Notes: This requirement was moved from IRO-002 into IRO-001-2, R6.</u>	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 (this requirement was incorporated from IRO-005-2) R15. Each Reliability Coordinator who foresees a transmission problem (such as an SOL or IROL violation, loss of reactive reserves, etc.) within its Reliability Coordinator Area shall issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area without delay. The receiving Reliability Coordinator shall disseminate this information to its impacted Transmission Operators and Balancing Authorities. The Reliability Coordinator shall notify all impacted Transmission Operators, Balancing Authorities, when the transmission problem has been mitigated. <i>[Violation Risk Factor: High]</i>	IRO-001-2 ~~R5~~R4. Each Reliability Coordinator ~~who~~<u>that</u> identifies a real or potential threat with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations]</i> R5. <u>Each Reliability Coordinator that identifies an expected or actual threat with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when the transmission problem has been mitigated. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</u>
Notes: This requirement was moved from IRO-005 into IRO-001-2, ~~R5~~R4 and R5.	

Implementation Plan for IRO-001-2

Reliability Coordination — Responsibilities and Authorities

Functions that Must Comply with the Requirements in the Standards

Standard	Functions that Must Comply With the Requirements							
	Reliability Coordinator	Balancing Authority	Distribution Provider	Transmission Operator	Transmission Service Provider	Purchasing Selling Entity	Generator Operator	Load Serving Entity
IRO-001-2	X	X	X	X	X	X	X	X

Effective Dates

~~To be determined.~~ In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees approval.

Standard Development Roadmap

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed:

1. Draft SAR Version 1 posted January 15, 2007
2. Draft SAR Version 1 Comment Period ended February 14, 2007
3. Draft SAR Version 2 and comment responses on SAR version 1 posted March 19, 2007
4. Draft Version 2 SAR comment period ended April 17, 2007
5. SAR version 2 and comment responses for SAR version 2 accepted by SC and SDT appointed in June 2007.
6. First posting of revised standards on August 5, 2008 with comment period closed on September 16, 2008.
7. Draft Version 2 of standards and response to comments September 16, 2008–May 26, 2009.
8. Second posting of revised standards on July 10, 2009 with comment period closed on August 9, 2009.
9. RC SDT coordinated with OPCP SDT and RTO SDT on definitions relating to directives and three part communication and Draft Version 3 of standards and response to comments August 9–November 20, 2009.

Proposed Action Plan and Description of Current Draft:

The SDT began working on revisions to the standards in August 2007. The current posting contains revisions based on stakeholder comments on the second draft. The team is seeking comments on the revised standards.

Future Development Plan:

Anticipated Actions	Anticipated Date
1. Respond to comments on third posting	March 2010
2. Post Standards for pre-ballot period.	April 2010
3. Standards posted for initial and recirculation ballots.	May 2010
4. Standards sent to BOT for approval.	July 2010
5. Standards filed with regulatory authorities.	September 2010

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

None

A. Introduction

1. **Title:** Coordination Among Reliability Coordinators
2. **Number:** IRO-014-2
3. **Purpose:** To ensure that each Reliability Coordinator's operations are coordinated such that they will not have an Adverse Reliability Impact on other Reliability Coordinator Areas and to preserve the reliability benefits of interconnected operations.
4. **Applicability:**
 - 4.1. Reliability Coordinators.
5. **Effective Date:** In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter that is 12 months after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter that is 12 months after Board of Trustees approval.

B. Requirements

- R1. For conditions or activities that impact other Reliability Coordinator Areas, each Reliability Coordinator shall have Operating Procedures, Processes, or Plans for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following:
[Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning]
 - 1.1. Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators.
 - 1.2. Energy and capacity shortages.
 - 1.3. Planned or unplanned outage information.
 - 1.4. Control of voltage, including the coordination of reactive resources.
 - 1.5. Coordination of information exchange to support reliability assessments.
 - 1.6. Authority to act to prevent and mitigate conditions which could cause Adverse Reliability Impacts to other Reliability Coordinator Areas.
- R2. Each Reliability Coordinator's Operating Procedure, Process, or Plan that requires one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) shall be: *[Violation Risk Factor: Lower] [Time Horizon: Same Day Operations and Operations Planning]*
 - 2.1. Agreed to by all the Reliability Coordinators required to take the indicated action(s).

- 2.2. Distributed to all Reliability Coordinators that are required to take the indicated action(s).
- R3.** For conditions or activities that impact other Reliability Coordinator Areas, each Reliability Coordinator shall make notifications and exchange reliability-related information with impacted Reliability Coordinators using its predefined Operating Procedures, Processes, or Plans for conditions that may impact other Reliability Coordinator Areas or other means to accomplish the notifications and exchange of reliability-related information. *[Violation Risk Factor: Medium][Time Horizon: Real-time Operations and Operations Planning]*
- R4.** Each Reliability Coordinator shall participate in agreed upon conference calls, at least weekly, and other communication forums with impacted Reliability Coordinators. *[Violation Risk Factor: Lower][Time Horizon: Real-time Operations]*
- R5.** Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify all impacted Reliability Coordinators. *[Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*
- R6.** Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators, *[Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*
- R7.** The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. *[Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*
- R8.** Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan unless such actions would violate safety, equipment, or regulatory or statutory requirements. *[Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*

C. Measures

- M1.** Each Reliability Coordinator shall have available the latest approved documented version of Operating Procedures, Processes, or Plans that require notifications, information exchange or the coordination of actions among impacted Reliability Coordinators for conditions or activities that impact other Reliability Coordinator Areas. This documentation may include, but is not limited to, dated, current in force documentation with the specified elements. (R1)
- M2.** Each Reliability Coordinator shall have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were:
- 2.1 Agreed to by all the Reliability Coordinators required to take the indicated action(s).

- 2.2** Distributed to all Reliability Coordinators that are required to take the indicated action(s).

This evidence may include, but is not limited to dated document with confirmation of receipt or dated electronic communications with confirmation of receipt. (R2)

- M3.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it made notifications and exchanged reliability-related information with impacted Reliability Coordinators using its predefined Operating Procedures, Processes, or Plans for conditions or activities that impact other Reliability Coordinator Areas or other means to accomplish the notifications and exchange of reliability-related information. (R3)
- M4.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it participated in agreed upon (at least weekly) conference calls and other communication forums with impacted Reliability Coordinators. (R4)
- M5.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it, upon identification of an Adverse Reliability Impact, notified impacted Reliability Coordinators. (R5)
- M6.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it operated as though the problem exists when the identified Adverse Reliability Impact was not agreed to by the impacted Reliability Coordinators. (R6)
- M7.** Each Reliability Coordinator with the identified Adverse Reliability Impact shall have evidence and provide evidence that it developed a mitigation plan when the impacted Reliability Coordinators could not agree that the problem exists. This evidence may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation. (R7)
- M8.** Each impacted Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it implemented the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan unless such actions would have violated safety, equipment, or regulatory or statutory requirements. (R8)

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

Regional Entity

1.2. Compliance Monitoring Period and Reset Time Frame

Not Applicable

1.3. Compliance Monitoring and Enforcement Processes:

Compliance Audits

Self-Certifications

Spot Checking

Compliance Violation Investigations

Self-Reporting

Complaints

1.4. Data Retention

The Reliability Coordinator shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- o Each Reliability Coordinator shall retain its current, in force document and any documents in force since the last compliance audit for all Requirements R1, R2, and Measures M1, M2.
- o Each Reliability Coordinator shall retain its most recent 12 months of evidence for Requirement R3, R4, R5 and Measure M3, M4, M5.
- o Each Reliability Coordinator shall retain 3 calendar years plus current calendar year of evidence for Requirements R6 through R8 and Measures M6 through M8.
- o If a Reliability Coordinator is found non-compliant, it shall keep information related to the non-compliance until found compliant.
- o The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

2. Violation Severity Levels

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	The Reliability Coordinator has Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address one or two of the parts.	The Reliability Coordinator has Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address three or four of the parts.	The Reliability Coordinator has Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address five of the parts.	The Reliability Coordinator failed to have Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability.
R2	N/A	The Reliability Coordinator failed to have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were distributed to all Reliability Coordinators that are required to take action.	The Reliability Coordinator failed to have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were agreed to by all Reliability Coordinators that are required to take action.	The Reliability Coordinator failed to have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were agreed to by all Reliability Coordinators that are required to take action and were distributed to all Reliability Coordinators that are required to take action.
R3	N/A	N/A	The Reliability Coordinator failed to make notifications OR exchange reliability-related information with impacted Reliability Coordinators.	The Reliability Coordinator failed to make notifications AND exchange reliability-related information with impacted Reliability Coordinators.

Standard IRO-014-2 — Coordination Among Reliability Coordinators

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R4	N/A	N/A	N/A	The Reliability Coordinator failed to participate in an agreed upon (at least weekly) conference call or other communication forum with impacted Reliability Coordinators.
R5	N/A	The Reliability Coordinator failed to notify one, but not all, of the impacted Reliability Coordinators upon identification of an Adverse Reliability Impact.	N/A	The Reliability Coordinator failed to notify any impacted Reliability Coordinators upon identification of an Adverse Reliability Impact.
R6	N/A	N/A	N/A	The Reliability Coordinator failed to operate as though the problem existed when the identified Adverse Reliability Impact was not agreed to by the impacted Reliability Coordinators.
R7	N/A	N/A	N/A	The Reliability Coordinator with the identified Adverse Reliability Impact failed to develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists.
R8	N/A	N/A	N/A	The impacted Reliability Coordinator failed to implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators could not agree on a mitigation plan.

E. Regional Differences

None identified.

F. Associated Documents

Version History

Version	Date	Action	Change Tracking
1	August 10, 2005	1. Changed incorrect use of certain hyphens (-) to “en dash (–).” 2. Hyphenated “30-day” when used as adjective. 3. Changed standard header to be consistent with standard “Title.” 4. Initial capped heading “Definitions of Terms Used in Standard.” 5. Added “periods” to items where appropriate. 6. Changed “Timeframe” to “Time Frame” in item D, 1.2. 7. Lower cased all words that are not “defined” terms — drafting team, self-certification. 8. Changed apostrophes to “smart” symbols. 9. Added comma in all word strings “Procedures, Processes, or Plans,” etc. 10. Added hyphens to “Reliability Coordinator-to-Reliability Coordinator” where used as adjective. 11. Removed comma in item 2.1.2. 12. Removed extra spaces between words where appropriate.	January 20, 2006
1	February 7, 2006	Approved by BOT	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New
2	TBD	Revised per SAR for Project 2006-6, RC SDT	Revised

Standard Development Roadmap

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed:

1. Draft SAR Version 1 posted January 15, 2007
2. Draft SAR Version 1 Comment Period ended February 14, 2007
3. Draft SAR Version 2 and comment responses on SAR version 1 posted March 19, 2007
4. Draft Version 2 SAR comment period ended April 17, 2007
5. SAR version 2 and comment responses for SAR version 2 accepted by SC and SDT appointed in June 2007.
6. First posting of revised standards on August 5, 2008 with comment period closed on September 16, 2008.
7. Draft Version 2 of standards and response to comments September 16, 2008 – May 26, 2009.
8. Second posting of revised standards on July 10, 2009 with comment period closed on August 9, 2009.
9. RC_SDT coordinated with OPCP_SDT and RTO_SDT on definitions relating to directives and three part communication and Draft Version 3 of standards and response to comments August 9 – November 20, 2009.

Proposed Action Plan and Description of Current Draft:

The SDT began working on revisions to the standards in August 2007. The current posting contains revisions based on stakeholder comments on the ~~first~~second draft. The team is seeking comments on the revised standards.

Future Development Plan:

Anticipated Actions	Anticipated Date
1. Respond to comments on third posting	March 2010
2. Post Standards for pre-ballot period.	April 2010
3. Standards posted for initial and recirculation ballots.	May 2010
4. Standards sent to BOT for approval.	July 2010
5. Standards filed with regulatory authorities.	September 2010

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

Adverse Reliability Impact—~~The impact of an event that results in Bulk Electric System instability; uncontrolled separation or cascading~~None ~~outages.~~

A. Introduction

1. **Title:** Coordination Among Reliability Coordinators
2. **Number:** IRO-014-2
3. **Purpose:** To ensure that each Reliability Coordinator's operations are coordinated such that they will not have an Adverse Reliability Impact on other Reliability Coordinator Areas and to preserve the reliability benefits of interconnected operations.
4. **Applicability:**
 - 4.1. Reliability Coordinators.
5. **Effective Date:** In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter that is 12 months ~~one-year~~ after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter that is 12 months ~~one-year~~ after Board of Trustees approval.

B. Requirements

- R1. For conditions or activities that impact other Reliability Coordinator Areas, each ~~Each~~ Reliability Coordinator shall have Operating Procedures, Processes, or Plans for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following: *[Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning]*
 - 1.1. Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators.
 - 1.2. Energy and capacity shortages.
 - 1.3. Planned or unplanned outage information.
 - 1.4. Control of voltage, including the coordination of reactive resources.
 - 1.5. Coordination of information exchange to support reliability assessments.
 - 1.6. Authority to act to prevent and mitigate conditions which ~~instances of~~ could ~~cause~~ ing Adverse Reliability Impacts to other Reliability Coordinator Areas.
- R2. Each Reliability Coordinator's Operating Procedure, Process, or Plan that requires one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) shall be: *[Violation Risk Factor: Lower] [Time Horizon: Same Day Operations ~~Planning~~ and Operations ~~Long-term~~ Planning]*
 - 2.1. Agreed to by all the Reliability Coordinators required to take the indicated action(s).

2.2. Distributed to all Reliability Coordinators that are required to take the indicated action(s).

- R3.** [For conditions or activities that impact other Reliability Coordinator Areas](#), ~~e~~Each Reliability Coordinator shall make notifications and exchange reliability-related information with impacted Reliability Coordinators using its predefined Operating Procedures, Processes, or Plans for conditions that may impact other Reliability Coordinator Areas or other means to accomplish the notifications and exchange of reliability-related information. *[Violation Risk Factor: Medium][Time Horizon: Real-time Operations and Operations Planning]*
- R4.** Each Reliability Coordinator shall participate in agreed upon conference calls, at least weekly, and other communication forums with impacted Reliability Coordinators. *[Violation Risk Factor: Lower][Time Horizon: Real-time Operations]*
- R5.** Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify [all](#) impacted Reliability Coordinators. *[Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*
- R6.** Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators, *[Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*
- R7.** The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. *[Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*
- R8.** Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan [unless such actions would violate safety, equipment, or regulatory or statutory requirements](#). *[Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*

C. Measures

- M1.** Each Reliability Coordinator shall have available the latest approved documented version of Operating Procedures, Processes, or Plans that require notifications, information exchange or the coordination of actions among impacted Reliability Coordinators [for conditions or activities that impact other Reliability Coordinator Areas](#). This documentation may include, but is not limited to, dated, current in force documentation with the specified elements. [\(R1\)](#)
- M2.** Each Reliability Coordinator shall have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were:
- 2.1 Agreed to by all the Reliability Coordinators required to take the indicated action(s).

- 2.2 Distributed to all Reliability Coordinators that are required to take the indicated action(s).

This evidence may include, but is not limited to dated document with confirmation of receipt or dated electronic communications with confirmation of receipt. [\(R2\)](#)

- M3.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it made notifications and exchanged reliability-related information with impacted Reliability Coordinators using its predefined Operating Procedures, Processes, or Plans for conditions [or activities](#) that ~~may~~ impact other Reliability Coordinator Areas or other means to accomplish the notifications and exchange of reliability-related information. [\(R3\)](#)
- M4.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it participated in agreed upon (at least weekly) conference calls and other communication forums with impacted Reliability Coordinators. [\(R4\)](#)
- M5.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it, upon identification of an Adverse Reliability Impact, notified impacted Reliability Coordinators. [\(R5\)](#)
- M6.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it operated as though the problem exists when the identified Adverse Reliability Impact was not agreed to by the impacted Reliability Coordinators. [\(R6\)](#)
- M7.** Each Reliability Coordinator with the identified Adverse Reliability Impact shall have evidence and provide evidence that it developed a mitigation plan when the impacted Reliability Coordinators could not agree that the problem exists. This evidence may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation. [\(R7\)](#)
- M8.** Each impacted Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it implemented the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan [unless such actions would have violated safety, equipment, or regulatory or statutory requirements](#); [\(R8\)](#)

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

Regional Entity

1.2. Compliance Monitoring Period and Reset Time Frame

Not Applicable

1.3. Compliance Monitoring and Enforcement Processes:

Compliance Audits

Self-Certifications

Spot Checking

Compliance Violation Investigations

Self-Reporting

Complaints

1.4. Data Retention

The Reliability Coordinator shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- o Each Reliability Coordinator shall retain its current, in force document and any documents in force since the last compliance audit for all Requirements R1, R2, and Measures M1, M2.
- o Each Reliability Coordinator shall retain its most recent 12 months of evidence for Requirement R3, R4, [R5](#) and Measure M3, M4, [M5](#).
- o Each Reliability Coordinator shall retain 3 calendar years plus current calendar year of evidence for Requirements ~~R5~~ [R6](#) through R8 and Measures ~~M5~~ [M6](#) through M8.
- o If a Reliability Coordinator is found non-compliant, it shall keep information related to the non-compliance until found compliant.
- o The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

2. Violation Severity Levels

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	The Reliability Coordinator has Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address one or two of the parts subrequirements.	The Reliability Coordinator has Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address three or four of the parts subrequirements.	The Reliability Coordinator has Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address five of the parts subrequirements.	The Reliability Coordinator failed to have Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability.
R2	N/A	The Reliability Coordinator failed to have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were distributed to all Reliability Coordinators that are required to take action.	The Reliability Coordinator failed to have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were agreed to by all Reliability Coordinators that are required to take action.	The Reliability Coordinator failed to have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were agreed to by all Reliability Coordinators that are required to take action and were distributed to all Reliability Coordinators that are required to take action.

Standard IRO-014-2 — Coordination Among Reliability Coordinators

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R3	N/A	N/A	The Reliability Coordinator failed to make notifications OR exchange reliability-related information with impacted Reliability Coordinators.	The Reliability Coordinator failed to make notifications AND exchange reliability-related information with impacted Reliability Coordinators.
R4	N/A	N/A	N/A	The Reliability Coordinator failed to participate in an agreed upon (at least weekly) conference call or other communication forum with impacted Reliability Coordinators.
R5	N/A	The Reliability Coordinator failed to notify one, but not all, of the impacted Reliability Coordinators upon identification of an Adverse Reliability Impact.	N/A	The Reliability Coordinator failed to notify any impacted Reliability Coordinators upon identification of an Adverse Reliability Impact.
R6	N/A	N/A	N/A	The Reliability Coordinator failed to operate as though the problem existed when the identified Adverse Reliability Impact was not agreed to by the impacted Reliability Coordinators.

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R7	N/A	N/A	N/A	The Reliability Coordinator with the identified Adverse Reliability Impact failed to develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists.
R8	N/A	N/A	N/A	The impacted Reliability Coordinator failed to implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators could not agree on a mitigation plan.

E. Regional Differences

None identified.

F. Associated Documents**Version History**

Version	Date	Action	Change Tracking
1	August 10, 2005	1. Changed incorrect use of certain hyphens (-) to “en dash (–).” 2. Hyphenated “30-day” when used as adjective. 3. Changed standard header to be consistent with standard “Title.” 4. Initial capped heading “Definitions of Terms Used in Standard.” 5. Added “periods” to items where appropriate. 6. Changed “Timeframe” to “Time Frame” in item D, 1.2. 7. Lower cased all words that are not “defined” terms — drafting team, self-certification. 8. Changed apostrophes to “smart” symbols. 9. Added comma in all word strings “Procedures, Processes, or Plans,” etc. 10. Added hyphens to “Reliability Coordinator-to-Reliability Coordinator” where used as adjective. 11. Removed comma in item 2.1.2. 12. Removed extra spaces between words where appropriate.	January 20, 2006
1	February 7, 2006	Approved by BOT	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New
2	TBD	Revised per SAR for Project 2006-6, RC_SDT	Revised

Implementation Plan for IRO-014-2 — Coordination Among Reliability Coordinators

Prerequisite Approvals

- None required

Conforming Changes to Requirements in Already Approved Standards

- IRO-001-2 — Reliability Coordination — Responsibilities and Authorities
- IRO-015-1 — Notifications and Information Exchange Between Reliability Coordinators
- IRO-016-1 — Coordination of Real-time Activities between Reliability Coordinators

Revision Summary

The Reliability Coordination SDT (RC SDT) revised the standard and is proposing retiring two requirements (R3 and R4). New requirements were brought into this standard from IRO-015-1 (R1-R2) and IRO-016-1 (R1 and its sub requirements). Changes were made to eliminate redundancies between standards (existing and proposed), eliminate administrative items, align with NERCs Rules of Procedure and to address issues in FERC Order 693.

Functions that Must Comply with the Requirements in the Standard:

- Reliability Coordinator

Effective Dates

In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter that is 12 months after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter that is 12 months after Board of Trustees approval.

Implementation Plan for IRO-014-2 — Coordination Among Reliability Coordinators

Revisions or Retirements to Already Approved Standards

The following tables identify the sections of approved standards that shall be retired or revised when this standard is implemented. If the drafting team is recommending the retirement or revision of a requirement, that text is blue.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-2 R7. The Reliability Coordinator shall have clear, comprehensive coordination agreements with adjacent Reliability Coordinators to ensure that System Operating Limit or Interconnection Reliability Operating Limit violation mitigation requiring actions in adjacent Reliability Coordinator Areas are coordinated.	IRO-014-2 R1. For conditions or activities that impact other Reliability Coordinator Areas, each Reliability Coordinator shall have Operating Procedures, Processes, or Plans for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following: <i>[Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning]</i> 1.1. Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators. 1.2. Energy and capacity shortages. 1.3. Planned or unplanned outage information. 1.4. Control of voltage, including the coordination of reactive resources for voltage control. 1.5. Coordination of information exchange to support reliability assessments. 1.6. Authority to act to prevent and mitigate conditions which could cause Adverse Reliability Impacts to other Reliability Coordinator Areas.
Notes: The RC SDT proposes retiring R7 as it is redundant with IRO-014, R1.	

Implementation Plan for IRO-014-2 — Coordination Among Reliability Coordinators

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-014-1 R1. The Reliability Coordinator shall have Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with one or more other Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall address Scenarios that affect other Reliability Coordinator Areas as well as those developed in coordination with other Reliability Coordinators. <i>[Violation Risk Factor: Medium]</i> R1.1 These Operating Procedures, Processes, or Plans shall collectively address, as a minimum, the following: <i>[Violation Risk Factor: Lower]</i> R1.1.1 Communications and notifications, including the conditions¹ under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators. [Violation Risk Factor: Medium] R1.1.2 Energy and capacity shortages. [Violation Risk Factor: Medium] R1.1.3 Planned or unplanned outage information. [Violation Risk Factor: Medium] R1.1.4 Voltage control, including the coordination of reactive resources for voltage control. [Violation Risk Factor: Medium] R1.1.5 Coordination of information exchange to support reliability assessments. [Violation Risk Factor: Lower] R1.1.6 Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas. [Violation Risk Factor: Lower]	IRO-14-2 R1. For conditions or activities that impact other Reliability Coordinator Areas, each Reliability Coordinator shall have Operating Procedures, Processes, or Plans for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following: <i>[Violation Risk Factor: Medium]</i> <i>[Time Horizon: Same Day Operations and Operations Planning]</i> 1.1 Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators 1.2 Energy and capacity shortages. 1.3 Planned or unplanned outage information. 1.4 Control of voltage, including the coordination of reactive resources for voltage control. 1.5 Coordination of information exchange to support reliability assessments. 1.6 Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas.

¹ Examples of conditions when one Reliability Coordinator may need to notify another Reliability Coordinator may include (but aren't limited to) sabotage events, Interconnection Reliability Operating Limit violations, voltage reductions, insufficient resources, arming of special protection systems, etc.

Implementation Plan for IRO-014-2 — Coordination Among Reliability Coordinators

Notes: Revise R1 as shown and delete the footnote.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-014-1 R2. Each Reliability Coordinator's Operating Procedure, Process, or Plan that requires one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) shall be: R2.1. Agreed to by all the Reliability Coordinators required to take the indicated action(s). R2.2. Distributed to all Reliability Coordinators that are required to take the indicated action(s).	IRO-014-2 R2. Each Reliability Coordinator's Operating Procedure, Process, or Plan that requires one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) shall be: <i>[Violation Risk Factor: Lower] [Time Horizon: Same Day Operations and Long-term Planning]</i> 2.1 Agreed to by all the Reliability Coordinators required to take the indicated action(s). 2.2 Distributed to all Reliability Coordinators that are required to take the indicated action(s).
Notes: The RC SDT added a Time Horizon to the requirement and eliminated the VRFs that were applied to the subrequirements.	

Implementation Plan for IRO-014-2 — Coordination Among Reliability Coordinators

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-014-1 R3. A Reliability Coordinator's Operating Procedures, Processes, or Plans developed to support a Reliability Coordinator-to-Reliability Coordinator Operating Procedure, Process, or Plan shall include: R3.1. A reference to the associated Reliability Coordinator-to-Reliability Coordinator Operating Procedure, Process, or Plan. R3.2. The agreed-upon actions from the associated Reliability Coordinator-to-Reliability Coordinator Operating Procedure, Process, or Plan.	None – Retire the requirement
Notes: This requirement is administrative in nature describing the contents of the plans and should not be in a standard. The RC SDT proposes retiring R3 and its subrequirements and recommends converting these good utility practices into a guideline document for use in developing the operating procedures, processes or plans.	

Implementation Plan for IRO-014-2 — Coordination Among Reliability Coordinators

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-014-1 R4. Each of the Operating Procedures, Processes, and Plans addressed in Reliability Standard IRO-014 Requirement 1 and Requirement 3 shall: R4.1. Include version control number or date. R4.2. Include a distribution list. R4.3. Be reviewed, at least once every three years, and updated if needed	None – retire the requirement.
Notes: This requirement is administrative in nature describing the contents of the plans and should not be in a standard. The RC SDT proposes retiring R4 and its subrequirements and recommends converting these good utility practices into a guideline document for use in developing the operating procedures, processes or plans.	

Implementation Plan for IRO-014-2 — Coordination Among Reliability Coordinators

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-015-1 R1. The Reliability Coordinator shall follow its Operating Procedures, Processes, or Plans for making notifications and exchanging reliability-related information with other Reliability Coordinators. <i>[Violation Risk Factor: Medium]</i> R1.1 The Reliability Coordinator shall make notifications to other Reliability Coordinators of conditions in its Reliability Coordinator Area that may impact other Reliability Coordinator Areas. <i>[Violation Risk Factor: Medium]</i> R2. The Reliability Coordinator shall participate in agreed upon conference calls and other communication forums with adjacent Reliability Coordinators. <i>[Violation Risk Factor: Lower]</i> R2.1 The frequency of these conference calls shall be agreed upon by all involved Reliability Coordinators and shall be at least weekly. <i>[Violation Risk Factor: Lower]</i> R3. The Reliability Coordinator shall provide reliability-related information as requested by other Reliability Coordinators. <i>[Violation Risk Factor: Medium]</i>	IRO-014-2 R3. For conditions or activities that impact other Reliability Coordinator Areas , each Reliability Coordinator shall make notifications and exchange reliability-related information with impacted Reliability Coordinators using its predefined Operating Procedures, Processes, or Plans for conditions that may impact other Reliability Coordinator Areas or other means to accomplish the notifications and exchange of reliability-related information. <i>[Violation Risk Factor: Medium]</i>[[Time Horizon: Real-time Operations and Operations Planning] R4. Each Reliability Coordinator shall participate in agreed upon conference calls, at least weekly, and other communication forums with impacted Reliability Coordinators. <i>[Violation Risk Factor: Lower]</i> <i>[Time Horizon: Real-time Operations]</i>
The RC SDT recommends retiring Standard IRO-015 and moving Requirements R1 and R2 to IRO-014-2 and revising as shown. The RC SDT proposes retiring R3 (as shown in the left column) as it is redundant with proposed R5 above. Reliability Coordinators already have several requirements aimed at providing data or information to other Reliability Coordinators in support of Reliability Coordinator responsibilities. For example, Reliability Coordinators provide reliability-related information to other Reliability Coordinators as part of IRO-010-1, R3 – they share information as they try to confirm the existence of operating issues as part of IRO-014-2 R5, etc.	

Implementation Plan for IRO-014-2 — Coordination Among Reliability Coordinators

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-016-1 R1. The Reliability Coordinator that identifies a potential, expected, or actual problem that requires the actions of one or more other Reliability Coordinators shall contact the other Reliability Coordinator(s) to confirm that there is a problem and then discuss options and decide upon a solution to prevent or resolve the identified problem. <i>[Violation Risk Factor: Medium]</i> R1.1 If the involved Reliability Coordinators agree on the problem and the actions to take to prevent or mitigate the system condition, each involved Reliability Coordinator shall implement the agreed-upon solution, and notify the involved Reliability Coordinators of the action(s) taken. <i>[Violation Risk Factor: Medium]</i> R1.2 If the involved Reliability Coordinators cannot agree on the problem(s) each Reliability Coordinator shall re-evaluate the causes of the disagreement (bad data, status, study results, tools, etc.). <i>[Violation Risk Factor: Medium]</i> R1.2.1 If time permits, this re-evaluation shall be done before taking corrective actions. <i>[Violation Risk Factor: Medium]</i> R1.2.2 If time does not permit, then each Reliability Coordinator shall operate as though the problem(s) exist(s) until the conflicting system status is resolved. <i>[Violation Risk Factor: Medium]</i> R1.3 If the involved Reliability Coordinators cannot agree on the solution, the more conservative solution shall be implemented. <i>[Violation Risk Factor: Medium]</i>	IRO-014-2 R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify all impacted Reliability Coordinators. <i>[Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i> R6. Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators <i>[Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i> R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. <i>[Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i> R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan unless such actions would violate safety, equipment, or regulatory or statutory requirements. <i>[Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i>
Notes: IRO-014-2 R5 and R6 are revised versions of IRO-016-1, R1 and its subrequirements which were moved to this standard. The RC SDT removed the wording relating to the “most conservative solution” because it can not be measured. We are proposing to use the mitigation plan of the RC who is experiencing the issue in cases where an agreed to mitigation plan can not be developed. Note that stakeholders proposed revisions to these requirements, and the RC SDT subdivided the requirements to add more clarity.	

Implementation Plan for IRO-014-2 — Coordination Among Reliability Coordinators

Prerequisite Approvals

- None required

Conforming Changes to Requirements in Already Approved Standards

- IRO-001-2 — Reliability Coordination — Responsibilities and Authorities
- IRO-015-1 — Notifications and Information Exchange Between Reliability Coordinators
- IRO-016-1 — Coordination of Real-time Activities between Reliability Coordinators

Revision Summary

—The Reliability Coordination SDT (RC SDT) revised the standard and is proposing retiring two requirements (R3 and R4). New requirements were brought into this standard from IRO-015-1 (R1-R2) and IRO-016-1 (R1 and its sub requirements). Changes were made to eliminate redundancies between standards (existing and proposed), eliminate administrative items, align with NERCs Rules of Procedure and to address issues in FERC Order 693.

Functions that Must Comply with the Requirements in the Standard:

- Reliability Coordinator

Effective Dates

~~To be determined.~~

In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter that is 12 months after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter that is 12 months after Board of Trustees approval.

Implementation Plan for IRO-014-2

Coordination Among Reliability Coordinators

Revisions or Retirements to Already Approved Standards

The following tables identify the sections of approved standards that shall be retired or revised when this standard is implemented. If the drafting team is recommending the retirement or revision of a requirement, that text is blue.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-2 R7. The Reliability Coordinator shall have clear, comprehensive coordination agreements with adjacent Reliability Coordinators to ensure that System Operating Limit or Interconnection Reliability Operating Limit violation mitigation requiring actions in adjacent Reliability Coordinator Areas are coordinated.	IRO-014-2 R1. <u>For conditions or activities that impact other Reliability Coordinator Areas, e</u>~~The Each~~ Reliability Coordinator shall have Operating Procedures, Processes, or Plans for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address, ~~as a minimum,~~ the following: <i>[Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning]</i> ~~R1.1.1.1.~~ <u>R1.1.1.1.</u> Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators. ~~R1.2.1.2.~~ <u>R1.2.1.2.</u> Energy and capacity shortages. ~~R1.3.1.3.~~ <u>R1.3.1.3.</u> Planned or unplanned outage information. ~~R1.4.1.4. Control of V~~ <u>R1.4.1.4. Control of V</u>oltage ~~control,~~ including the coordination of reactive resources for voltage control. ~~R1.5.1.5.~~ <u>R1.5.1.5.</u> Coordination of information exchange to support reliability assessments. ~~R1.6.1.6.~~ <u>R1.6.1.6.</u> Authority to act to prevent and mitigate <u>conditions which could instances of cause</u>ing Adverse Reliability Impacts to other Reliability Coordinator Areas.
Notes: The RC_SDT proposes retiring R7 as it is redundant with IRO-014, R1.	

Implementation Plan for IRO-014-2

Coordination Among Reliability Coordinators

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-014-1 R1. The Reliability Coordinator shall have Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with one or more other Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall address Scenarios that affect other Reliability Coordinator Areas as well as those developed in coordination with other Reliability Coordinators. [Violation Risk Factor: Medium] R1.1 These Operating Procedures, Processes, or Plans shall collectively address, as a minimum, the following: [Violation Risk Factor: Lower] R1.1.1 Communications and notifications, including the conditions¹ under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators. [Violation Risk Factor: Medium] R1.1.2 Energy and capacity shortages. [Violation Risk Factor: Medium] R1.1.3 Planned or unplanned outage information. [Violation Risk Factor: Medium] R1.1.4 Voltage control, including the coordination of reactive resources for voltage control. [Violation Risk Factor: Medium] R1.1.5 Coordination of information exchange to support reliability assessments. [Violation Risk Factor: Lower] R1.1.6 Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas. [Violation Risk Factor: Lower]	IRO-14-2 R1. <u>For conditions or activities that impact other Reliability Coordinator Areas,</u> ~~The Each~~ Reliability Coordinator shall have Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted ~~with one or more other~~ Reliability Coordinators to support Interconnection reliability. ~~These Operating Procedures, Processes, or Plans shall address Scenarios that affect other Reliability Coordinator Areas as well as those developed in coordination with other Reliability Coordinators.~~ <u>These Operating Procedures, Processes, or Plans shall collectively address the following:</u> [Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning] ~~R1.1~~ ~~These Operating Procedures, Processes, or Plans shall collectively address, as a minimum, the following:~~ [Violation Risk Factor: Lower] ~~R1.1.1~~ Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators. ~~[Violation Risk Factor: Medium]~~ ~~R1.1.2~~ Energy and capacity shortages. ~~[Violation Risk Factor: Medium]~~ ~~R1.1.3~~ Planned or unplanned outage information. ~~[Violation Risk Factor: Medium]~~ ~~R1.1.4~~ <u>Control of</u> ~~V~~voltage-control, including the coordination of reactive resources for voltage control. ~~[Violation Risk Factor: Medium]~~ ~~R1.1.5~~ Coordination of information exchange to support reliability assessments. ~~[Violation Risk Factor: Lower]~~ ~~R1.1.6~~ Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas. ~~[Violation Risk Factor: Lower]~~
Notes: Revise R1 as shown and delete the footnote.	

¹ Examples of conditions when one Reliability Coordinator may need to notify another Reliability Coordinator may include (but aren't limited to) sabotage events, Interconnection Reliability Operating Limit violations, voltage reductions, insufficient resources, arming of special protection systems, etc.

Implementation Plan for IRO-014-2
Coordination Among Reliability Coordinators

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-014-1 R2. Each Reliability Coordinator's Operating Procedure, Process, or Plan that requires one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) shall be: R2.1. Agreed to by all the Reliability Coordinators required to take the indicated action(s). R2.2. Distributed to all Reliability Coordinators that are required to take the indicated action(s).	IRO-014-2 R2. Each Reliability Coordinator's Operating Procedure, Process, or Plan that requires one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) shall be: <i>[Violation Risk Factor: Lower]</i> <i>[Time Horizon: Same Day ~~Real-time~~ Operations Planning and Operations-Long-term Planning]</i> R2.1 Agreed to by all the Reliability Coordinators required to take the indicated action(s). <i>[Violation Risk Factor: Lower]</i> R2.2 Distributed to all Reliability Coordinators that are required to take the indicated action(s). <i>[Violation Risk Factor: Lower]</i>
Notes: The RC SDT added a Time Horizon to the requirement and eliminated the VRFs that were applied to the subrequirements.	

Implementation Plan for IRO-014-2
Coordination Among Reliability Coordinators

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-014-1 R3. A Reliability Coordinator's Operating Procedures, Processes, or Plans developed to support a Reliability Coordinator-to-Reliability Coordinator Operating Procedure, Process, or Plan shall include: R3.1. A reference to the associated Reliability Coordinator-to-Reliability Coordinator Operating Procedure, Process, or Plan. R3.2. The agreed-upon actions from the associated Reliability Coordinator-to-Reliability Coordinator Operating Procedure, Process, or Plan.	None – Retire the requirement
Notes: This requirement is administrative in nature describing the contents of the plans and should not be in a standard. The RC SDT proposes retiring R3 and its subrequirements and recommends converting these good utility practices into a guideline document for use in developing the operating procedures, processes or plans.	

Implementation Plan for IRO-014-2
Coordination Among Reliability Coordinators

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-014-1 R4. Each of the Operating Procedures, Processes, and Plans addressed in Reliability Standard IRO-014 Requirement 1 and Requirement 3 shall: R4.1. Include version control number or date. R4.2. Include a distribution list. R4.3. Be reviewed, at least once every three years, and updated if needed	None – retire the requirement.
Notes: This requirement is administrative in nature describing the contents of the plans and should not be in a standard. The RC SDT proposes retiring R4 and its subrequirements and recommends converting these good utility practices into a guideline document for use in developing the operating procedures, processes or plans.	

Implementation Plan for IRO-014-2
Coordination Among Reliability Coordinators

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-015-1 R1. The Reliability Coordinator shall follow its Operating Procedures, Processes, or Plans for making notifications and exchanging reliability-related information with other Reliability Coordinators. <i>[Violation Risk Factor: Medium]</i> R1.1 The Reliability Coordinator shall make notifications to other Reliability Coordinators of conditions in its Reliability Coordinator Area that may impact other Reliability Coordinator Areas. <i>[Violation Risk Factor: Medium]</i> R2. The Reliability Coordinator shall participate in agreed upon conference calls and other communication forums with adjacent Reliability Coordinators. <i>[Violation Risk Factor: Lower]</i> R2.1 The frequency of these conference calls shall be agreed upon by all involved Reliability Coordinators and shall be at least weekly. <i>[Violation Risk Factor: Lower]</i> R3. The Reliability Coordinator shall provide reliability-related information as requested by other Reliability Coordinators. <i>[Violation Risk Factor: Medium]</i>	IRO-014-2 ~~R5~~R3. <u>For conditions or activities that impact other Reliability Coordinator Areas, The Each</u> Reliability Coordinator shall make notifications and exchange reliability-related information with impacted Reliability Coordinators using its predefined Operating Procedures, Processes, or Plans for conditions that may impact other Reliability Coordinator Areas or other means to accomplish the notifications and exchange of reliability-related information. <i>[Violation Risk Factor: Medium]</i> <u>Time Horizon: Real-time Operations and Operations Planning]</u> ~~R6~~R4. <u>The Each</u> Reliability Coordinator shall participate in agreed upon conference calls, <u>at least weekly,</u> and other communication forums with ~~impacted adjacent~~ Reliability Coordinators. <i>[Violation Risk Factor: Lower]</i> <u>Time Horizon: Real-time Operations]</u> ~~R6.1~~ <u>The frequency of these conference calls shall be agreed upon by all involved Reliability Coordinators and shall be at least weekly. [Violation Risk Factor: Lower]</u>
The RC SDT recommends retiring Standard IRO-015 and moving Requirements R1 and R2 to IRO-014-2 and revising as shown. The RC SDT proposes retiring R3 (as shown in the left column) as it is redundant with proposed R5 above. Reliability Coordinators already have several requirements aimed at providing data or information to other Reliability Coordinators in support of Reliability Coordinator responsibilities. For example, Reliability Coordinators provide reliability-related information to other Reliability Coordinators as part of IRO-010-1, R3 – they share information as they try to confirm the existence of operating issues as part of IRO-014-2 R5, etc.	

Implementation Plan for IRO-014-2
Coordination Among Reliability Coordinators

Already Approved Standard	Proposed Replacement Requirement(s)

Implementation Plan for IRO-014-2

Coordination Among Reliability Coordinators

IRO-016-1 R1. The Reliability Coordinator that identifies a potential, expected, or actual problem that requires the actions of one or more other Reliability Coordinators shall contact the other Reliability Coordinator(s) to confirm that there is a problem and then discuss options and decide upon a solution to prevent or resolve the identified problem. <i>[Violation Risk Factor: Medium]</i> R1.1 If the involved Reliability Coordinators agree on the problem and the actions to take to prevent or mitigate the system condition, each involved Reliability Coordinator shall implement the agreed-upon solution, and notify the involved Reliability Coordinators of the action(s) taken. <i>[Violation Risk Factor: Medium]</i> R1.2 If the involved Reliability Coordinators cannot agree on the problem(s) each Reliability Coordinator shall re-evaluate the causes of the disagreement (bad data, status, study results, tools, etc.). <i>[Violation Risk Factor: Medium]</i> R1.2.1 If time permits, this re-evaluation shall be done before taking corrective actions. <i>[Violation Risk Factor: Medium]</i> R1.2.2 If time does not permit, then each Reliability Coordinator shall operate as though the problem(s) exist(s) until the conflicting system status is resolved. <i>[Violation Risk Factor: Medium]</i> R1.3 If the involved Reliability Coordinators cannot agree on the solution, the <u>more conservative solution</u> shall be implemented. <i>[Violation Risk Factor: Medium]</i>	IRO-014-2 R5. ~~When an expected or actual reliability issue is detected, the~~ <u>Each</u> Reliability Coordinator, <u>upon identification of an Adverse Reliability Impact,</u> ~~shall confirm the existence of the issue with the~~ <u>notify all</u> impacted ~~other~~ Reliability Coordinators ~~that are involved.~~ <u>In the event that the issue cannot be confirmed, each RC shall operate as though the problem exists.</u> <i>[Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i> R6. ~~When an expected or actual reliability issue exists and the~~ <u>Each</u> impacted ~~affected~~ Reliability Coordinator ~~s shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators -can not agree on a mitigation plan, all impacted affected Reliability Coordinators shall implement the mitigation plan developed by the Reliability Coordinator who has the reliability issue.~~ <i>[Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i> R7. <u>The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists.</u> <i>[Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i> R8. <u>Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan unless such actions would violate safety, equipment, or regulatory or statutory requirements.</u> <i>[Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i>

Implementation Plan for IRO-014-2

Coordination Among Reliability Coordinators

Notes: IRO-014-2 R5 and R6 are revised versions of IRO-016-1, R1 and its subrequirements which were moved to this standard. The RC SDT removed the wording relating to the “most conservative solution” because it can not be measured. We are proposing to use the mitigation plan of the RC who is experiencing the issue in cases where an agreed to mitigation plan can not be developed. [Note that stakeholders proposed revisions to these requirements, and the RC SDT subdivided the requirements to add more clarity.](#)

Unofficial Comment Form for Reliability Coordination – Project 2006-06

Please **DO NOT** use this form. Please use the [electronic comment form](#) at the link below to submit comments on the proposed revisions to the standards for Project 2006-06 — Reliability Coordination. Comments must be submitted by **February 3, 2010**. If you have questions please contact Stephen Crutchfield at stephen.crutchfield@nerc.net or by telephone at 609-651-9455.

http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html

Background Information:

The Reliability Coordination Standards Drafting Team (RC SDT) was tasked with 1) ensuring that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique and enforceable; 2) ensuring that this set of requirements is sufficient to maintain reliability of the Bulk Electric System; and 3) revising the group of standards based on FERC Order 693.

During the course of the project, the NERC standards staff revised the Reliability Standards Development Plan and noted several areas of overlapping scope between certain projects. The original SAR for Project 2006-06 called for revisions to PER-004 — Reliability Coordination – Staffing and PRC-001 — System Protection Coordination. Based on scope overlap, it was determined that PER-004 and PRC-001 would best be served by moving the proposed work to Project 2006-01: System Personnel Training and Project 2007-06: System Protection, respectively.

The RC SDT proposed revisions to the set of standards under the project in August and September 2008. The RC SDT made revisions to the set of standards based on stakeholder feedback and the results of the IROL Standards Drafting Team work. Since the inception of this project, the IROL Standards Drafting Team has proposed, successfully balloted and obtained NERC Board of Trustees approval for three new Standards which included revisions to other IRO standards. With the approval of the IROL set of standards, certain requirements were retired from other IRO standards (see below summaries for specific examples under the RC SDT project).

- 1. Do you agree with the proposed definition of Interpersonal Communication (COM-001-2)? If not, please explain in the comment area.**

☐ Yes

☐ No

Comments:

- 2. Do you agree with the proposed definition of Alternative Interpersonal Communication (COM-001-2)? If not, please explain in the comment area.**

☐ Yes

☐ No

Comments:

- 3. Do you agree with the revisions made to Requirement 1 in COM-001-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.**

☐ Yes

☐ No

Comments:

- 4. Do you agree with the definition of Reliability Directive (COM-002-2)? If not, please explain in the comment area.**

☐ Yes

☐ No

Comments:

- 5. Do you agree with the revisions to the Requirements in COM-002-3 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.**

☐ Yes

☐ No

Comments:

- 6. Do you agree with the use of the defined term “Reliability Directive” in revisions to the Requirements in IRO-001-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.**

☐ Yes

☐ No

Comments:

- 7. Do you agree with the revisions to the Requirements in IRO-014-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.**

☐ Yes

☐ No

Comments:

- 8. Do you have any other comment, not expressed in questions above, for the RC SDT?**

Comments:



NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

Standards Announcement

Comment Period Open

January 4–February 3, 2010

Now available at: http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html

Project 2006-06: Reliability Coordination

The Reliability Coordination Standards Drafting Team is seeking comments on the following standards and associated implementation plans **until 8 p.m. EST on February 3, 2010:**

- COM-001-2 — Communications
- COM-002-3 — Communications and Coordination
- IRO-001-2 — Reliability Coordination – Responsibilities and Authorities
- IRO-014-2 — Coordination Among Reliability Coordinators

This is the third comment period for the proposed standards and implementation plans. The drafting team has made revisions to the documents based on stakeholder feedback. Explanations of the changes are included in the comment form. The drafting team has also posted its consideration of industry comments received during the previous comment period.

Instructions

Please use this [electronic form](#) to submit comments. If you experience any difficulties in using the electronic form, please contact Lauren Koller at Lauren.Koller@nerc.net. An off-line, unofficial copy of the comment form is posted on the project page:

http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html

Next Steps

The drafting team will draft and post responses to comments received during this period. The drafting team will also determine whether to post the standards for an additional comment period or seek approval from the Standards Committee to proceed to balloting.

Project Background

The Reliability Coordination Standards Drafting Team was tasked with 1) ensuring that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique, and enforceable; 2) ensuring that this set of requirements is sufficient to maintain reliability of the Bulk Electric System; and 3) revising the group of standards based on FERC Order 693.

During the course of this project, the Reliability Coordination Standards Drafting Team incorporated changes due to the work of the IROL Standards Drafting Team, and two standards from the original Standards Authorization Request (PER-004 and PRC-001) were moved to other projects due to scope overlap.

Applicability of Standards in Project

Reliability Coordinator
Balancing Authority

Purchasing Selling Entity
Transmission Service Provider
Transmission Operator
Distribution Provider
Generator Operator
Load Serving Entity

Proposed Glossary of Terms Changes

New terms:

Reliability Directive
Interpersonal Communication
Alternative Interpersonal Communication

Modified term:

Adverse Reliability Impact

Standards Development Process

The [Reliability Standards Development Procedure](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate.

*For more information or assistance,
please contact Shaun Streeter at shaun.streeter@nerc.net or at 609.452.8060.*





NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

Standards Announcement

Comment Period Extension

Project 2006-06: Reliability Coordination

The comment period for this project has been extended **until 8 p.m. EDT on February 18, 2010**. The extension provides a 45-day period to review the definition of Reliability Directive, which was not part of the previous comment periods for this project.

Project page: http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html

Standards Development Process

The [Reliability Standards Development Procedure](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate.

*For more information or assistance,
please contact Shaun Streeter at shaun.streeter@nerc.net or at 609.452.8060.*

Individual or group. (69 Responses)
Name (51 Responses)
Organization (51 Responses)
Group Name (18 Responses)
Lead Contact (18 Responses)
Question 1 (62 Responses)
Question 1 Comments (69 Responses)
Question 2 (63 Responses)
Question 2 Comments (69 Responses)
Question 3 (65 Responses)
Question 3 Comments (69 Responses)
Question 3.1 (64 Responses)
Question 3.1 Comments (69 Responses)
Question 3.2 (64 Responses)
Question 3.2 Comments (69 Responses)
Question 3.3 (65 Responses)
Question 3.3 Comments (69 Responses)
Question 3.4 (58 Responses)
Question 3.4 Comments (69 Responses)
Question 4 (64 Responses)
Question 4 Comments (69 Responses)
Question 5 (0 Responses)
Question 5 Comments (69 Responses)
Question 6 (51 Responses)
Question 6 Comments (69 Responses)
Question 7 (53 Responses)
Question 7 Comments (69 Responses)

Individual
Ray Mason
ReliabilityFirst
No
TPL-001-2 Draft 5 is much better than Draft 4. There is still one significant concern, that I do not believe the drafting team adequately addressed. It is unclear as to what "Planning Assessment results" and "results of its Planning Assessment" entail. The Draft 5 response that "Planning Assessment" is a defined term does not fully address this concern. "Planning Assessment results" or "results of its Planning Assessment" is not necessarily the same thing as "Planning Assessment". As written, "Planning Assessment results" or "results of its Planning Assessment" could be anything from a single sentence, to a few brief high level

paragraphs, to a detailed and technically complete Planning Assessment. The Standard needs to more clearly state what is required in the report to other entities. Based on the drafting team response in Draft 4, it seems that replacement of "Planning Assessment results" or "results of its Planning Assessment" with the term "Planning Assessment" or "its Planning Assessment" would be appropriate. Violation Severity Levels: R8 The failure to provide documented responses to documented comments to "Planning Assessment results" is deemed to be a higher severity level than failing to distribute "results of its Planning Assessment". Failure to distribute denies functional entities an opportunity to comment, and could prevent coordinated planning, and thus should be deemed to be more severe than failing to provide documented responses to documented comments.

Individual
Greg Rowland
Duke Energy
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
We support the changes.
Yes
Yes
Individual
Catherine Mathews
NorthWestern Energy (NWMT)
Yes
Yes
Yes
Yes
Yes

Yes
Yes
Yes
Table 1, P5 currently requires the study of “[d]elayed Fault Clearing due to the failure of a relay13 protecting the Faulted element to operate as designed”. As written, this requirement does not recognize the use of redundant relays for primary protection. In some cases side by side relays are used to provide primary fault tripping if one relay fails to operate. Per the requirement as stated, the redundant relay would provide no value in meeting this requirement. Please revise to acknowledge backup relays: “Single failure of a protection relay13 protecting the Faulted element to operate as designed, resulting in backup relay actions or Delayed Fault Clearing, for one of the following”. In Table 1, P2 and P3, the last column “Non-Consequential Load Loss Allowed” where the requirement “No12” appears, and in footnote 12, the standard as proposed does not allow for any Non-Consequential Load Loss. When the Non-Consequential Load Loss (footnote b) issue is clarified in Project 2010-11 this requirement may be changed. Therefore, if this proposed Standard is enforced before Project 2010-11 is completed, entities will be required to meet this No Non-Consequential Load Loss requirement without the exception allowed in the existing TPL-002-0, footnote “b”. This will require immediate redesigns to meet this particular requirement. The unintended consequence could be that operators of local systems that are currently networked may opt to begin operation as radial systems, and future designs for local systems may be radial, at any voltage level. We suggest that the proposed footnote 12 include a provision to default to the existing footnote “b” in TPL-002-0 until Project 2010-11 is decided. Please revise footnote 12 to read, “Note: Non-Consequential Load Loss is being decided in Project 2010-11. When that project is finalized, the resolution will be copied here. In the interim, planned or controlled interruption of electric supply to radial customers or some local Network customers, connected to or supplied by the Faulted element or by the affected area, may occur in certain areas without impacting the overall reliability of the interconnected transmission systems. To prepare for the next contingency, system adjustments are permitted, including curtailments of contracted Firm (non-recallable reserved) electric power Transfers.”
No
Measure M6 is too vague. It is unclear how to identify the conditions of Cascading, voltage instability, or uncontrolled islanding. The Glossary of Terms defines Cascading as “The uncontrolled successive loss of system elements triggered by an incident at any location. Cascading results in widespread electric service interruption that cannot be restrained from sequentially spreading beyond an area predetermined by studies.” Does the loss of system elements have to extend beyond the Control Area to be considered “Cascading”? Is there a Megawatt threshold that must be satisfied? Is there a time duration involved? Also, “cascading outages” needs to be defined. In addition, “voltage instability” and “uncontrolled islanding” should both be defined.
Yes
Individual
Phuong Tran
Lakeland Electric

Yes
Shouldn't the "Implementation Plan for TPL-001-1" document be for TPL-001-2? Also, "TPL-001-1" is referenced throughout the document.
No
"the latest" is not needed from the second sentence of R1, since the sentence already ended with "...shall represent projected System conditions". R1 Part 1.1.2 Suggest adding this clarification at the end "... six months during the period under study". This language addition helps clarify the point that if an outage occurs during the summer and the entity's system peak occurs in the winter, then the system peak Load study case (model) does not have to include this particular outage.
No
Please consider removing R.2.6.2
No
A "measureable change in performance" can be interpreted as not meeting one of the performance requirements as specified in Table 1 in order for the condition to be selected as a sensitivity. This will cause utilities to perform sensitivity analysis for all system conditions listed in R2.1.4 to determine which one fails to meet one of the performance requirements in Table 1, as one may not be able to tell performance impact until after the studies are performed. Suggested change: "...one of the following conditions by a sufficient amount...system conditions that may demonstrate a measurable change in system response."
Yes
No
Please consider removing R2.6.2. The "any material change" language can cause utilities perform studies due to material changes outside of and remote to its system.
Yes
The performance requirements of Table 1 do not allow the loss of non-consequential load for single and multiple contingency events. The disallowance of load loss does not provide any real benefit to the reliability of the BES and is an unnecessary overreach into local quality of service issues that are best addressed by State, Provincial or Municipal authorities. There may be circumstances such as high local transmission costs or local opposition to transmission construction where prohibition of non-consequential load loss represents a poor cost/benefit or quality of life tradeoff. Having a provision at the regional level that a PA or TP can have a certain amount of non-consequential load loss designed or planned in to its system that would be reasonable if it is acceptable to the RE and does not have an adverse impact on the remaining BES. In lieu of such a RE provision, providing a quantitative cap in non-consequential load loss such as 100 MW may be rationale compromise in the goal of limiting load loss for the more probable outage events. Our preference would be to retain the capability of limited non-consequential load loss. It is our understanding that footnote 9 is under consideration as part of Project 2010-11 and should be noted as such for clarification.
No
please consider remove "the latest" from M1
No
The requirement to distribute the Planning Assessment should be more flexible and allow for making the Planning Assessment available, such that those entities that desire the

information can have it readily available. R8 should be modified as follows: Each Planning Coordinator and Transmission Planner shall make available its Planning Assessment results to adjacent Planning Coordinators and Transmission Planners and to any functional entity that indicates a reliability related need for the Planning Assessment results.

Individual

Tom Duane

PNM

Yes

We commend the SDT for its work to continue the improvement on the proposed TPL-001-1. We were not able to find a place to include comment on Requirement R4; therefore, we have included our comments here: Section R4.3.1, bullet point 3 requires the stability analyses to include the impact of subsequent "[t]ripping of Transmission lines and transformers where transient swings cause Protection System operation based on generic or actual relay models". As written, this bullet could be interpreted as requiring the inclusion of these relay models in stability data bases. We do not have generic or actual relay models in our dynamics data bases for tripping line faults on lines and transformers represented. We represent actual relay response and tripping times of relays, communications, and breakers to faults in tripping transmission lines and transformers. Requiring the inclusion of generic or actual relay models for all relays that can trip lines and transformers would add a large burden to the development and maintenance of accurate dynamics model files that would add little or no benefit. Please change this bullet to read: "Tripping of Transmission lines and transformers where transient swings cause Protection System operation based on known Protection System response".

Yes

Yes

Yes

Yes

Yes

Yes

Table 1, P5 currently requires the study of "[d]elayed Fault Clearing due to the failure of a relay¹³ protecting the Faulted element to operate as designed". As written, this requirement does not recognize the use of redundant relays for primary protection. In some cases side by side relays are used to provide primary fault tripping if one relay fails to operate. Per the requirement as stated, the redundant relay would provide no value in meeting this requirement. Please revise to acknowledge backup relays: "Single failure of a protection relay¹³ protecting the Faulted element to operate as designed, resulting in backup relay actions or Delayed Fault Clearing, for one of the following". In Table 1, P2 and P3, the last column "Non-Consequential Load Loss Allowed" where the requirement "No¹²" appears, and in footnote 12, the standard as proposed does not allow for any Non-Consequential Load Loss. When the Non-Consequential Load Loss (footnote b) issue is clarified in Project 2010-11 this requirement may be changed. Therefore, if this proposed Standard is enforced before Project 2010-11 is completed, entities will be required to meet

this No Non-Consequential Load Loss requirement without the exception allowed in the existing TPL-002-0, footnote "b". This will require immediate redesigns to meet this particular requirement. The unintended consequence could be that operators of local systems that are currently networked may opt to begin operation as radial systems, and future designs for local systems may be radial, at any voltage level. We suggest that the proposed footnote 12 include a provision to default to the existing footnote "b" in TPL-002-0 until Project 2010-11 is decided. Please revise footnote 12 to read, "Note: Non-Consequential Load Loss is being decided in Project 2010-11. When that project is finalized, the resolution will be copied here. In the interim, planned or controlled interruption of electric supply to radial customers or some local Network customers, connected to or supplied by the Faulted element or by the affected area, may occur in certain areas without impacting the overall reliability of the interconnected transmission systems. To prepare for the next contingency, system adjustments are permitted, including curtailments of contracted Firm (non-recallable reserved) electric power Transfers." Timing of this project and project 2010-11 is critical. It would be very difficult to vote to approve the proposed TPL-001-2 prior to knowing the outcome of Project 2010-11 (footnote b issue).

Group

NERC Staff

Mallory Huggins

Yes

NERC staff supports the change to allow Corrective Action Plans to include tripping of Non-Consequential Load and curtailment of Firm Transmission Service for 7 years. This seems long, but staff understands the stakeholder concern that it could take that long to plan, site, and construct facilities required for compliance with the standard.

Yes

NERC staff supports the revisions to the definition of Year One. However, we believe an associated change should be made where this term is used in part 2.1.1 of Requirement 2 which requires modeling of "System peak Load for either Year One or year two, and for year five." It seems the new definition of Year One would negate the need to refer to year two. NERC staff recommends that part 2.1.1 be changed to "System peak Load for Year One and for year five."

No

NERC staff suggests that the added sentence in R1 be deleted and "Normal System" in Table 1 be replaced with "No unplanned Element outages." We have a problem with R1 establishing "normal system condition." "Normal" is not defined, but the system condition that most people would define as "normal" is the System operating within its limits. There are no checks required on the projected system conditions to guarantee "operation within limits." Staff realizes that if this were the case, the categories tested would all pass their respective tests. (In other words, the category tests may define operating limits that in turn define "normal" from a planning perspective.) Thus, the added sentence in R1 should be deleted. In Table 1, the use of the term "Normal System" in the column "Initial System Condition" really means "No unplanned Element outages." All Elements that do not have a planned outage are assumed in-service (for transmission Elements) or available for dispatch (for generators). Contrast the term "Normal System" with categories P3 and P6, which have the loss of an Element (which is unplanned) followed by the loss of a second Element (also unplanned). "Normal System" should be replaced with "No unplanned Element outages."

Yes

NERC staff supports the use of qualified past studies for the Near Term horizon.
Yes
NERC staff supports removing the phrase “not already included in the studies” from the parts 2.1.4 and 2.4.3 of Requirement R2. We believe that the requirement is more clear and less subject to interpretation without this phrase.
No
NERC staff understands why the SDT has inserted the word “expected” before “dynamic behavior of Loads,” but we have concerns with this addition. We understand that a PC or TP that models the best current industry understanding of load behavior should not need to worry about compliance if that model does not match actual load response for all possible system conditions. However, we are concerned that this change to part 2.4.1 of Requirement R2 may be too accommodating. If a PC or TP has unrealistic expectations about load behavior, would this permit the use of unrealistic models? While we have struggled to develop an alternative proposal, we hope that the SDT will identify a way to address this concern.
Yes
NERC staff supports inserting the word “material” in the reference to assessing the impact of proposed generation. We have some concern that this change leaves this part of the requirement open to interpretation, but we also understand the need to permit some degree of engineering judgment to be applied. It would not be appropriate to require that every potential generation addition be included in the assessment where some proposed additions may by inspection be deemed to be immaterial due to size and/or interconnection location.
Yes
NERC staff supports the changes to the header notes in Table 1.
NERC staff is concerned with P5 and footnote 9 and thus cannot support these changes in their entirety. First, a revision to the Draft 4 definition of P5 should be used in lieu of the current Draft 5 version: “Loss of multiple elements caused by the Fault clearing consistent with failure of a single Protection System while clearing a fault on one of the following: . . .” After reviewing the P5 contingency throughout various drafts of this standard, along with existing Table 1 for TPL-001 through TPL-004, NERC staff’s primary concern is that this most recent version is going in the wrong direction by becoming too limiting regarding which Protection System component failures are covered. Draft 5 is an improvement because it removes the reference to loss of multiple elements in Draft 4 (which defined P5 as “Loss of multiple elements caused by the failure of a single Protection System while clearing a fault on one of the following: . . .”). Draft 5 takes a step backward, however, by referring to Delayed Fault Clearing. The advantage of not referring to Delayed Fault Clearing is that for cases where redundant protection systems are provided, the fault clearing may not be delayed even when a single Protection System failure occurs. Ideally, NERC staff believes that P5 should refer to “failure of any component of a Protection System,” but NERC staff recognizes that we cannot get there until the term Protection System is redefined and Project 2009-07—Reliability of Protection Systems is underway. Until that change is possible, NERC staff encourages the SDT to use the revised version of P5 proposed above. A second concern is with footnote 9, which is used numerous times in Table 1. System adjustments may be used in two different settings: the first is to address the aftermath of a particular Contingency; the second is to prepare for the next Contingency. Staff suggests that the current footnote 9 have this language added: “Post-Contingency Ccurtailment of Firm Transmission Service to address the simulated contingency, when coupled with” Footnote 9 is used in the column labeled “Interruption of Firm Transmission Service Allowed” whenever a “No” is provided. The footnote 9 in this column has to do with System adjustments that address the aftermath of the Contingency

that is being simulated. Therefore, no footnote 9 appears appropriate for category P0 (No Contingency). The reference in footnote 9 to no load loss and staying within applicable Facility rating, including those on a neighboring system, is sufficient for addressing the aftermath of the Contingency being simulated. To address next Contingency, an additional footnote is needed in the "Initial System Condition" column for category P3 and category P6. The following is suggested: "System adjustments to prepare for the next Contingency must be completed within 30 minutes." Footnote 9 is used in the column labeled "Initial System Condition" for category P3 and category P6, and these two categories define the loss of an Element "followed by System adjustments" and then followed by the loss of a second Element. It is unclear whether the intent in footnote 9 in these two cases is meant to address the same issue referenced above (i.e. the aftermath of the Contingency being simulated) or whether it is intended to address the next Contingency. Thus, both situations need to be addressed using the suggestions indicated above.

Yes

NERC staff supports the changes to the Measures.

Yes

NERC staff supports the changes to the VSL for Requirement R8.

Individual

Doug Hohlbaugh

FirstEnergy

Yes

We appreciate the effort of the standard drafting team and the changes reflected in the current draft of the TPL-001-1 standard. The changes are improvements that should move the standard towards greater industry consensus. The extended Implementation Plan aligns with suggestions in FE's prior ballot comments. We support the Implementation Plan change made by the team.

Yes

The change in the Year One definition provides greater flexibility for the industry and also addresses a prior FE comment during the 1st ballot. We appreciate the team's careful consideration of the industry feedback and support the change.

Yes

Yes

Yes

Yes

Yes

Yes

Table 1, P5 currently requires the study of "[d]elayed Fault Clearing due to the failure of a relay (footnote 13) protecting the Faulted element to operate as designed". To the extent fully redundant relaying exists with no expected delay in Fault Clearing its understood that the P5 event would not be a concern for the redundant system design. The drafting team has taken appropriate steps within the TPL standard to focus on relaying failures to provide clarity in what is required for P5 planning event.

Yes
Yes
Individual
John Collins
Platte River Power Authority
Yes
We commend the SDT for its work to continue the improvement on the proposed TPL-001-1. We were not able to find a place to include comment on Requirement R4; therefore, we have included our comments here: Section R4.3.1, bullet point 3 requires the stability analyses to include the impact of subsequent “[t]ripping of Transmission lines and transformers where transient swings cause Protection System operation based on generic or actual relay models”. As written, this bullet could be interpreted as requiring the inclusion of these relay models in stability data bases. We do not have generic or actual relay models in our dynamics data bases for tripping line faults on lines and transformers represented. We represent actual relay response and tripping times of relays, communications, and breakers to faults in tripping transmission lines and transformers. Requiring the inclusion of generic or actual relay models for all relays that can trip lines and transformers would add a large burden to the development and maintenance of accurate dynamics model files that would add little or no benefit. Please change this bullet to read: “Tripping of Transmission lines and transformers where transient swings cause Protection System operation based on known Protection System response”.
Yes
Yes
No
I like that you have requirements for qualifying past studies, but Part 2.6.2 is confusing. Please change Part 2.6.2 to read something like: “For steady state, short circuit or Stability analysis: no material changes have occurred to the System represented in the study or, if material changes have occurred, a technical rationale can be provided to explain that the changes do not impact the performance results in the study area.”
Yes
Yes
For consistency, use the qualifier “expected” in the second sentence of Part 2.4.1 also, such that it reads “...represents the overall expected dynamic behavior...”
Yes
I like the flexibility you give the PC and TP to define what ‘material’ means in their ‘documentation to support the technical rationale for determining material changes.’ In Part 2.5 this rationale will decide whether or not any Long-Term Stability studies are required for the Planning Assessment. And in Part 2.6.2 this rationale will be a factor in qualifying a past study.
Yes
I like the flexibility you give the PC and TP in Requirements R3 and R4 to develop their rationale for the Contingencies they select for evaluation.
No. Table 1, P5 currently requires the study of “[d]elayed Fault Clearing due to the failure

of a relay¹³ protecting the Faulted element to operate as designed". As written, this requirement does not recognize the use of redundant relays for primary protection. In some cases side by side relays are used to provide primary fault tripping if one relay fails to operate. Per the requirement as stated, the redundant relay would provide no value in meeting this requirement. Please revise to acknowledge backup relays: "Single failure of a protection relay¹³ protecting the Faulted element to operate as designed, resulting in backup relay actions or Delayed Fault Clearing, for one of the following". In Table 1, P2 and P3, the last column "Non-Consequential Load Loss Allowed" where the requirement "No12" appears, and in footnote 12, the standard as proposed does not allow for any Non-Consequential Load Loss. When the Non-Consequential Load Loss (footnote b) issue is clarified in Project 2010-11 this requirement may be changed. Therefore, if this proposed Standard is enforced before Project 2010-11 is completed, entities will be required to meet this No Non-Consequential Load Loss requirement without the exception allowed in the existing TPL-002-0, footnote "b". This will require immediate redesigns to meet this particular requirement. The unintended consequence could be that operators of local systems that are currently networked may opt to begin operation as radial systems, and future designs for local systems may be radial, at any voltage level. We suggest that the proposed footnote 12 include a provision to default to the existing footnote "b" in TPL-002-0 until Project 2010-11 is decided. Please revise footnote 12 to read, "Note: Non-Consequential Load Loss is being decided in Project 2010-11. When that project is finalized, the resolution will be copied here. In the interim, planned or controlled interruption of electric supply to radial customers or some local Network customers, connected to or supplied by the Faulted element or by the affected area, may occur in certain areas without impacting the overall reliability of the interconnected transmission systems. To prepare for the next contingency, system adjustments are permitted, including curtailments of contracted Firm (non-recallable reserved) electric power Transfers." Timing of this project and project 2010-11 is critical. It would be very difficult to vote to approve the proposed TPL-001-2 prior to knowing the outcome of Project 2010-11 (footnote b issue). In Table 1 – Planning Events – Suggest changing the description for Events P2-3, P2-4, P4 and P4-6 to use the term 'Bus-tie Breaker' or 'non-Bus-tie Breaker' as applicable. In Table 1 – Extreme Events – Stability – Items 2a-2d, do you mean 'Protection System failure' here, or do you want to change to 'relay failure' to be consistent with changes in P5?

Yes

Yes

Group

SERC Planning Standards Subcommittee

Philip Kleckley

Yes

Yes

No

The definition does not adequately address normal (pre-contingency) operating procedures or system configurations. Language should be added to the requirement (perhaps as R1.1.7) to include normal operating procedures or system configurations in place prior to any contingency occurring.

Yes

Yes
Yes
Yes
Yes
Yes
Yes
Comments: We wish to make a comment on R4.3.1: it appears that this requires stability simulations of both successful and unsuccessful high-speed reclosing for all contingency simulations regardless of whether high-speed reclosing is used on the faulted line. We suggest the following wording be used to replace the first bullet: "Successful high-speed reclosing and unsuccessful high-speed reclosing onto a fault, where such reclosing is applied, and where such additional simulations are deemed appropriate by the PC or TP." We wish to make a comment on the stability extreme event table: Changes were made in planning event P5 to narrow the focus to specific relay failures. The same changes are needed for stability extreme event 2a, 2b, 2c, and 2d.
Individual
Aaron Staley
Orlando Utilities Commission
Yes
Yes
Yes
No
Allowing the use of past studies in lieu of new studies for part or all of an assessment when the underlying system hasn't changed in a significant change if very prudent. However the wording in 2.6.2 of "unless a technical rationale can be provided to demonstrate that System changes do not impact the performance results in the study area" is of concern. By this wording is it intended that the planner must demonstrate that every material change has no impact? In essence doing more work to prove that a study isn't required then the study would take? Or that the planner must essentially have a technical rationale (overarching) for determining when a material change is "material enough" to impact system performance?
No
What is meant by "measurable change in performance"? Is this a measure that the sensitivty should move the system from meeting the performance requirements to not meeting the performance requirements? Or just a measurable change in system response, IE the loading was 45% on this corridor but is now 76%.
Yes

No
I agree with what I think is the intent. The word "Material" is meant to allow for changes in model to occur that are "small" relative to the TP/PC. For example the 400 MW generator that might be built in 10 years by another utility over a hundred miles, several dozen buses and generators away to not force new study work. However as written in 2.5 it requires you to define what a material change is, and could be applied to mean every change must be identified and explained rather than an overarching rationale that would only have you looking for changes that meet the material criteria. But then in 2.6.2 the word material is used with no obligation to explain what material is, only to explain if a material change would not impact the results in a study area. I recommend leaving the term material, but setting a requirement, measure, or definition that requires the TP/PC to define what they consider material specific to their system and circumstance. Since this will by the hetroogenous nature of the grid be different for each it may not be reasonable to pre-define what is realibale. Just as was done with many items in the ATC (MOD) standards, require that it be documented and questions on that rationale be answered. If a specific level of technical oversight is desired, consider requiring that description to be on file with the regional entity and approved by their planning committee. I think the team is heading in a good direction, it's just how the words will be applied that concern me. This may be a case where an Example or two would go a long way towards providing guidance to entities and auditors.
Yes
I am assuming you mean the header notes on the performance table
I generally agree with the direction the team has gone. Footnote 9 should also be highlighted as being part of the project 2010-11 discussion just as footnote 12 is.
Yes
No
R8 should require that the PC and TP make available it's planning assessment results when requested, rather than requiring the preemptive transmittal. There is no reliablity purpose served by providing unsolicited information.
Individual
Kasia Mihalchuk
Manitoba Hydro
Yes
Yes
Yes
Yes
Yes
No
The last two sentences "System peak Load levels shall include a Load model which represents the expected dynamic behavior of Loads that could impact the study area, considering the behavior of induction motor Loads. An aggregate System Load model which

represents the overall dynamic behavior of the Load is acceptable.” belong in the MOD standards. They are not required in TPL-001-2.
No
Adding the word “material” does not clarify Part 2.5. The word “material” can be interpreted in many ways and is subjective. In order to have a consistent approach by all TPs, the drafting team should add a definition of the term “material”. One TP may consider a new 200 MW unit as not being material because there are several larger units in the TPs system.
Yes
In point g, violations are noted in terms of post-Contingency voltage deviations rather than post-Contingency voltage limits. This may lead to confusion, as some utilities evaluate performance based on a post-Contingency voltage deviation criterion while other utilities evaluate performance based on post-Contingency voltage limits. This same comment applies to Requirement R5. Suggested rewording for point g: System steady state voltages and post-Contingency voltages or voltage deviations shall be within acceptable limits as established by the Planning Coordinator and the Transmission Planner. Suggested rewording for the first sentence in Requirement R5: Each Transmission Planner and Planning Coordinator shall have criteria for acceptable System steady state voltage limits, post-Contingency voltages or voltage deviations, and the transient voltage response for its System. Note 12 states that an outstanding issue related to non-consequential load loss is being discussed. This will create a lot of uncertainty. Manitoba Hydro could not support this standard unless the resolution of Note B is known.
Yes
Yes
Individual
Randi Woodward
Minnesota Power
Yes
Yes
Yes
No
Requirement 2 - This requirement states that Stability analyses be performed as part of the annual Planning Assessments. Minnesota Power would like to see the term "Stability analysis" more clearly defined as there are several different types of stability related analysis that can be performed for power systems including: transient stability, voltage stability and small signal stability.
Yes
Yes
Yes

Yes
None.
Yes
Yes
Group
Northeast Power Coordinating Council
Guy Zito
No
Requirement R1 Part 1.1 and following states "System models shall represent:... 1.1.5. Known commitments for firm Transmission Service and Interchange. It was commented during a previous posting that 1.1.5 should be reworded to read: Known commitments for Firm Transmission Service, and, additionally, other types of transactions provided they have been demonstrated to not violate existing reliability constraints. The response was that "The SDT believes that the defined term 'Interchange' covers other transfers as described in your comment. No change made." It is agreed that known Interchanges should be modeled. However, it is imperative that existing reliability constraints not be violated in the process. That is, Interchange relating to economic transactions should not drive planning studies. Reliability related investments should not be driven by congestion related to economic transactions incorporated into planning models. Following is a preferred/revised wording: • 1.1.5. Known commitments for firm Transmission Service and Interchange. Interchange is meant to refer to energy transactions other than firm Transmission Service. While rigorous planning studies have been conducted to permit the uninterrupted implementation of firm Transmission Service without jeopardizing the reliable operation of the Interconnected System, other types of energy transaction only take place whenever system conditions permit them. They are usually of very short duration relative to planning assessment periods (usually spanning for a few hours to a few days) and deemed highly interruptible subject to reliability issues that may arise during operation of the system. In other words, the term Interchange refers to economic transactions that are permitted when the system is secure and there are reasonable reliability margins to effect dispatch changes to lower operating costs. As such, Interchange should not be reflected in system representation meant to assess system reliability in adherence to reliability criteria delineated in documents such as TPL-001.
No
The definition of Year One could be eliminated, and its wording used in place of Year One within the text of the requirement. The proposed definition has now added ambiguity with respect to "year two" and "year five" which are not defined. Year two could be deleted and R.2.1.1 modified as follows: System peak Load representing a point in time 12-24 months and another point in time 48-65 months into the future from the time the study is initiated. Define Year Five as the twelve month period 4 to 6 calendar years from the date of the Planning Assessment.
Yes
No
The revisions made to Requirement R2 Part 2.1 appear to resolve the concern that past studies could not be used to comply with the short-term steady state study requirements. This revision must be carried through to other sections (R2.2, 2.2.1). However, the

language of Requirement R2 Part 2.2 still seems to suggest that current annual studies are always required for the long-term steady state assessment to be compliant. This may have been an oversight, for consistency Requirement R2 Part 2.2 should be modified to similarly read as Requirement R2, Part 2.1. Regarding R2.2, the language should be consistent with 2.1. For example, use "current or qualified past studies" instead of "the following annual current study". Revisions made to Requirement R2.1.5 have made it worse than was originally drafted. This would require the PC & TP to study (meaning performing a technical analysis) of the impact and probability of the possible unavailability of any piece of equipment with a lead time of one year or more. Such an evaluation of spare equipment strategies would require significant additional resources and data, but provide no benefit to system reliability, as it is redundant to the existing N-1-1 contingency requirement (P6). R2.7 requires that Corrective Action Plans are included in each Planning Assessment and states "Such actions may include..." followed by a list of actions. Restricting allowable actions, and excluding runback/tripping of HVDC would have a direct impact on multiple existing facilities in New York and would adversely impact the reliability planning of the NYCA. Runback/tripping of HVDC must be added to the list, and also suggest revising to "Such actions may include but not be limited to:".

No

Part 2.1.4, requires an entity to vary one or more conditions to demonstrate a change in performance. If the cases were initially stressed, this may force an entity to simulate conditions with less severe stresses. At this point, there is limited to no value to this additional workload. Having a requirement to test at least one sensitivity as a blanket requirement may not be informative by itself and is more unclear since sensitivities are being required on an undefined base set of conditions. If an entity does a case with a stressed set of assumptions, is it necessary to do a non-stressed case? Additionally, our concern involves wording under 2.1.4 and 2.4.3 that sensitivities are required varying one or more conditions. Subsequently, in requirement 2.7.2 corrective action plans need to be developed to resolve performance deficiencies "only" if identified in multiple conditions or require a rationalization why no corrective action plan is necessary. Multiple conditions sensitivities under 2.1.4 and 2.4.3 are necessary to satisfy requirement 2.7.2. Requirement 2.7.2 adds ambiguity and should be removed. If not, a suggested revision to Requirement 2.7.2 as follows: 2.7.2. Corrective Action Plans are not required for performance deficiencies identified in a sensitivity analysis. In general, the scope of this requirement is too broad and non-specific, and only results in undue study burden. Is it necessary for sensitivity analysis to be included in requirements since in accordance with good engineering practices a conservative approach should be used in studies? The standard is referring to requirements for sensitivity and other issues without a reference to base assumptions as commented in issue #3. The standard must describe base assumptions. To define a sensitivity condition, NERC must define base assumptions.

No

There is insufficient information and experience regarding dynamic load modeling. It may also be included as a "sensitivity" analysis in 3.2, rather than requiring and expecting accurate representation of a dynamic load model. If this requirement is kept, a modeling standard must be written that is specific to dynamic loads. Change belongs in a modeling standard, not in TPL-001.

Yes

No

Header note (i) in the first Table 1 (p. 10) could imply that voltage-varying load shall not be used to meet steady state performance requirements. Steady state load models in use include voltage-varying loads. The explicit representation of (voltage-dependent) load

models is perfectly consistent with the requirements defined in R1 (which calls for a comprehensive representation of system components and their expected operating status in the planning assessment period) and the impetus to the creation of more specific load models in dynamic assessments found Requirement 2.4 of this draft of TPL-001-2. It is a known that depressed voltage conditions cause certain system elements to perform below their rated capacity. For example, capacitors provide less voltage support and voltage controlling transformers are impeded by their finite tap range to direct VAR flow into areas affected by low voltage conditions. Certain load types, on the other hand, provide a self-compensating relief to depressed voltage by naturally decreasing demand in a manner proportional to their characteristics, without operator intervention. Choosing to negate the voltage-dependence of one of these system elements (load, in our case) results in an inaccurate system representation that, in turn, may lead to erroneous assessments of the reliability state of the interconnected system and, potentially, to the implementation of unwarranted system upgrades. This note should be revised to only reference loads which are disconnected due to voltage.

To support the change to P5, other items need to also be modified. In Table 1 - Steady State & Stability Performance Extreme Events (p. 12), in the Stability Section, the language should be made similar to wording in P5. Protection System should be removed and replaced with the words "relay failure". This change should be made for 2a through 2d: 2. Local or wide area events affecting the Transmission System such as: a. 3Ø fault on generator with stuck breaker¹⁰ or a relay failure resulting in Delayed Fault Clearing. b. 3Ø fault on Transmission circuit with stuck breaker¹⁰ or a relay failure resulting in Delayed Fault Clearing. c. 3Ø fault on transformer with stuck breaker¹⁰ or a relay failure resulting in Delayed Fault Clearing. d. 3Ø fault on bus section with stuck breaker¹⁰ or a relay failure resulting in Delayed Fault Clearing. Note 11 (p. 14) needs clarification as shown: Excludes circuits that share a common structure (Planning event P7, Extreme event steady state 2a) or common Right-of-Way (Extreme event, steady state 2b) for a total of 1 mile or less. There are two tables labeled "Table 1". Suggest that the extreme events table be renamed "Table 2".

Yes

No

Requirement 8 is an administrative burden to TPs and PCs that adds no value to Bulk Power System reliability. PCs should be including TPs, neighboring PCs and interested parties in its planning processes when developing the Planning Assessments. Therefore, the inclusion of a set of VSLs for Requirement 8 is unnecessary. Should the VSLs for Requirement 8 remain, Requirement 8.1 should be revised to reflect that comments only to the final Assessment (not drafts developed during a process) need a response as follows: If a recipient of the planning assessment final results provides documented comments on the results, the respective Planning Coordinator or Transmission Planner shall provide a documented response to such recipient within 90 calendar days of receipt of those comments. If Requirement 8 and 8.1 are retained, they should be revised to reflect that comments only to the final Assessment (not drafts developed during a process) need a response and there should be a limit on the comment period as follows: If a recipient of the planning assessment final results provides documented comments on the results within 90 days of receipt, the respective Planning Coordinator or Transmission Planner shall provide a documented response to such recipient within 90 calendar days of receipt of those comments. Other comments not addressed by this Comment Form as follows: Section 3.3 - The last sentence of 3.3.1 should be removed. This is addressed in PRC-023. Line ratings are addressed in PRC-023. PRC-023 requires coordination with the Reliability Coordinator. Remove "Tripping of Transmission elements where relay loadability limits are exceeded."

Section 4.3 - High speed reclosing is not defined, and to help eliminate any confusion that it may introduce into the standard it will be worthwhile for the SDT to define this term. Several specific examples from previous comments on sensitivity analysis and guidance for base case assumptions: The requirements for sensitivity analysis already address issues going beyond what is expected to meet reliability requirements. Requiring extreme event analysis is requiring two layers of event analysis beyond what is required and there is no requirement for corrective action if anything is identified. The standard is referring to requirements for sensitivity and other issues without a reference to base assumptions. The standard must describe base assumptions. To define a sensitivity condition, NERC must define base assumptions. As for allowing con-consequential load loss for Categories P1 through P5, suggest approval at the Regional level, with a concept of allowing it in a "local area" that does not impact BPS reliability. All references to 300 kV in document should be replaced with EHV (for example in the Introduction, Section 5). The first phrase of Note 3 on p. 14 should be revised as follows: "Bulk Electric System (BES) level references include extra-high voltage (EHV) Facilities defined as those representing the backbone of the System, generally at voltage greater than 300 kV, and high voltage (HV) Facilities defined as those not representing the backbone of the System, as determined by the Planning Coordinator and approved by Regional Entity."

Individual

Martin Bauer

US Bureau of Reclamation

Yes

With exception of the definitions.

No

The language implies a requirement. The language "Year One must include the forecasted peak Load period for one of the following two calendar years" is a requirement and not a statement of clarification. If the definition is that "Year One" can also be the period used for forecast peak load, then it should be stated so. It is suggested that either the language in the definition is modified or the language is deleted from the definition and moved to the body of the standard.

Yes

No

The question is misleading in that R2 also include current studies. The overall structure of the standard could be greatly improved if the standard were segmented into Near Term and Long Term with sub segments for each specific type of analysis to be performed. Second, the standard does not use consistent terms. The Planning Assessment is to include Near Term and Long Term portions which must have steady state analysis, short circuit analysis, and stability analysis (ref. R2). Requirement R 2.1 introduces sensitivity analysis for the Near Term portion, and then refers to the Planning Analysis which is in reality both Near Term and Long Term portions. That implies that sensitivity analysis must be required for both? The standard repeats the requirement for annual stability studies in 2.4 which was already a requirement for Planning Assessments. The requirement 2.1.5 is one the most problematic requirements in this standard. This requirement implies that an entity must have spare equipment and a strategy to employ it. That is beyond the scope of the Energy Policy Act 2005. Spare equipment is not on-line and does not contribute to the reliability of the existing system. The Energy Policy Act of 2005 specifically prohibits the requirement to enhance or modify the system. The use, application, or requirement to have spare equipment violates that prohibition. This section should be removed. In addition, this requirement suffers from an ability to implement. In the first case, the requirement is

invoked if the spare equipment strategy could result in unavailability of transmission equipment. How is that determined? There is no nexus to that determination. The unavailability may have already occurred once the transmission equipment has failed. The only way to avoid unavailability if the transmission equipment that fails has a hot stand-by with automatic fail-over. The presence or not of a suitable replacement will still result in unavailability by virtue of the failure of the first piece of transmission equipment. Next problem, who will second guess the owner of the replacement. Where is the requirement to make the replacement strategy available? The standard should focus on system performance with existing equipment to meet current and future loads.

No

Sensitivity analysis is not included in R2. This gets back to the structure of the standard. There should a clear indication of the studies that are to be included in the Near-Term and Long-Term portions of the Planning Assessments.

No

Not included in R2. See response to Question 3.2

No

The term "material" is arbitrary. It is suggested that a specific value be used to trigger the assessment.

No

The language implies that the responsible entity may choose to not distribute it is feels the entity making the request does not have a "reliability related need". It is not clear why that distinction is being made?

Group

Exelon Transmission Planning

Eric Mortenson

Yes

Yes

Yes

Yes

Yes

No

There is not an industry consensus around best practices for modeling the dynamic behavior or characteristics of load. It is premature to make this a requirement in an enforceable standard which would be held to this degree of subjective auditing.

No

The term 'material changes' is subjective. It is very difficult to determine a base case to study combinations of generator additions on a changing transmission network in the 6 to 10 year time period to be used for dynamic simulations. Dynamic studies should be performed whenever new generator interconnections are proposed and it is at that time

where meaningful calculations can be performed. The long term six to ten year out dynamic studies for groupings of potential units should be done at a high level, if at all.
Yes
Comments: The term 'HV' in the performance table should be defined as 'Bulk Electric System elements up to 300 kV, not simply all elements 'below 300 kV'. Footnote 12 should be clarified to specifically state the requirements before voting takes place. The performance criteria should be based on the voltage level of the element experiencing stress due to the contingency, not based on the voltage level of the outaged element. It does not seem to make sense that the loss of a 500 kV bus would not allow for any non-consequential load shedding unless the bus contained a 500 to 230 kV transformer, in which case additional load shedding would be allowed. If outages on a 230 kV system, such as bus fault with stuck breaker, were to cause overloads on a 500 kV network it is acceptable to shed load, but if the outages were on the 500 kV system originally it would not be acceptable to shed additional load. It seems as if it should be the severity of the situation and the elements involved that would dictate allowable remedial actions and not the initial cause of the disturbance. If, for example, there was a 500 kV contingency outage that caused problems on the 230 kV system there would be a problem that may require load shedding on the 230 kV system. If there were a 230 kV contingency or series of contingencies that caused overloads on the 500 kV system, it would be more difficult to find enough lower voltage load to shed to bring the 500 kV system back to applicable ratings or conditions. The inability to shed non-consequential load could theoretically be resolved by hanging a small EHV / HV transformer on a particular bus, or by tapping a EHV line with an auto transformer.
Yes
Yes
Individual
Paul Rocha
CenterPoint Energy
No
The SDT did not incorporate CenterPoint Energy's previous comment regarding R1; therefore, CenterPoint Energy's concerns remain.
No
The SDT did not incorporate CenterPoint Energy's previous comments regarding R2; therefore, CenterPoint Energy's concerns remain.
No
The SDT did not incorporate CenterPoint Energy's previous comments regarding R2; therefore, CenterPoint Energy's concerns remain.
No
The SDT did not incorporate CenterPoint Energy's previous comments regarding R2; therefore, CenterPoint Energy's concerns remain.
No
The SDT did not incorporate CenterPoint Energy's previous comments regarding R2; therefore, CenterPoint Energy's concerns remain.

Yes
CenterPoint Energy appreciates the effort put forth by the SDT in revising the performance table. The current draft of P5 is preferable to previous versions.
Individual
Tim Ponseti, VP
TVA Transmission Planning & Compliance
Yes
TVA supports the change from five years to seven years for the implementation plan period.
Yes
TVA supports the change in the Year One definition - but would suggest that the word "started" should be changed to "completed" since a Planning Assessment may be started in one calendar year and finished in the next calendar year.
Yes
Yes
Yes
Yes
Yes
Yes
TVA is concerned about footnote 12 (known as footnote b in existing TPL standards). TVA believes that utilities should be given some freedom in dropping local load in response to N-1 events as long as overall BES reliability is not impacted. Otherwise significant capital improvements will be required that will have no overall reliability gain for the Bulk Electric System. TVA does agree with the revisions made specifically to the P5 event. TVA wishes to make a comment on the stability extreme event table: Changes were made in planning event P5 to narrow the focus to specific relay failures. The same changes are needed for stability extreme event 2a, 2b, 2c, and 2d.
Yes
Yes
Additional TVA comments: TVA wishes to make a comment on R4.3.1: it appears that this requires stability simulations of both successful and unsuccessful high-speed reclosing for all contingency simulations. Does high speed reclosing occur in less than 60 cycles or 60 seconds? If a utility does not have reclosing on a transmission line - then must the utility still perform stability studies assuming that there is reclosing? TVA suggests the following wording be used to replace the first bullet: "Successful high-speed reclosing and unsuccessful high-speed reclosing onto a fault, where such reclosing is applied, and where such additional simulations are deemed appropriate by the PC or TP." In R4.1.1, TVA is concerned that no generating unit shall pull out of synchronism in a local area only (thus

not impacting the overall reliability of the BES) for Planning Event P1, while the standard does allow generator runback/tripping for the same event. Thus the generating unit may be tripped by a special protection scheme - but may not be tripped by an out of step relay. TVA believes that out of step relaying should be allowed for this unit tripping as long as this does not affect the overall reliability of the BES.
Individual
Dan Rochester
Independent Electricity System Operator
Yes
We agree with this change. We further suggest that this change and the additional wording: "or in those jurisdictions where no regulatory approval is required on the first day of the first calendar quarter, 84 months after Board of Trustees adoption" be added to P. 3 of the standard that starts with "For 84 calendar months..." to be totally consistent.
Yes
Yes
Yes
Yes
Yes
Yes
Yes
We do not have a concern with this change but we don't think it is necessary. It is not a requirement, and appropriate wording in the Measures can take care of it.
Yes
Yes
Yes
Group
Southern Company
Andy Tillery
Yes
Yes
No
The definition does not adequately address normal (pre-contingency) operating procedures or system configurations. Language should be added to the requirement (perhaps as R1.1.7) to include normal operating procedures or system configurations in place prior to any contingency occurring.
Yes

Yes
Yes
Yes
Yes
NO We wish to make a comment on the stability extreme event table: Changes were made in planning event P5 to narrow the focus to specific relay failures. The same changes are needed for stability extreme event 2a, 2b, 2c, and 2d.
Yes
No
We wish to make a comment on R4.3.1: it appears that this requires stability simulations of both successful and unsuccessful high-speed reclosing for all contingency simulations regardless of whether high-speed reclosing is used on the faulted line. We suggest the following wording be used to replace the first bullet: "Successful high-speed reclosing and unsuccessful high-speed reclosing onto a fault, where such reclosing is applied, and where such additional simulations are deemed appropriate by the PC or TP." Also, we wish to make a comment on footnote #13 of Table 1. 13. Applies to any of the following relay functions or types: pilot (#85), distance (#21), differential (#87), current (#50, 51, & 67), voltage (#27 & 59), directional (#32 & 67), and associated tripping (#86 & 94) relays.
Group
Hydro One Networks Inc.
David Kiguel
Yes
Yes
Yes
Yes
No
The scope of this requirement is too broad and non-specific and only results in undue study burden.
No
There is insufficient information and experience regarding dynamic load modeling. Hence, this should not be a requirement but a guide or an item to be considered to the extent possible. It may also be included as a "sensitivity" analysis in 3.2, rather than requiring and expecting accurate representation of dynamic load model.
Yes
Yes

No selection boxes in this question. Yes, we support.
Yes
Yes
Requirement 8 is an administrative burden and adds little or no value to the BPS reliability. Therefore, the inclusion of a set of VSLs for Requirement 8 is unnecessary.
Group
jWestern Electricity Coordinating Council
Steve Rueckert
Yes
We commend the SDT for its work to continue the improvement on the proposed TPL-001-1. We were not able to find a place to include comment on various requirements not identified in the questions below; therefore, we have included our comments here: Requirement and 2.6 and 2.6.1: A study that is five years old is very likely to be out of date. The entity's BES may have not changed much in five years but the entity cannot be certain whether or not their neighbor's system may have changed. Changes outside the immediate entity's system can impact results of studies within their system. Suggest that two years is a maximum that past studies should be allowed. Requirement 3.4.1 and 4.4.1 require PCs and TPs to coordinate with adjacent PCs and TPs to ensure that Contingencies on adjacent Systems which may impact their Systems are included in the Contingency list. Please clarify whether this means that a PC or TP must coordinate with others to identify contingencies on other Systems that the PC or TP must now include on their Contingency list to simulate and address any performance violations on their own System, or does it mean that the PC or TP must coordinate with others to identify contingencies on their System that the PC or TP must now include on their Contingency list to simulate and address any performance violations on other Systems. In either case, the standard does not seem to clearly state what must be done, or whose responsibility it is to mitigate, if a contingency in one System causes a performance violation in another System. Requirement R4.3.1, bullet point 3 requires the stability analyses to include the impact of subsequent "[t]ripping of Transmission lines and transformers where transient swings cause Protection System operation based on generic or actual relay models". As written, this bullet could be interpreted as requiring the inclusion of these relay models in stability data bases. We do not have generic or actual relay models in our dynamics data bases for tripping line faults on lines and transformers represented. We represent actual relay response and tripping times of relays, communications, and breakers to faults in tripping transmission lines and transformers. Requiring the inclusion of generic or actual relay models for all relays that can trip lines and transformers would add a large burden to the development and maintenance of accurate dynamics model files that would add little or no benefit. Please change this bullet to read: "Tripping of Transmission lines and transformers where transient swings cause Protection System operation based on known Protection System response".
No
We recognize that the drafting team made changes to the definition of Year One based on industry comments. However, we believe that the revised language could allow for a situation where an entity could use its next season's operating study as its Year One planning study. For example, if the entity does its study in the fall of 2011, the proposed definition would allow the entity to use its summer 2012 operating study as its Year One study. This is a very short period to address any issued identified. Suggest working into the requirement that Planning Studies must look out at least 12 months beyond when the study is performed. This would still allow for the provision in the current definition example ("if a

Planning Assessment was started in 2011, then Year One must include the forecasted peak Load period for either 2012 or 2013) because the entity would be able to use their 2013 Load period, but it would prevent the entity from using the 2012 Load period if they started the assessment late in 2011.
Yes
Yes
Yes
Yes
Yes
Table 1, P5 currently requires the study of "[d]elayed Fault Clearing due to the failure of a relay ¹³ protecting the Faulted element to operate as designed". As written, this requirement does not recognize the use of redundant relays for primary protection. In some cases side by side relays are used to provide primary fault tripping if one relay fails to operate. Per the requirement as stated, the redundant relay would provide no value in meeting this requirement. Please revise to acknowledge backup relays: "Single failure of a protection relay ¹³ protecting the Faulted element to operate as designed, resulting in backup relay actions or Delayed Fault Clearing, for one of the following". In Table 1, P2 and P3, the last column "Non-Consequential Load Loss Allowed" where the requirement "No ¹² " appears, and in footnote 12, the standard as proposed does not allow for any Non-Consequential Load Loss. When the Non-Consequential Load Loss (footnote b) issue is clarified in Project 2010-11 this requirement may be changed. Therefore, if this proposed Standard is enforced before Project 2010-11 is completed, entities will be required to meet this No Non-Consequential Load Loss requirement without the exception allowed in the existing TPL-002-0, footnote "b". This will require immediate redesigns to meet this particular requirement. The unintended consequence could be that operators of local systems that are currently networked may opt to begin operation as radial systems, and future designs for local systems may be radial, at any voltage level. We suggest that the proposed footnote 12 include a provision to default to the existing footnote "b" in TPL-002-0 until Project 2010-11 is decided. Please revise footnote 12 to read, "Note: Non-Consequential Load Loss is being decided in Project 2010-11. When that project is finalized, the resolution will be copied here. In the interim, planned or controlled interruption of electric supply to radial customers or some local Network customers, connected to or supplied by the Faulted element or by the affected area, may occur in certain areas without impacting the overall reliability of the interconnected transmission systems. To prepare for the next contingency, system adjustments are permitted, including curtailments of contracted Firm (non-recallable reserved) electric power Transfers." Timing of this project and project 2010-11 is critical. It would be very difficult to vote to approve the proposed TPL-001-2 prior to knowing the outcome of Project 2010-11 (footnote b issue).
Individual
Dilip Mahendra
SMUD

R2.7.1, last bullet: Please provide specifics on the types of acceptable 'Corrective Actions' covered by 'rate applications and DSM' and the planning horizon for which they are considered acceptable. As an alternative, NERC should develop a process by which what is considered acceptable is published and continuously updated. (With due apologies for not raising this point earlier).
What is the significance of changing the wording for section R2.1.5 from 'assessed' to 'studied' and 'Planning Assessments' to 'studies'?
For the Western Interconnection, the performance level for a Bus-tie breaker fault under TPL-001-2, Table 1, Item P2-4, Notes (a) and (f), requires no thermal overloads and no cascading. While, FAC-010-2.1, R1.2, R2.5-R2.6, as modified by E1.1, E1.1.7, E1.3, and E1.3.1 requires a different performance level of no cascading. Please explain why this regional variance is not included under TPL-001-2, Item E.
Group
Arizona Public Service Company
Jana Van Ness, Director Regulatory Compliance
Yes
We commend the SDT for its work to continue the improvement on the proposed TPL-001-1. We were not able to find a place to include comment on Requirement R4; therefore, we have included our comments here: Section R4.3.1, bullet point 3 requires the stability analyses to include the impact of subsequent "[t]ripping of Transmission lines and transformers where transient swings cause Protection System operation based on generic or actual relay models". As written, this bullet could be interpreted as requiring the inclusion of these relay models in stability data bases. We do not have generic or actual relay models in our dynamics data bases for tripping line faults on lines and transformers represented. We represent actual relay response and tripping times of relays, communications, and breakers to faults in tripping transmission lines and transformers. Requiring the inclusion of generic or actual relay models for all relays that can trip lines and transformers would add a large burden to the development and maintenance of accurate dynamics model files that would add little or no benefit. Please change this bullet to read: "Tripping of Transmission lines and transformers where transient swings cause Protection System operation based on known Protection System response".
Yes
Yes
Yes
Yes
Yes

Yes
Table 1, P5 currently requires the study of “[d]elayed Fault Clearing due to the failure of a relay13 protecting the Faulted element to operate as designed”. As written, this requirement does not recognize the use of redundant relays for primary protection. In some cases side by side relays are used to provide primary fault tripping if one relay fails to operate. Per the requirement as stated, the redundant relay would provide no value in meeting this requirement. Please revise to acknowledge backup relays: “Single failure of a protection relay13 protecting the Faulted element to operate as designed, resulting in backup relay actions or Delayed Fault Clearing, for one of the following”. In Table 1, P2 and P3, the last column “Non-Consequential Load Loss Allowed” where the requirement “No12” appears, and in footnote 12, the standard as proposed does not allow for any Non-Consequential Load Loss. When the Non-Consequential Load Loss (footnote b) issue is clarified in Project 2010-11 this requirement may be changed. Therefore, if this proposed Standard is enforced before Project 2010-11 is completed, entities will be required to meet this No Non-Consequential Load Loss requirement without the exception allowed in the existing TPL-002-0, footnote “b”. This will require immediate redesigns to meet this particular requirement. The unintended consequence could be that operators of local systems that are currently networked may opt to begin operation as radial systems, and future designs for local systems may be radial, at any voltage level. We suggest that the proposed footnote 12 include a provision to default to the existing footnote “b” in TPL-002-0 until Project 2010-11 is decided. Please revise footnote 12 to read, “Note: Non-Consequential Load Loss is being decided in Project 2010-11. When that project is finalized, the resolution will be copied here. In the interim, planned or controlled interruption of electric supply to radial customers or some local Network customers, connected to or supplied by the Faulted element or by the affected area, may occur in certain areas without impacting the overall reliability of the interconnected transmission systems. To prepare for the next contingency, system adjustments are permitted, including curtailments of contracted Firm (non-recallable reserved) electric power Transfers.” Timing of this project and project 2010-11 is critical. It would be very difficult to vote to approve the proposed TPL-001-2 prior to knowing the outcome of Project 2010-11 (footnote b issue).
Individual
RoLynda Shumpert
South Carolina and Gas
Yes
Yes
Yes
Yes
Yes

Yes
Yes
Yes
Yes
Yes
Yes
We wish to make a comment on the revisions to R4.3.1. We believe that the analysis of both successful and unsuccessful high speed reclosing for all cases is not justified and should be left to the discretion of the Transmission Planner.
Individual
Brian Keel
SRP
Yes
We commend the SDT for its work to continue the improvement on the proposed TPL-001-1. We were not able to find a place to include comment on Requirement R4; therefore, we have included our comments here: Section R4.3.1, bullet point 3 requires the stability analyses to include the impact of subsequent “[t]ripping of Transmission lines and transformers where transient swings cause Protection System operation based on generic or actual relay models”. As written, this bullet could be interpreted as requiring the inclusion of these relay models in stability data bases. We do not have generic or actual relay models in our dynamics data bases for tripping line faults on lines and transformers represented. We represent actual relay response and tripping times of relays, communications, and breakers to faults in tripping transmission lines and transformers. Requiring the inclusion of generic or actual relay models for all relays that can trip lines and transformers would add a large burden to the development and maintenance of accurate dynamics model files that would add little or no benefit. Please change this bullet to read: “Tripping of Transmission lines and transformers where transient swings cause Protection System operation based on known Protection System response”.
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Table 1, P5 currently requires the study of “[d]elayed Fault Clearing due to the failure of a

relay13 protecting the Faulted element to operate as designed". As written, this requirement does not recognize the use of redundant relays for primary protection. In some cases side by side relays are used to provide primary fault tripping if one relay fails to operate. Per the requirement as stated, the redundant relay would provide no value in meeting this requirement. Please revise to acknowledge backup relays: "Single failure of a protection relay13 protecting the Faulted element to operate as designed, resulting in backup relay actions or Delayed Fault Clearing, for one of the following". In Table 1, P2 and P3, the last column "Non-Consequential Load Loss Allowed" where the requirement "No12" appears, and in footnote 12, the standard as proposed does not allow for any Non-Consequential Load Loss. When the Non-Consequential Load Loss (footnote b) issue is clarified in Project 2010-11 this requirement may be changed. Therefore, if this proposed Standard is enforced before Project 2010-11 is completed, entities will be required to meet this No Non-Consequential Load Loss requirement without the exception allowed in the existing TPL-002-0, footnote "b". This will require immediate redesigns to meet this particular requirement. The unintended consequence could be that operators of local systems that are currently networked may opt to begin operation as radial systems, and future designs for local systems may be radial, at any voltage level. We suggest that the proposed footnote 12 include a provision to default to the existing footnote "b" in TPL-002-0 until Project 2010-11 is decided. Please revise footnote 12 to read, "Note: Non-Consequential Load Loss is being decided in Project 2010-11. When that project is finalized, the resolution will be copied here. In the interim, planned or controlled interruption of electric supply to radial customers or some local Network customers, connected to or supplied by the Faulted element or by the affected area, may occur in certain areas without impacting the overall reliability of the interconnected transmission systems. To prepare for the next contingency, system adjustments are permitted, including curtailments of contracted Firm (non-recallable reserved) electric power Transfers." Timing of this project and project 2010-11 is critical. It would be very difficult to vote to approve the proposed TPL-001-2 prior to knowing the outcome of Project 2010-11 (footnote b issue).

Individual

Darcy O'Connell

California ISO

Yes

Yes

Yes

Yes

No

Requirement 2.7.2 could be revised as follows: 2.7.2. Corrective Action Plans are not required for performance deficiencies identified in a sensitivity analysis. If a Planning Coordinator includes Corrective Action Plans to resolve performance deficiencies identified in multiple sensitivity analysis, the Planning Coordinator shall provide documentation to support those Plans.

Yes

Yes
Yes
We support these changes, although we suggest that the proposed footnote 12 include an interim provision to default to the existing footnote "b" in TPL-002-0 until Project 2010-11 is decided. Please revise footnote 12 to read, "Note: Non-Consequential Load Loss is being decided in Project 2010-11. When that project is finalized, the resolution will be copied here. In the interim, planned or controlled interruption of electric supply to radial customers or some local Network customers, connected to or supplied by the Faulted element or by the affected area, may occur in certain areas without impacting the overall reliability of the interconnected transmission systems. To prepare for the next contingency, system adjustments are permitted, including curtailments of contracted Firm (non-recallable reserved) electric power Transfers."
Yes
No
Requirement 8 is an administrative burden to TPs and PCs that adds no value to reliability. PCs should be including TPs, neighboring PCs and interested parties in its planning processes when developing the Planning Assessments. Therefore, the inclusion of a set of VSLs for Requirement 8 is unnecessary. Should the SDT decide to leave the VSLs for Requirement 8, Requirement 8.1 should be revised to reflect that comments only to the final Assessment (not drafts developed during a process) need a response as follows: 8.1 If a recipient of the planning assessment final results provides documented comments on the results, the respective Planning Coordinator or Transmission Planner shall provide a documented response to such recipient within 90 calendar days of receipt of those comments. For a Planning Coordinator (PC) who distributes the Planning Assessment to many different entities (to adjacent PCs, TPs, and other functional entities), a concern regarding the Requirement R8 VSL is that it is overly restrictive to apply a violation for failing to distribute the results of its Planning Assessment to only one PC, TP, or functional entity (and to apply a High VSL for failing to distribute to more than one entity), particularly since an entity's contact is subject to change over time, and since Measure M8 allows for publicly posting the results of its Planning Assessment to its website. Should the SDT decide to include the VSLs for Requirement 8, would recommend revising to use a percentage approach rather than applying a violation to a Planning Coordinator who fails to provide the results of its Planning Assessment to one PC, TP, or other functional entity (or applying a High VSL for failing to distribute to more than one entity.) Recommend applying a similar percentage approach to the VSLs drafted by NERC Staff for Project #2007-23 VSLs (e.g., for FAC-013-1) to be considered for the TPL-001-2 R8 VSLs. For example, • Lower VSL: The responsible entity failed to provide the Planning Assessment final results to 5% or less of the required entities. • Moderate VSL: The responsible entity failed to provide the Planning Assessment final results to more than 5% up to (and including) 10% of the required entities. • High VSL: The responsible entity failed to provide the Planning Assessment final results to more than 10% up to (and including) 15% of the required entities. • Severe VSL: The responsible entity failed to provide the Planning Assessment final results to more than 15% of the required entities OR [the existing language for the Severe VSL]. Explanation: The VSLs were modified for consistency with other standards and VSLs. Reference: Link to VSLs drafted by NERC Staff for Project #2007-23 VSLs (e.g., for FAC-013-1): http://www.nerc.com/docs/standards/sar/Staff_Proposed_VSLs_2010July27.pdf
Individual

Scott Inglebritson
Seattle City Light
Yes
No
The definition of Year One is now too flexible and does not meet the intent of the standard. For example, our system peak is generally in January of the year. If I perform TPL studies in November 2011, studying the peak in January 2012 is acceptable according to the new definition. This is only two months from the date of the study. The intent of the TPL standard should be that entities must study and plan for inadequacies found in the studies. A one- or two-month lead time is not adequate to address any problems identified. Year One should be the year containing the first peak 12 months or more from the current date. Otherwise, TPL studies become merely seasonal operational studies, not planning studies. Alternative Language: "For the Planning Assessment started in a given year, Year One should contain the first system peak that occurs twelve months or more after the date of the Planning Assessment."
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Table 1, P5 does not recognize the existence of redundant (or backup) relays. These are an integral part of the protection system design and should be considered in analysis of SLG faults. The TPL standard should encourage redundant, fail-safe systems, not ignore them. In Table 1, P2 and P3, we have a concern about not allowing non-consequential load loss. Project 2010-11 is deciding on this issue, but is not completed (see footnote 12). Should the standard become effective before this project is completed, no non-consequential load loss would be allowed, requiring many transmission additions and reconfigurations. Please change the "NO" in the last column to "YES" until the completion of Project 2010-11.
Yes
Yes
Individual
Ean O'Neill
California Energy Commission
Yes
We commend the SDT for its work to continue the improvement on the proposed TPL-001-1. We were not able to find a place to include comment on Requirement R4; therefore, we have included our comments here: Section R4.3.1, bullet point 3 requires the stability

analyses to include the impact of subsequent “[t]ripping of Transmission lines and transformers where transient swings cause Protection System operation based on generic or actual relay models”. As written, this bullet could be interpreted as requiring the inclusion of these relay models in stability data bases. We do not have generic or actual relay models in our dynamics data bases for tripping line faults on lines and transformers represented. We represent actual relay response and tripping times of relays, communications, and breakers to faults in tripping transmission lines and transformers. Requiring the inclusion of generic or actual relay models for all relays that can trip lines and transformers would add a large burden to the development and maintenance of accurate dynamics model files that would add little or no benefit. Please change this bullet to read: “Tripping of Transmission lines and transformers where transient swings cause Protection System operation based on known Protection System response”.

Yes

Yes

Yes

Yes

Yes

Yes

Yes

No. Table 1, P5 currently requires the study of “[d]elayed Fault Clearing due to the failure of a relay¹³ protecting the Faulted element to operate as designed”. As written, this requirement does not recognize the use of redundant relays for primary protection. In some cases side by side relays are used to provide primary fault tripping if one relay fails to operate. Per the requirement as stated, the redundant relay would provide no value in meeting this requirement. Please revise to acknowledge backup relays: “Single failure of a protection relay¹³ protecting the Faulted element to operate as designed, resulting in backup relay actions or Delayed Fault Clearing, for one of the following”. In Table 1, P2 and P3, the last column “Non-Consequential Load Loss Allowed” where the requirement “No¹²” appears, and in footnote 12, the standard as proposed does not allow for any Non-Consequential Load Loss. When the Non-Consequential Load Loss (footnote b) issue is clarified in Project 2010-11 this requirement may be changed. Therefore, if this proposed Standard is enforced before Project 2010-11 is completed, entities will be required to meet this No Non-Consequential Load Loss requirement without the exception allowed in the existing TPL-002-0, footnote “b”. This will require immediate redesigns to meet this particular requirement. The unintended consequence could be that operators of local systems that are currently networked may opt to begin operation as radial systems, and future designs for local systems may be radial, at any voltage level. We suggest that the proposed footnote 12 include a provision to default to the existing footnote “b” in TPL-002-0 until Project 2010-11 is decided. Please revise footnote 12 to read, “Note: Non-Consequential Load Loss is being decided in Project 2010-11. When that project is finalized, the resolution will be copied here. In the interim, planned or controlled interruption of electric supply to radial customers or some local Network customers, connected to or

supplied by the Faulted element or by the affected area, may occur in certain areas without impacting the overall reliability of the interconnected transmission systems. To prepare for the next contingency, system adjustments are permitted, including curtailments of contracted Firm (non-recallable reserved) electric power Transfers." Timing of this project and project 2010-11 is critical. It would be very difficult to vote to approve the proposed TPL-001-2 prior to knowing the outcome of Project 2010-11 (footnote b issue).

Individual

Kathleen Goodman

ISO New England Inc.

Yes

No

The definition of Year One could be deleted and used in place of Year One within the text of the requirement. The proposed definition has now added ambiguity with respect to "year two" and "year five" which are not defined. Year two could be deleted and R.2.1.1 modified as follows: System peak Load representing a point in time 12-24 months and another point in time 48-65 months into the future from the time the study is initiated.

No

R1.1 Part 1.1.2. With respect to known outages, there needs to be greater flexibility in the standards (e.g. more tolerance to non-consequential load shedding or limitations to the contingencies that need to be considered (e.g. P0, P1, & P2)). Regional allowances for load shedding under this condition should be approved. Duration of known outages should be increased from six months to one year; R1.1 Part 1.1.6 Delete "required for Load". Resources may also be used for export to other areas, not just internal load.

No

We can agree with R2.1 however with respect to R2.2 Language should be consistent with 2.1 for example - use "current or qualified past studies" instead of "the following annual current study."

No

Part 2.1.4, requires an entity to vary one or more conditions to demonstrate a change in performance. If the cases were initially stressed, this may force an entity to simulate conditions with less severe stresses. At this point, there is limited to no value to this additional workload. Having a requirement to test at least one sensitivity as a blanket requirement may not be informative by itself and is more unclear since sensitivities are being required on an undefined base set of conditions. Additionally, our concern involves wording under 2.1.4 and 2.4.3 that sensitivities are required varying one or more conditions. Subsequently, in requirement 2.7.2 corrective action plans need to be developed to resolve performance deficiencies "only" if identified in multiple conditions or require a rationalization why no corrective action plan is necessary. Multiple conditions sensitivities under 2.1.4 and 2.4.3 are necessary to satisfy requirement 2.7.2. Requirement 2.7.2 adds ambiguity and should be removed. Requirement 2.7.2 should be revised as follows: 2.7.2. Corrective Action Plans are not required for performance deficiencies identified in a sensitivity analysis.

Yes

Yes

Yes
We are supportive of the change to P5. However, in making this modification, other items need to also be changed. In Table 1 – Stability, the language should be made similar to wording in P5. Protection System should be removed and replaced with the words “relay failure”. This change should be made for 2a through 2d: 2. Local or wide area events affecting the Transmission System such as: a. 3Ø fault on generator with stuck breaker10 or a relay failure resulting in Delayed Fault Clearing. b. 3Ø fault on Transmission circuit with stuck breaker10 or a relay failure resulting in Delayed Fault Clearing. c. 3Ø fault on transformer with stuck breaker10 or a relay failure resulting in Delayed Fault Clearing. d. 3Ø fault on bus section with stuck breaker10 or a relay failure resulting in Delayed Fault Clearing. We also believe that Note 11 needs clarifying wording as shown below: "Excludes circuits that share a common structure (Planning event P7, Extreme event steady state 2a) or common Right-of-Way (Extreme event, steady state 2b) for a total of 1 mile or less"
Yes
Yes
Requirement 8 and 8.1, should be revised to reflect that comments only to the final Assessment (not drafts developed during a process) need a response and there should be a limit on the comment period as follows: If a recipient of the planning assessment final results provides documented comments on the results within 90 days of receipt, the respective Planning Coordinator or Transmission Planner shall provide a documented response to such recipient within 90 calendar days of receipt of those comments. We have other comments not addressed by this Comment Form as follows - Sections 2.7, 3.3, 4.3 and overall. R2.7 requires that Corrective Action Plans are included in each Planning Assessment and states “Such actions may include...” followed by a list of actions. Runback/tripping of HVDC should be added to the list. Section 3.3 - We feel that the last sentence of 3.3.1 should be removed. This is handled by PRC-023. Line ratings are addressed by PRC-023. PRC-023 requires coordination with the Reliability Coordinator. Remove “Tripping of Transmission elements where relay loadability limits are exceeded.” Section 4.3 - High speed reclosing needs to be defined.
Individual
Oscar Herrera
Los Angeles Department of Water and Power
Yes
We commend the SDT for its work to continue the improvement on the proposed TPL-001-1. We were not able to find a place to include comment on Requirement R4; therefore, we have included our comments here: Section R4.3.1, bullet point 3 requires the stability analyses to include the impact of subsequent “[t]ripping of Transmission lines and transformers where transient swings cause Protection System operation based on generic or actual relay models”. As written, this bullet could be interpreted as requiring the inclusion of these relay models in stability data bases. We do not have generic or actual relay models in our dynamics data bases for tripping line faults on lines and transformers represented. We represent actual relay response and tripping times of relays, communications, and breakers to faults in tripping transmission lines and transformers. Requiring the inclusion of generic or actual relay models for all relays that can trip lines and transformers would add a large burden to the development and maintenance of accurate dynamics model files that would add little or no benefit. Please change this bullet to read: “Tripping of Transmission lines and transformers where transient swings cause Protection System operation based on known Protection System response”.

Yes
Yes
Yes
Yes
Yes
Yes
Yes
No. Table 1, P5 currently requires the study of “[d]elayed Fault Clearing due to the failure of a relay ¹³ protecting the Faulted element to operate as designed”. As written, this requirement does not recognize the use of redundant relays for primary protection. In some cases side by side relays are used to provide primary fault tripping if one relay fails to operate. Per the requirement as stated, the redundant relay would provide no value in meeting this requirement. Please revise to acknowledge backup relays: “Single failure of a protection relay ¹³ protecting the Faulted element to operate as designed, resulting in backup relay actions or Delayed Fault Clearing, for one of the following”. In Table 1, P2 and P3, the last column “Non-Consequential Load Loss Allowed” where the requirement “No ¹² ” appears, and in footnote 12, the standard as proposed does not allow for any Non-Consequential Load Loss. When the Non-Consequential Load Loss (footnote b) issue is clarified in Project 2010-11 this requirement may be changed. Therefore, if this proposed Standard is enforced before Project 2010-11 is completed, entities will be required to meet this No Non-Consequential Load Loss requirement without the exception allowed in the existing TPL-002-0, footnote “b”. This will require immediate redesigns to meet this particular requirement. The unintended consequence could be that operators of local systems that are currently networked may opt to begin operation as radial systems, and future designs for local systems may be radial, at any voltage level. We suggest that the proposed footnote 12 include a provision to default to the existing footnote “b” in TPL-002-0 until Project 2010-11 is decided. Please revise footnote 12 to read, “Note: Non-Consequential Load Loss is being decided in Project 2010-11. When that project is finalized, the resolution will be copied here. In the interim, planned or controlled interruption of electric supply to radial customers or some local Network customers, connected to or supplied by the Faulted element or by the affected area, may occur in certain areas without impacting the overall reliability of the interconnected transmission systems. To prepare for the next contingency, system adjustments are permitted, including curtailments of contracted Firm (non-recallable reserved) electric power Transfers.” Timing of this project and project 2010-11 is critical. It would be very difficult to vote to approve the proposed TPL-001-2 prior to knowing the outcome of Project 2010-11 (footnote b issue).
Yes
Yes
Individual

Orlando A Ciniglio
Idaho Power Co
Yes
We were not able to find a place to include comment on Requirement R4; therefore, we have included our comments here: Section R4.3.1, bullet point 3 requires the stability analyses to include the impact of subsequent “[t]ripping of Transmission lines and transformers where transient swings cause Protection System operation based on generic or actual relay models”. As written, this bullet could be interpreted as requiring the inclusion of these relay models in stability data bases. We do not have generic or actual relay models in our dynamics data bases for tripping line faults on lines and transformers represented. We represent actual relay response and tripping times of relays, communications, and breakers to faults in tripping transmission lines and transformers. Requiring the inclusion of generic or actual relay models for all relays that can trip lines and transformers would add a large burden to the development and maintenance of accurate dynamics model files that would add little or no benefit. Please change this bullet to read: “Tripping of Transmission lines and transformers where transient swings cause Protection System operation based on known Protection System response”.
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Table 1, P5 currently requires the study of “[d]elayed Fault Clearing due to the failure of a relay13 protecting the Faulted element to operate as designed”. As written, this requirement does not recognize the use of redundant relays for primary protection. In some cases side by side relays are used to provide primary fault tripping if one relay fails to operate. Per the requirement as stated, the redundant relay would provide no value in meeting this requirement. Please revise to acknowledge redundant relays for primary protection: “Single failure of a protection relay13 protecting the Faulted element to operate as designed, resulting in backup relay actions or Delayed Fault Clearing, for one of the following”. In Table 1, P2 and P3, the last column “Non-Consequential Load Loss Allowed” where the requirement “No12” appears, and in footnote 12, the standard as proposed does not allow for any Non-Consequential Load Loss. When the Non-Consequential Load Loss (footnote b) issue is clarified in Project 2010-11 this requirement may be changed. Therefore, if this proposed Standard is enforced before Project 2010-11 is completed, entities will be required to meet this No Non-Consequential Load Loss requirement without the exception allowed in the existing TPL-002-0, footnote “b”. This will require immediate redesigns to meet this particular requirement. The unintended consequence could be that operators of local systems that are currently networked may opt to begin operation as radial systems, and future designs for local systems may be radial, at any voltage level. We

suggest that the proposed footnote 12 include a provision to default to the existing footnote "b" in TPL-002-0 until Project 2010-11 is decided. Please revise footnote 12 to read, "Note: Non-Consequential Load Loss is being decided in Project 2010-11. When that project is finalized, the resolution will be copied here. In the interim, planned or controlled interruption of electric supply to radial customers or some local Network customers, connected to or supplied by the Faulted element or by the affected area, may occur in certain areas without impacting the overall reliability of the interconnected transmission systems. To prepare for the next contingency, system adjustments are permitted, including curtailments of contracted Firm (non-recallable reserved) electric power Transfers."
Yes
Yes
Individual
David Bradt
United Illuminating
Yes
No
Year One should be used within the text of the requirement. Do not have a definition for Year One.
No
For R1 Ambiguity regarding base case assumptions, in combination with lack of clarity and clear direction of purpose regarding the sensitivity analysis, undermines the objectives of the standard; R1.1 Part 1.1.2. With respect to known outages, there needs to be greater flexibility in the standards (e.g. more tolerance to non-consequential load shedding or limitations to the contingencies that need to be considered (e.g. P0, P1, & P2)). Regional allowances for load shedding under this condition should be approved. Duration of known outages should be increased from six months to one year; R1.1 Part 1.1.6 Delete "required for Load". Resources may also be used for export to other areas, not just internal load.
No
We can agree with R2.1 however with respect to R2.2 Language should be consistent with 2.1 for example - use "current or qualified past studies" instead of "the following annual current study".
No
If an entity does a stressed set of assumptions do they always need to do a non-stressed case?
Yes
Yes
Yes
In Table 1 – Stability, Make language similar to wording in P5. "Protection System" should be removed and replaced with the words "relay failure". This would avoid future interpretation issues about the intent of this requirement (as we understand it) to exclude more severe though less likely failures such as battery systems. This change should be made for 2a through 2d on page 12). In Note 11 (page 14) ADD the wording shown in

"quotes" below: Excludes circuits that share a common structure (Planning event P7, Extreme event steady state 2a) or common Right-of-Way (Extreme event, steady state 2b) for "a total of" 1 mile or less.
Yes
Yes
General Comment: We have other comments not addressed by this Comment Form as follows - Section 3.3, Section 4.3 and overall Section 3.3 - We feel that the last sentence of 3.3.1 should be removed. This is handled by PRC-023. Line ratings are addressed by PRC-023. PRC-023 requires coordination with the Reliability Coordinator. Remove "Tripping of Transmission elements where relay loadability limits are exceeded." Section 4.3 - High speed reclosing is not defined. Overall - ISO New England and New England Transmission Owners have previously made comments which have not been addressed in the current version of the proposed standard. Support for the standard can at most be limited without addressing comments. We have previously commented on sensitivity analysis and guidance for base case assumptions. Also, extreme event analysis should not be mandated in this standard as no corrective action is required.
Group
Transmission Issues Subcommittee
Bob Cummings
No Comment
No Comment
Yes
No Comment
No comment
No
TIS believes that the term "expected" leaves the question as to "whose expectation." It should be stated as to "expected...by the Transmission Planner."
No comment
No
Delete the word "voltage" from the last header note J concerning Stability Only. All types of transient stability must be observed.
No comment
No comment
No comment
Group
SERC Dynamics Review Subcommittee
Robert Jones
Yes
"The comments expressed herein represent a consensus of the views of the above named members of the SERC Engineering Committee Dynamics Review Subcommittee only and should not be construed as the position of SERC Reliability Corporation, its board or its officers."
Yes
Yes

Yes
Yes
Yes
Yes
Yes
Yes. The SERC DRS supports the revisions.
Yes
Yes
We wish to make a comment on R4.3.1: it appears that this requires stability simulations of both successful and unsuccessful high-speed reclosing for all contingency simulations regardless of whether high-speed reclosing is used on the faulted line. We suggest the following wording be used to replace the first bullet: "Successful high-speed reclosing and unsuccessful high-speed reclosing onto a fault, where such reclosing is applied." We wish to make a comment on the stability extreme event table: Changes were made in planning event P5 to narrow the focus to specific relay failures. The same changes are needed for stability extreme event 2a, 2b, 2c, and 2d.
Individual
John Sullivan
Ameren
Yes
Yes
No
The definition does not adequately address normal (pre-contingency) operating procedures or system configurations. Language should be added to the requirement (perhaps as R1.1.7) to include normal operating procedures or system configurations in place prior to any contingency occurring.
Yes
Yes
No
Industry needs guidance regarding how to provide reasonable induction motor representation as opposed to generic models.
Yes
Yes

No
For measurements M3 and M4, there is some question as to what is to be provided as evidence of a study. Would the study results alone provide sufficient evidence, or does the entire powerflow, stability, or short circuit effort need to be documented in a formal study report? There are no measures for the creation and coordination of contingency lists that are to be developed in R3.4, R3.5, R4.4, and R4.5. Are these contingency lists required to be a documented part of the study?
No
The sharing issues of requirement R8 are still not clear, therefore the R8 VSL is not clear. It is not clear if the intent of the SDT is for the PC to share the assessments with PCs and TPs are to share the assessments with TPs, or whether the intent is for the TP to share its assessments with its PC. Will posting the assessment to a secure web-site meet the intent of the requirement? Although the comment form is not designed to allow for such, we need to comment on R4.3.1: As written, it appears that this requires stability simulations of both successful and unsuccessful high-speed reclosing for all contingency simulations, regardless of whether high-speed reclosing is actually implemented. A suggested wording change for the first bullet: "Successful high-speed reclosing and unsuccessful high-speed reclosing onto a fault, where such reclosing is applied, and where such additional simulations are deemed appropriate by the PC or TP." Another comment needs to be made regarding the stability extreme event table: Changes were made in planning event P5 to concentrate on specific relay failures. The same changes need to be made for stability extreme events 2a, 2b, 2c, and 2d. The proposed standard will significantly increase the amount of work required to develop more detailed and complex system models, to perform and document the engineering studies to meet the performance requirements, and to develop the assessments necessary for compliance. All of these increased engineering activities are perceived to provide marginal benefit to the reliability of the bulk electric system, but will require significant increases in manpower across the industry. Further, the manpower is presently not available to develop these more detailed models and to perform these studies with any reasonable assuredness. It will be a continuing challenge to the industry to obtain and keep the engineering talent needed to perform these compliance activities for such marginal benefits.
Individual
Si Truc PHAN
Hydro-Quebec TransEnergie
Yes
Yes
Yes
No
Requirement R2 Part 2.2 should be modified to read as 2.1 (not impose current annual studies as the only requirement for assessment)
No
It is questionable that sensitivity analysis be included in Requirements since a conservative approach should already be used in studies, in accordance with good engineering practices.
No
There is insufficient data available to accurately model system wide motor loads.

Yes
Yes
In table 1 on page 12 (Stability section), Relay failure should replace Protection System
Yes
Yes
• All references to 300 kV in document should be replaced with EHV (In the introduction, section 5) • The first phrase of Note 3 on p 14 should be revised as follows: "Bulk Electric System (BES) level references include extra-high voltage (EHV) Facilities defined as those representing the backbone of the System, generally at voltage greater than 300 kV, and high voltage (HV) Facilities defined as those not representing the backbone of the System, as determined by the Planning Coordinator and approved by Regional Entity."
Group
MRO's NERC Standards Review Subcommittee
Carol Gerou
Yes
Yes
Yes
We propose the following changes and questions: R1 – We offer the minor suggestion of replacing the wording of "maintain System models within their respective areas" with "maintain System models of elements that are interconnected to any portion of the BES that is owned or operated by the TP or PC". This wording would avoid the ambiguity that can occur when a BA that is associated primarily with one TP declares ownership of a bus in another TP's geographic area, but expects its primary TP to maintain the BA's model data for the remote generation or load. R1.1.2 – We request the SDT opinion on how two individual outages should be modeled if they are both in excess of six months duration and they overlap by less than six months. Should the overlapping condition only be modeled if the condition is expected to last more than six months?
Yes
R2.1.3 – We offer the minor suggestion of revising R2.1.3 to state, "Known outages of generation or Transmission Facilities with a duration of at least six months be simulated along with P1 events for the System peak or Off-Peak conditions when the outages are scheduled to occur." We interpret that the requirement should only call for the simulation of individual outages with duration of six months or more and not imply the simulation of sequential (back-to-back) outages where each individual outage is less than six months, but the composite duration of the back-to-back outages is more than six months. We also interpret that if two or more known outages with duration of at least six months are overlapping, then the overlapping outage condition would only be simulated for the conditions when the overlapping outages are scheduled to occur if the duration of the overlapping condition is at least six months. R2.1.5 – We offer a major suggestion regarding the phrase "could result in the unavailability of major transmission equipment" because this phrase is ambiguous and not defined. So, there is a significant risk of different and possibly contradictory interpretations by TPs, PCs, and auditors. We proposed adding that the TP and PC "shall provide documentation to support the technical rationale for defining unavailability of major transmission equipment" similar to R2.5.

No
R2.1.4 & R2.4.3 – We offer a major suggestion regarding the terms of ‘credible’ and ‘measurable change’ because these terms are ambiguous and not defined. So, there is a significant risk of different and possibly contradictory interpretations by TPs, PCs, and auditors. We proposed adding that the TP and PC “shall provide documentation to support the technical rationale for determining the range of credible conditions and measurable change in performance” similar to R2.5. R2.1.4 & R2.4.3 bullet items – We offer the minor suggestion that the number and description of the bullet items in R2.1.4 match the bullet points in R2.4.3. Otherwise, please explain the reasons for any differences between the bullet items in R2.1.4 and R2.4.3. R2.1.4 bullet #2 & # 5 – We suggest that the wording in bullet #2 be changed to “Expected transfers and other generation dispatch scenarios”. This modification would put the transfer and dispatch element, which are complementary, together in the same bullet item, rather than grouping the ‘generation dispatch’ (operating level) element together with the generation capacity elements in bullet item #5. R2.1.4 bullet #7 – We offer the minor suggestion that the term “planned” be replaced with “known” to be consistent with R1.1.2 and R2.1.3. Besides the term “planned outage” has a specific meaning in the Reliability Standards that are specific to the Operating horizon. R2.7.2 – With regard to “include actions to resolve performance deficiencies identified in multiple sensitivity studies”, we do not think that mitigation plans should be required for deficiencies found in multiple sensitivity studies because the conditions in some sensitivity studies are more extreme and less likely than base case conditions. It’s impractical to require corrective actions for longer term horizon sensitivities due to how fast the electric grid changes. We believe sensitivity analyses are valuable to improving the development of mitigation plans to address base case performance limit concerns. Some of the sensitivity study conditions are not credible or plausible enough to warrant the implementation of mitigation measures. What is the interpretation of multiple sensitivity studies - more than one or a majority of the number that were studied?
Yes
Yes
Yes
We offer the major suggestion that Requirements not be created in the Performance Table and be absent from the Requirement section. Requirements should only be referred to in the Performance Table after they already exist in the Requirement section. a. Notes “f” and “g” under “Steady State Only” section in the Table 1 header create requirements (e.g. use the verb, “shall”) that do not appear in the Requirements section. We suggest adding R3.3.5, which could read, “Applicable System Operating Limits for the planning horizon shall not be exceeded.” [After R3.3.5 is added, Notes “f” and “g” should be revised and refer to R3.3.5.]. b. Note “i” under “Steady State Only” section in the Table 1 header creates a requirement (e.g. use the verb, “shall”) that does not appear in the Requirements section. We suggest adding R3.3.6, which could read, “The response of voltage sensitive Load including Load that is disconnected from the System by end-user equipment associated with an event shall not be used to meet steady state voltage requirements.” [After R3.3.6 is added, Note “d” should be revised to refer to R3.3.6. c. Note “j” under the “Stability Only” section in the Table 1 header creates a requirement (e.g. use the verb, “shall”) that does not appear in the Requirements section. We suggest adding R4.1.4, which could read, “Transient voltage response shall be within acceptable limits established by the Planning Coordinator and the Transmission Planner”. [After R4.1.4 is added, Note “j” should be revised to refer to R4.1.4.]
We offer the major suggestion that the P3 Category performance criteria be modified to

apply only to the loss of two generators. The SDT properly recognizes that generator outages are significantly more probable than line or transformer outages and should be "higher" in the category list. However given the clearly higher probability of generator outages, the probability of the loss of two generators is clearly higher than the loss of a generator and line or the loss of a generator and transformer. Therefore, if the loss of two generators is in the P3 category, then the loss of a generator and line or transformer should be clearly "lower" in the category list. We suggest the listing of: the loss of a generator and some other element (e.g. transmission circuit, transformer, shunt device, and single pole of DC line) be moved to a lower event category, such as the P6 Category by adding "1. Generator" to the listing in the Initial System Condition (Loss of . . .) column. Item 2.a in the Extreme Events, Steady State section – Clarify the meaning of the loss of multiple circuits in Item 2.a by using wording similar to P7. We suggest this text: "a. Loss of three or more circuits that share a common structure." Footnote 6 – Further clarify the applicable shunt devices in Footnote 6 with this suggested text: "6. Requirements which are applicable to shunt devices, also apply to FACTS devices that are connected to ground, but not instrument voltage transformers or surge arresters."

Yes

Yes

Other Comments: 1. How are backup relays handled (TPL-002-0, R1.3.10 & TPL-001-2 R1 & P5)? What does FERC construe as normal system for a protection system. The TPL-001-2 R1 & P5, this standard doesn't appear to address primary protection and how this handled. 2. Revise the Planning Assessment definition to more explicitly apply to the BES and the TPL-001 requirements. We suggest text of: "Planning Assessment: Documented evaluation of future Transmission System performance and Corrective Action Plans to remedy identified deficiencies in the BES from the steady state and stability performance requirements set forth in the TPL-001 standard." 3. R2.1.5 – We propose replacing the term 'major Transmission' with "BES" because BES is a well defined term, while the term, 'major Transmission', is not. 4. Add R2.3.1 – We suggest the addition of a R2.3.1 requirement to emulate the distinction between the requirement to perform a short circuit assessment and conduct required studies or analysis to support the assessment (e.g. R2.1/R2.1.1 and R2.2/R2.2.1). We propose wording such as, "Perform an analysis for at least one year in the Near Term Transmission Planning Horizon." This requirement would set an expectation that an analysis should be conducted to at least one or more years in the near-term planning horizon, rather than imply that an analysis of all five years in the near-term planning horizon must be conducted. 5. R2.7.4 – We suggest that the wording of R2.7.4 be the same as R.2.8.2. Otherwise, we propose that R2.7.4 and R2.8.2 be revised with wording like, ". . . implementation status of identified Corrective Action Plans for System Facilities and Operating Procedures." to clarify that the identified system facilities and operating procedures refer only to those that were in the previous year's Corrective Action Plans. 6. R3.3.1 – The term of 'controls' is ambiguous and not defined, unlike the term, 'Protection Systems', which is defined. Therefore, we suggest that this item be defined or more clearly described to avoid the risk of different and possibly contradictory interpretations by TPs, PCs, and auditors. 7. R3.3.1, bullet #1 - We suggest qualifying which generating units to consider and which voltage limits to simulate with revised wording like, "Trip generating units that are connected to the BES when actual or assumed minimum generator steady state or ride through voltage limits are known and simulations show voltages may fall below the voltage limit. If assumed voltage limits are used, then they should be included in the assessment". The requirement should not apply to all relevant generating units until one of the MOD standards requires all Generator Owners to provide their minimum generating unit voltage limits to the TP and PC. If the wording of

R3.3.1 bullet #1 must be different from its counterpart, R4.3.1 bullet #2, then please explain the reasons for any differences. 8. R3.4.1 – Compliance with the requirement “to coordinate” is problematic and non-measurable We suggest replacing it with the requirement “to communicate”. 9. R3.5 - We interpret that R3.5 requires the TP and PC to conduct an evaluation of possible actions to reduce the likelihood or impact of extreme events, which produce the more severe impacts, if cascading outages may occur. Does the drafting team intend for the TP and PC to fulfill this requirement for at least one event in each of the five categories (i.e. 3 steady state and 2 stability) or in each of the 21 categories/sub-categories (i.e. 14 steady state and 7 stability). Also, if the resulting cascading outages do not result in any overloads, under-voltages, voltage collapse, or loss of generator synchronization, then should the evaluation of possible actions to reduce likelihood or impact be required? 10. R4.1.1 – We suggest that there should be some qualification of which generating units are referred to in this requirement. We propose that the requirement say, “No generating unit connected to the BES shall pull out of synchronism.” For example, some utilities include smaller generation units that are connected at voltages below 100 kV and even down to distribution voltage in their base cases. 11. R4.1.2 – We propose that the wording of this requirement be revised to reflect the same BES qualification of the generating unit that we noted in R4.1.1 above. 12. R4.3.1 – This requirement refers to high speed reclosing and we presume that this is special high speed reclosing that is completed in several cycles, rather than the normal high speed reclosing that is completed in a number of seconds. We recommend that the term high speed reclosing be more clearly defined for this sub-requirement. 13. R5 – This requirement should remove the criterion item, “post-Contingency voltage deviation”, because this criterion is not used widely enough in the industry to be well established criterion. 14. R8 – This requirement should be revised to limit the need to provide the Planning Assessment as follows “adjacent Planning Coordinators and adjacent Transmission Planners and to any registered functional entity...” This suggestion is added to the requirement to clarify that the word adjacent also applies to Transmission Planners and to clarify that the functional entity must be registered in order for the entity to be applicable to the requirement.

Individual

Sergio Garza

LCRA TSC

Yes

Yes

Yes

Yes

No

The first bullet item in Section 3.3.1 should be the same as the second bullet in Section 4.3.1. The wording is somewhat confusing in both. Also, the wording as proposed does not recognize that a high voltage limit could also be violated. Edits to the item as shown below are suggested. Tripping of generators where simulations show generation bus voltages or high side generation step up (GSU) voltages are outside known limits, or assumed to be outside generator steady state limits, or have reached the generator ride through voltage limit. Include in the assessment any assumptions made.

Yes
No
The third bullet of 4.3.1 requires the addition of relay models for stability studies. This type of analysis is performed today by scripting the tripping of multiple lines due to breaker failure events. The inclusion of relay models into the stability study will result in added complexity and an over reliance on relay models for system stability assessment. The stability assessment should assess stability resulting from the operation of relays as opposed to reliance on a relay model for proper system representations. Assurance of the proper operation of relays results from the analysis performed to set relays not from stability studies. From Section 4.3.1: "Tripping of Transmission lines and transformers where transient swings cause Protection System operation based on generic or actual relay models." Section 4.5 requires that "The rationale for those Contingencies selected for evaluation shall be available as supporting information." This will have to be developed. Requirement R5 requires the establishment of criteria for transient voltage response of the system. This seems unnecessary given the proposed changes to Table 1. The proposed changes to table 1 seem to make clear the type of system response that is allowable through its specification of what is allowable in terms of interruptions to Firm Transmission and Non-Consequential loads. R5 states: "Each Transmission Planner and Planning Coordinator shall have criteria for acceptable System steady state voltage limits, post-Contingency voltage deviations, and the transient voltage response for its System. For transient voltage response, the criteria shall at a minimum, specify a low voltage level and a maximum length of time that transient voltages may remain below that level."
An important footnote to Table 1 is omitted from this proposed revision. This omission prevents adequate evaluation of the footnote. Footnote 12 in Table 1 is no longer applied to P2.1, P2.2, P2.3, P4, and P5. The footnote states: "Non-Consequential Load Loss is being decided in Project 2010-11. When that project is finalized, the resolution will be copied here." The footnote should be removed from the proposed revision until Project 2010-11 is concluded.
Individual
Saurabh Saksena
National Grid
Yes
No
Year One should be used within the text of the requirement. Do not have a definition for Year One. Year two could be deleted and R.2.1.1 modified as follows: For the Planning Assessment started in a given calendar year, the first year that is studied must include the forecasted peak Load period for one of the following two calendar years. An additional Near-term study must be performed that is four calendar years beyond the first year that is studied.
No
For R1: Ambiguity regarding base case assumptions, in combination with lack of clarity and clear direction of purpose regarding the sensitivity analysis, undermines the objectives of the standard; R1.1 Part 1.1.2. With respect to known outages, there needs to be greater flexibility in the standards (e.g. more tolerance to non-consequential load shedding or limitations to the contingencies that need to be considered (e.g. P0, P1, & P2)). Regional

allowances for load shedding under this condition should be approved. Duration of known outages should be increased from six months to one year; R1.1 Part 1.1.6 Delete "required for Load". Resources may also be used for export to other areas, not just internal load.
No
We can agree with R2.1 however with respect to R2.2 Language should be consistent with 2.1 for example - use "current or qualified past studies" instead of "the following annual current study".
No
If an entity does a stressed set of assumptions do they always need to do a non-stressed case?
Yes
Yes
Yes
In Table 1 – Stability, Make language similar to wording in P5. Protection System should be removed and replaced with the words relay failure. This change should be made for 2a through 2d: 2. Local or wide area events affecting the Transmission System such as: a. 3Ø fault on generator with stuck breaker10 or a relay failure resulting in Delayed Fault Clearing. b. 3Ø fault on Transmission circuit with stuck breaker10 or a relay failure resulting in Delayed Fault Clearing. c. 3Ø fault on transformer with stuck breaker10 or a relay failure resulting in Delayed Fault Clearing. d. 3Ø fault on bus section with stuck breaker10 or a relay failure resulting in Delayed Fault Clearing. In Note 11 change wording as shown below: Excludes circuits that share a common structure (Planning event P7, Extreme event steady state 2a) or common Right-of-Way (Extreme event, steady state 2b) for a total of 1 mile or less
Yes
Yes
Other Comments: Section 3.3 - We feel that the last sentence of 3.3.1 should be removed. This is handled by PRC-023. Line ratings are addressed by PRC-023. PRC-023 requires coordination with the Reliability Coordinator. Remove "Tripping of Transmission elements where relay loadability limits are exceeded." Section 4.3 - High speed reclosing is not defined. We have previously commented on sensitivity analysis and guidance for base case assumptions. Also, extreme event analysis should not be mandated in this standard as no corrective action is required.
Individual
Charles Lawrence
American Transmission Company
Yes
Yes
No
We propose the following changes and questions: R1 – We offer the minor suggestion of replacing the wording of "maintain System models within their respective areas" with "maintain System models of elements that are interconnected to any portion of the BES

that is owned or operated by the TP or PC". This wording would avoid the ambiguity that can occur when a BA that is associated primarily with one TP declares ownership of a bus in another TP's geographic area, but expects its primary TP to maintain the BA's model data for the remote generation or load. R1.1.2 – We request a SDT opinion on how two individual outages should be modeled if they are both in excess of six months duration and they overlap by less than six months. Should the overlapping condition only be modeled if the condition is expected to last more than six months?

No

R2.1.3 – We offer the minor suggestion of revising R2.1.3 to state, "Known outages of generation or Transmission Facilities with a duration of at least six months be simulated along with P1 events for the System peak or Off-Peak conditions when the outages are scheduled to occur." We interpret that the requirement should only call for the simulation of individual outages with duration of six months or more and not imply the simulation of sequential (back-to-back) outages where each individual outage is less than six months, but the composite duration of the back-to-back outages is more than six months. We also interpret that if two or more known outages with duration of at least six months are overlapping, then the overlapping outage condition would only be simulated for the conditions when the overlapping outages are scheduled to occur if the duration of the overlapping condition is at least six months.

No

R2.1.4 & R2.4.3 – We offer a major suggestion regarding the terms of 'credible' and 'measurable change' because these terms are ambiguous and not defined. So, there is a significant risk of different and possibly contradictory interpretations by TPs, PCs, and auditors. We proposed adding that the TP and PC "shall provide documentation to support the technical rationale for determining the range of credible conditions and measurable change in performance" similar to R2.5. R2.1.4 & R2.4.3 bullet items – We offer the minor suggestion that the number and description of the bullet items in R2.1.4 match the bullet points in R2.4.3. Otherwise, please explain the reasons for any differences between the bullet items in R2.1.4 and R2.4.3. R2.1.4 bullet #7 – We offer the minor suggestion that the term "planned" be replaced with "known" to be consistent with R1.1.2 and R2.1.3. Besides the term "planned outage" has a specific meaning in the Reliability Standards that are specific to the Operating horizon. R2.7.2 – With regard to "include actions to resolve performance deficiencies identified in multiple sensitivity studies", we do not think that mitigation plans should be required for deficiencies found in multiple sensitivity studies because the conditions in sensitivity studies are more extreme and less likely than base case conditions. Some sensitivity study conditions are not credible or plausible enough to warrant the implementation of mitigation measures. What is the SDT interpretation of multiple studies - more than one or a majority of the sensitivities that were studied?

Yes

Yes

No

We offer the major suggestion that Requirements not be created in the Performance Table and be absent from the Requirement section. Requirements should only be referred to in the Performance Table after they already exist in the Requirement section. (a.) Notes "f" and "g" under "Steady State Only" section in the Table 1 header create requirements (e.g. use the verb, "shall") that do not appear in the Requirements section. We suggest adding R3.3.5, which could read, "Applicable System Operating Limits for the planning horizon shall not be exceeded." [After R3.3.5 is added, Note "a" should be revised and refer to

R3.3.5.]. (b.) Note "i" under "Steady State Only" section in the Table 1 header creates a requirement (e.g. use the verb, "shall") that does not appear in the Requirements section. We suggest adding R3.3.6, which could read, "The response of voltage sensitive Load including Load that is disconnected from the System by end-user equipment associated with an event shall not be used to steady state voltage requirements." [After R3.3.6 is added, Note "i" should be revised to refer to R3.3.6.]. (c.) Note "j" under the "Stability Only" section in the Table 1 header creates a requirement (e.g. use the verb, "shall") that does not appear in the Requirements section. We suggest adding R4.1.4, which could read, "Transient voltage response shall be within acceptable limits established by the Planning Coordinator and the Transmission Planner". [After R4.1.4 is added, Note "j" should be revised to refer to R4.1.4.]

We offer the major suggestion that the P3 Category performance criteria be modified to apply only to the loss of two generators. The SDT properly recognizes that generator outages are significantly more probable than line or transformer outages and should be "higher" in the category list. However given the clearly higher probability of generator outages, the probability of the loss of two generators is clearly higher than the loss of a generator and line or the loss of a generator and transformer. Therefore, if the loss of two generators is in the P3 category, then the loss of a generator and line or transformer should be clearly "lower" in the category list. We suggest the listing of: the loss of a generator and some other element (e.g. transmission circuit, transformer, shunt device, and single pole of DC line) be moved to a lower event category, such as the P6 Category by adding "1. Generator" to the listing in the Initial System Condition (Loss of . . .) column. We offer the minor suggestion that Item 2.a in the Extreme Events, Steady State section – Clarify the meaning of the loss of multiple circuits in Item 2.a by using wording similar to P7. We suggest this text: "a. Loss of three or more circuits that share a common structure." We offer the minor suggestion that Footnote 6 – Further clarify the applicable shunt devices in Footnote 6 with this suggested text: "6. Requirements which are applicable to shunt devices, also apply to FACTS devices that are connected to ground, but not instrument voltage transformers or surge arresters." ATC has significant concerns with Q3.2 (R2.1.4 & R2.4.3), Q4 (Table requirements) and Q5 (P3 scope), as noted above. In addition, ATC offers the following suggestions to promote proper Reliability Standard quality and content. (1.) Revise the Planning Assessment definition to more explicitly apply to the BES and the TPL-001 requirements. We suggest text of: "Planning Assessment: Documented evaluation of future Transmission System performance and Corrective Action Plans to remedy identified deficiencies in the BES from the steady state and stability performance requirements set forth in the TPL-001 standard." (2.) R2.1.5 – We propose replacing the term 'major Transmission' with "BES" because BES is a well defined term, while the term 'major Transmission' is not. (3.) Add R2.3.1 – We suggest the addition of a R2.3.1 requirement to emulate the distinction between the requirement to perform a short circuit assessment and conduct required studies or analysis to support the assessment (e.g. R2.1/R2.1.1 and R2.2/R2.2.1). We propose wording such as, "Perform an analysis for at least one year in the Near Term Transmission Planning Horizon." This requirement would set an expectation that an analysis should be conducted to at least one or more years in the near-term planning horizon, rather than imply that an analysis of all five years in the near-term planning horizon must be conducted. (4.) R2.7.4 – We suggest that the wording of R2.7.4 be the same as R.2.8.2. Otherwise, we propose that R2.7.4 and R2.8.2 be revised with wording like, ". . . implementation status of identified Corrective Action Plans for System Facilities and Operating Procedures." to clarify that the identified system facilities and operating procedures refer only to those that were in the previous year's Corrective Action Plans. (5.) R3.3.1 – The term of 'controls' is ambiguous and not defined, unlike the term, 'Protection Systems', which is defined. Therefore, we suggest that this item be defined or more clearly described to avoid the risk of different and possibly contradictory

interpretations by TPs, PCs, and auditors. (6.) R3.3., bullet #1 - We suggest qualifying which generating units to consider and which voltage limits to simulate with revised wording like, "Trip generating units that are connected to the BES when actual or assumed minimum generator steady state or ride through voltage limits are known and simulations show voltages may fall below the voltage limit. If assumed voltage limits are used, then they should be included in the assessment". The requirement should not apply to all relevant generating units until one of the MOD standards requires all Generator Owners to provide their minimum generating unit voltage limits to the TP and PC. If the wording of R3.3.1, bullet #1 must be different from its counterpart, R4.3.1, then please explain the reasons for any differences. (7.) R3.4.1 - Compliance with the requirement "to coordinate" is problematic and non-measurable. We suggest replacing it with the requirement "to communicate". (8.) R3.5 - We interpret that R3.5 requires the TP and PC to conduct an evaluation of possible actions to reduce the likelihood or impact of extreme events, which produce the more severe impacts, if cascading outages may occur. Does the drafting team intend for the TP and PC to fulfill this requirement for at least one event in each of the five categories (i.e. 3 steady state and 2 stability) or in each of the 21 categories/sub-categories (i.e. 14 steady state and 7 stability). Also, if the resulting cascading outages do not result in any overloads, under-voltages, voltage collapse, or loss of generator synchronization, then should the evaluation of possible actions to reduce likelihood or impact be required? (9.) R4.1.1 - We suggest that there should be some qualification of which generating units are referred to in this requirement. We propose that the requirement say, "No generating unit connected to the BES shall pull out of synchronism." For example, some utilities include smaller generation units that are connected at voltages below 100 kV and even down to distribution voltage in their base cases. (10.) R4.1.2 - We propose that the wording of this requirement be revised to reflect the same BES qualification of the generating unit that we noted in R4.1.1 above. (11.) R4.3.1 - This requirement refers to high speed reclosing and we presume that this is special high speed reclosing that is completed in several cycles, rather than the normal high speed reclosing that is completed in a number of seconds. We recommend that the term high speed reclosing be more clearly defined for this sub-requirement. (12.) R5 - We propose removing the criteria item, "post-Contingency voltage deviation", because this criterion has not been developed and used widely enough in the industry to be introduced into the standards. (13.) R7 - Revise part of the requirement text to read, ". . . identify each entity's individual and joint responsibilities . . ." to provide better clarity. Perhaps this requirement should be listed at the beginning of the Requirements section, instead being mentioned near the end of this section. (14.) Change the forward referencing to backward referencing. We agree with R2.6, R3.1, R3.5, R4.1, and 4.2. However, we suggest that the requirements be ordered so that all of the references refer back to earlier text, rather later text to be consistent with the rest of this standard and other referencing in this standard (e.g. R2.1.3, R2.1.4, R2.4.3, R3, R3.3, R3.5, R4, R4.3, R4.4, R4.5), as well as other standards.

Yes

Yes

Individual

Thad Ness

American Electric Power (AEP)

Yes

Yes
Yes
Yes
R2, Part 2.1 – idicates that ‘qualified’ past studies can be utilized. This is an ambiguous term and we suggest the SDT consider the implications.
Yes
Yes
Yes
Yes
Yes
Yes
Individual
Bill Middaugh
Tri-State Generation & Transmission
Yes
No
Comments: The Year One definition is somewhat clearer now, but there is still some ambiguity. We recommend the removal of the term “Year One, year two, and year five” from R2.1.1. and deletion of the Year One definition (definitions are not required for year two and year five, for instance). The Year One concept can be integrated into the definition of Near-Term Transmission Planning Horizon, which we suggest changing to “The period beginning with the first year following the operating horizon, as determined by the Transmission Planner or Planning Coordinator, through the fifth year.” Then, rather than say “Year One, year two, and year five”, we can use the phrase “at least one of the first two years of the Near-Term Transmission Planning Horizon, and the fifth year”. This will require corresponding changes in R2.1.1 and R2.1.2.
No
We suggest changing the added sentence to “This establishes the Category P0, No Contingency, Initial System Conditions in Table 1.”
No
2.1.5 – Change “shall be performed for” to “shall have been performed for.”
Yes
No
Rather than specifically call out induction motor loads, we recommend changing the second sentence to “Stability analysis shall include models that represent the expected dynamic

behavior of system elements that could impact the study area."
Yes
Yes
Table 1, P5 does not seem to account for redundant relays in the Protection System to mitigate potential relay failure. We recommend changing the "Event" to "Delayed Fault Clearing due to the failure of a relay to operate as designed, if that is the only relay protecting the Faulted element, for one of the following:" In Table 1, P2 and P3, the last column "Non-Consequential Load Loss Allowed" where the requirement "No12" appears, and in footnote 12, the standard as proposed does not allow for any Non-Consequential Load Loss. When the Non-Consequential Load Loss (footnote b) issue is clarified in Project 2010-11 this requirement may be changed. Therefore, if this proposed Standard is enforced before Project 2010-11 is completed, entities will be required to meet this No Non-Consequential Load Loss requirement without the exception allowed in the existing TPL-002-0, footnote "b". This will require immediate redesigns to meet this particular requirement. The unintended consequence could be that operators of local systems that are currently networked may opt to begin operation as radial systems, and future designs for local systems may be radial, at any voltage level. We suggest that the proposed footnote 12 include a provision to default to the existing footnote "b" in TPL-002-0 until Project 2010-11 is decided. Please revise footnote 12 to read, "Note: Non-Consequential Load Loss is being decided in Project 2010-11. When that project is finalized, the resolution will be copied here. In the interim, planned or controlled interruption of electric supply to radial customers or some local Network customers, connected to or supplied by the Faulted element or by the affected area, may occur in certain areas without impacting the overall reliability of the interconnected transmission systems. To prepare for the next contingency, system adjustments are permitted, including curtailments of contracted Firm (non-recallable reserved) electric power Transfers." Timing of this project and project 2010-11 is critical. It would be very difficult to vote to approve the proposed TPL-001-2 prior to knowing the outcome of Project 2010-11 (footnote b issue). Second, we are unclear why voltage relays are included in footnote 13 and think they can be removed. Third, in the Extreme Events – Stability section of Table 1, items 2a-2d "Protection System failure" should be changed to "relay failure" to be consistent with Table 1, Category P5.
Yes
Yes
None regarding R8. The following comments refer to parts of the proposed standard for which no questions are asked. R4, Part 4.1.2: The response to our previous comment indicated that our description was for a system Stability issue. R4 is addressing system Stability and we believe the comment still applies and that it was not answered in the response. We have two issues with 4.1.2: Sometimes out-of-step (loss of generator synchronism) is better mitigated through islanding by tripping transmission rather than by tripping generators; the second point is that the ability of present modeling programs does not include the capability to model all types of impedance relays and their associated OOS blocking and tripping capabilities that are available. R4, Part 4.3.1: The third bullet implies that all impedance relays (and perhaps others) will need to be modeled in the stability databases. We question whether the existing simulation programs can accommodate this large magnitude of data inclusion and whether there is any benefit to BES reliability. Certainly using generic models rather than actual models would be of no benefit. We recommend changing the third bullet to "Evaluation of Protection System behavior when transient power swings are detected or predicted to have impedance characteristics that

may approach relay operating characteristics."
Individual
David Miller
Lakeland Electric
Yes
No
While the definition of Year One addresses the time span this year occupies, it does not address when that time span begins. The example which was added to the definition suggests that Year One begins twelve months from the start of the Planning Assessment, but it does not appear to be specifically stated. The following language is recommended: "The first twelve month period that a Planning Coordinator or a Transmission Planner is responsible for assessing, beginning twelve months from the planned completion date of the Planning Assessment."
No
Consider removing "...the latest..." from R1 and changing R1.1.2 to state "...six months during the period of study."
No
No, the phrase any material changes used in requirement R.2.6.2 will effectively cause all Planning Authorities to run all studies every year regardless of minor changes in the model. The overwhelming majority of PAs use a 10 year set of planning models developed annually by Regions or Subregions. These annual sets of planning models will always have some changes. The annual study requirement is especially problematic for Stability and Short circuit studies that require much more engineering time to complete and are much less likely to have results impacted by minor model changes such as different load forecasts. Uncertainty with audit review of technical rationale documentation will serve to focus Transmission Planning engineering resources on short term compliance to an extent that is counter productive. Please consider removing R.2.6.2
No
It is recommended that the phrase "...measureable change in performance..." be changed to "...measurable change in system response..." A change in performance is unclear, and could suggest that a sensitivity study is valid only if the System is stressed to the point that it no longer performs within the criteria established by Table 1. In addition, it is recommended that the following text appear after the last sentence of 2.4.3: "The condition or conditions to be varied shall be left to the discretion of the Transmission Planner or Planning Coordinator, provided they are selected from the list below."
Yes
Yes
Yes
The performance requirements of Table 1 do not allow the loss of non-consequential load for single and multiple contingency events. The disallowance of load loss does not provide any real benefit to the reliability of the BES and is an unnecessary overreach into local quality of service issues that are best addressed by State, Provincial or Municipal authorities. There may be circumstances such as high local transmission costs or local opposition to transmission construction where prohibition of non-consequential load loss

represents a poor cost/benefit or quality of life tradeoff. Having a provision at the regional level that a PA or TP can have a certain amount of non-consequential load loss designed or planned in to its system that would be reasonable if it is acceptable to the RE and does not have an adverse impact on the remaining BES. In lieu of such a RE provision, providing a quantitative cap in non-consequential load loss such as 100 MW may be rationale compromise in the goal of limiting load loss for the more probable outage events. Our preference would be to retain the capability of limited non-consequential load loss. It is our understanding that footnote 9 is under consideration as part of Project 2010-11 and should be noted as such for clarification.

No

Consider removing "the latest" from M1.

No

The requirement to distribute the Planning Assessment should be more flexible and allow for making the Planning Assessment available, such that those entities that desire the information can have it readily available. R8 should be modified as follows: Each Planning Coordinator and Transmission Planner shall make available its Planning Assessment results to adjacent Planning Coordinators and Transmission Planners and to any functional entity that indicates a reliability related need for the Planning Assessment results.

Group

E.ON U.S.

Brent.Ingebrigtsen@eon-us.com

No

Comments: 2.2.1. A current study assessing expected System peak Load conditions for one of the years in the Long-Term Transmission Planning Horizon and the rationale for why that year was selected. E.ON U.S. believes the scope of the 'current study' should be defined. It is not clear whether the scope is the same as outlined in section 2.1.

No

In the statement: "the Planning Coordinator and Transmission Planner shall coordinate with adjacent Planning Coordinators and Transmission Planners to ensure that Contingencies on adjacent Systems which may impact their Systems are included in the Contingency list." E.ON U.S. believes that the use of the pronoun "their" in the quoted section above is confusing. "Their" could be read as applying to the adjacent Planning Coordinators and not to the Planning Coordinator to whom the standard applies. E.ON U.S. recommends that the word "their" should be changed to "the Planning Coordinator's and Transmission Planner's" in order to make it clear.

E.ON U.S. believes that Table 1 should be formatted to avoid having the tables split by page breakers. In addition, tables spanning across multiple pages should have headers at the top of each page.

Individual

Steve Stafford

GTC
Yes
Yes
Yes
Yes
Yes
No
We have concerns for including induction motor representations in the load models without any study or bench-marking activities to meet the requirements of R2.4.1. This information should be supplied by the LSE as part of the MOD standard. We understand that the proposed standard will accept an aggregate system load model which represents the overall dynamic behavior of the load to relieve the burden of trying to develop specific induction motor load representation at each load bus. However this modeled system response will be considerably different compared to the actual system response which will open up the industry to unwarranted scrutiny and possible compliance violation investigations.
Yes
Yes
Yes
Yes
Individual
Chifong Thomas
Pacific Gas and Electric Company
Yes
We commend the SDT for its work to continue the improvement on the proposed TPL-001-1. We were not able to find a place to include comment on Requirement R3 or R4; therefore, we have included our comments here: Section R4.3.1, bullet point 3 requires the stability analyses to include the impact of subsequent "[t]ripping of Transmission lines and transformers where transient swings cause Protection System operation based on generic or actual relay models". As written, this bullet could be interpreted as requiring the inclusion of these relay models in stability data bases. We do not have generic or actual relay models in our dynamics data bases for tripping line faults on lines and transformers represented. We represent actual relay response and tripping times of relays, communications, and breakers to faults in tripping transmission lines and transformers. Requiring the inclusion of generic or actual relay models for all relays that can trip lines and transformers would add a large burden to the development and maintenance of accurate dynamics model files that would add little or no benefit. Please change this bullet to read: "Tripping of Transmission lines and transformers where transient swings cause Protection

System operation based on known Protection System response". Section 3.4.1 and 4.4.1 require PCs and TPs to coordinate with adjacent PCs and TPs to ensure that Contingencies on adjacent Systems which may impact their Systems are included in the Contingency list. Please clarify whether this means 1) that a PC or TP must coordinate with others to identify contingencies on other Systems that the PC or TP must now include on their Contingency list to simulate and address any performance violations on their own System, or 2) that the PC or TP must coordinate with others to identify contingencies on their System that this PC or TP must now include on their Contingency list to simulate and address any performance violations on the other Systems. In either case, the standard does not seem to clearly state what must be done, or whose responsibility it is to develop the corrective action plan, if a contingency in one System causes a performance violation in another System.

We recognize that the drafting team made changes to the definition of Year One based on industry comments. However, we believe that the revised language could allow for a situation where an entity could use its next season's operating study as its Year One planning study. For example, if the entity does its study in the fall of 2011, the proposed definition would allow the entity to use its summer 2012 operating study as its Year One study. This is a very short period to address any issued identified. Suggest working into the requirement that Planning Studies must look out at least 12 months beyond when the study is performed. This would still allow for the provision in the current definition example ("if a Planning Assessment was started in 2011, then Year One must include the forecasted peak Load period for either 2012 or 2013) because the entity would be able to use their 2013 Load period, but it would prevent the entity from using the 2012 Load period if they started the assessment late in 2011.

Yes

Yes

Yes

Yes

Yes

PG&E does not support the performance table, as currently revised. Table 1, P5 currently requires the study of "[d]elayed Fault Clearing due to the failure of a relay¹³ protecting the Faulted element to operate as designed". As written, this requirement does not recognize the use of redundant relays for primary protection. In some cases side by side relays are used to provide primary fault tripping if one relay fails to operate. Per the requirement as stated, the redundant relay would provide no value in meeting this requirement. Please revise to acknowledge backup relays: "Single failure of a protection relay¹³ protecting the Faulted element to operate as designed, resulting in backup relay actions or Delayed Fault Clearing, for one of the following". In Table 1, P2 and P3, the last column "Non-Consequential Load Loss Allowed" where the requirement "No¹²" appears, and in footnote 12, the standard as proposed does not allow for any Non-Consequential Load Loss. When the Non-Consequential Load Loss (footnote b) issue is clarified in Project 2010-11 this requirement may be changed. Therefore, if this proposed Standard is enforced before Project 2010-11 is completed, entities will be required to meet this No Non-Consequential Load Loss requirement without the exception allowed in the existing TPL-002-0, footnote "b". This will require immediate redesigns to meet this particular requirement. The

unintended consequence could be that operators of local systems that are currently networked may opt to begin operation as radial systems, and future designs for local systems may be radial, at any voltage level. We suggest that the proposed footnote 12 include a provision to default to the existing footnote "b" in TPL-002-0 until Project 2010-11 is decided. Please revise footnote 12 to read, "Note: Non-Consequential Load Loss is being decided in Project 2010-11. When that project is finalized, the resolution will be copied here. In the interim, planned or controlled interruption of electric supply to radial customers or some local Network customers, connected to or supplied by the Faulted element or by the affected area, may occur in certain areas without impacting the overall reliability of the interconnected transmission systems. To prepare for the next contingency, system adjustments are permitted, including curtailments of contracted Firm (non-recallable reserved) electric power Transfers." Timing of this project and project 2010-11 is critical. It would be very difficult to vote to approve the proposed TPL-001-2 prior to knowing the outcome of Project 2010-11 (footnote b issue).

Yes

Yes

Group

Florida Reliability Coordinating Council, Inc - Transmission Working Group

Richard BEcker

Yes

No

No, because it is worded to be dependent upon when an assessment is started rather than when the assessment is completed and valid. Assessments don't typically include a "start date". An assessment completed on a calendar date should include (be valid for) the forecasted peak load for a timeframe that begins no more than 24 months from the date that the assessment was completed.

No

No, Since "the latest" data may become available after the study is complete, a planner may not be able to ever complete a study. Please consider removing "the latest" from the second sentence.

No

No, Please consider removing R.2.6.2. The overwhelming majority of PAs use a 10 year set of planning models developed annually by Regions or Subregions. These annual sets of planning models will always have some changes. The annual study requirement is especially problematic for Stability and Short circuit studies that require much more engineering time to complete and are much less likely to have results impacted by minor model changes such as different load forecasts. Uncertainty with audit review of technical rationale documentation will serve to focus Transmission Planning engineering resources on short term compliance to an extent that is counter productive.

No

This change does not clarify the required sensitivity analysis. A measureable change in performance is unclear? Instead of a measurable change in performance, a measureable change in contingency response of the Bulk Electric System would be more appropriate. A change in performance implies not meeting one of the performance requirements as specified in Table 1.

Yes

No
This change does not clarify material. Material should be quantified somehow. We recommend changing the phrase "material generation additions or changes" to "generation in the vicinity with additions of changes larger than 200 MW".
Yes
We support the changes to the performance tables.
Footnote 12 performance requirements of Table 1 should allow the loss of non-consequential load for all contingency categories except for P0. The disallowance of load loss does not provide any real benefit to the reliability of the BES and is an unnecessary overreach into local quality of service issues that are best addressed by State, Provincial or Municipal authorities. There may be circumstances such as high local transmission costs or local opposition to transmission construction where prohibition of non-consequential load loss represents a poor cost/benefit or quality of life tradeoff. Having a provision at the regional level that a PA or TP can have a certain amount of non-consequential load loss designed or planned in to its system that would be reasonable if it is acceptable to the RE and does not have an adverse impact on the remaining BES. In lieu of such a RE provision, providing a quantitative cap in non-consequential load loss such as 100 MW may be rationale compromise in the goal of limiting load loss for the more probable outage events. Our preference would be to retain the capability of limited non-consequential load loss. Footnote 9 should also be under consideration as part of Project 2010-11 and should be noted as such for clarification.
No
It appears that there is a disagreement between R8 and M8, regarding public posting. We Agree with M8 posting option.
No
The requirement to distribute the Planning Assessment should be more flexible and allow for making the Planning Assessment available, such that those entities that desire the information can have it readily available. R8 should be modified to replace distribute with "make available:", so the new requirement would read as follows: Each Planning Coordinator and Transmission Planner shall make available its Planning Assessment results to adjacent Planning Coordinators and Transmission Planners and to any functional entity that indicates a reliability related need for the Planning Assessment results.
Individual
Michael R. Lombardi
Northeast Utilities
Yes
No
NU does not support the revised definition of Year One as we believe it leads to confusion. Our suggestion is that Year One should be the Peak Load Year after the study is initiated. The subsequent years should be counted from Year One (e.g., a study that is started in year 2010 with peak load in 2011 will have Year One as 2011 and Year Two as 2012, etc.).
No
NU believes that the Normal System Conditions as stated in Requirement R1 should establish the base case conditions to be used for the assessment studies. More guidelines for developing base cases should be addressed in the requirements. What the statement in Requirement R1 lacks is the manner of creating generation dispatches and the level of interface flows (level of stress), which are central to any base case to be used to assess the

reliability of the electric power network. Depending upon how the base case dispatches and the level of interface flows are created, a study may reveal reliability violations in the power system. This is a weakness of the existing TPL standards. NU, however, will support the idea of developing regional guidelines in regard to the nature of the base cases to be used for the NERC reliability studies. Comment on Requirement R1.1, Part 1.1.2: With respect to known outages NU requests that the six month duration listed by the requirement should be changed to one year duration. Requirement R1.1 Part 1.1.6: The phrase "required for Load" should be deleted as this confuses the issue [since resources may also be used for export to other areas and not just internal load].

No

The revisions made to Requirement R2 Part 2.1 appear to resolve the concern that past studies could not be used to comply with the short-term steady state study requirements. However, the language of Requirement R2 Part 2.2 still seems to suggest that current annual studies are always required for the long-term steady state assessment to be compliant. This may have been an oversight, for consistency Requirement R2 Part 2.2 should be modified to similarly read as Requirement R2, Part 2.1.

No

The standard is referring to requirements for sensitivity and other issues without a reference to base assumptions as commented in Question #3. The standard must describe base assumptions. To define a sensitivity condition, NERC must define base assumptions.

Yes

Yes

Yes

Checked "No" NU agrees with the changes that have been made to the language of P5. However, for Table 1 (Steady State and Stability Performance Extreme Events) – Stability, the wording "Protection Systems failure" should be changed to "relay failure" similarly to the change in P5. This change should be made for items 2a through 2d.

Yes

Yes

No comments on Question 7. Other Comments: As detailed below, NU has other comments that are not addressed by this Comment Form as follows – Section 3.3, Section 4.3, Non-Consequential Load Loss as referenced in the events Table 1 and studies using extreme event contingencies. Section 3.3 – NU believes that the last sentence of Part 3.3.1 should be removed since this is handled by PRC-023. Line ratings are addressed by PRC-023 which requires coordination with the Reliability Coordinator. NU suggests the removal of the following sentence: "Tripping of Transmission elements where relay loadability limits are exceeded." Section 4.3 - High speed reclosing is not defined and to help eliminate any confusion that it may introduce into the standard it will be worthwhile for the SDT to define this term. Non-Consequential Load Loss – Depending upon the resolution of "Project 2010-11, TPL Table 1, Footnote b" NU may have additional comments regarding this issue. Studies Using Extreme Event Contingencies: The requirements for sensitivity analysis already address issues going beyond what is expected to meet the reliability requirements of the standard. Therefore, requiring extreme event analysis is requiring two layers of event analysis beyond what is required and there is no requirement for corrective action if a concern is identified.

Individual
Christopher L. de Graffenried
Consolidated Edison Co. of New York, Inc.
No
Requirement R1 Part 1.1 and following states "System models shall represent:... 1.1.5. Known commitments for firm Transmission Service and Interchange. It was commented during a previous posting that 1.1.5 should be reworded to read: Known commitments for Firm Transmission Service, and, additionally, other types of transactions provided they have been demonstrated to not violate existing reliability constraints. The response was that "The SDT believes that the defined term 'Interchange' covers other transfers as described in your comment. No change made." It is agreed that known Interchange should be modeled. However, it is imperative that existing reliability constraints not be violated in the process. That is, Interchange relating to economic transactions should not drive planning studies. Reliability-related investments should not be driven by congestion related to economic transactions incorporated into planning models. Con Edison's Preferred approach: • 1.1.5. Known commitments for firm Transmission Service and Interchange. Interchange is meant to refer to energy transactions other than firm Transmission Service. While rigorous planning studies have been conducted to permit the uninterrupted implementation of firm Transmission Service without jeopardizing the reliable operation of the Interconnected System, other types of energy transaction only take place whenever system conditions permit them. They are usually of very short duration relative to planning assessment periods (usually spanning for a few hours to a few days) and deemed highly interruptible subject to reliability issues that may arise during operation of the system. In other words, the term Interchange refers to economic transactions that are permitted when the system is secure and there are reasonable reliability margins to effect dispatch changes to lower operating costs. As such, Interchange should not be reflected in system representation meant to assess system reliability in adherence to reliability criteria delineated in documents such as TPL-001.
No
See NPCC comments
Yes
No
See NPCC comments
No
See NPCC comments
No
There is insufficient information and experience regarding dynamic load modeling. It may also be included as a "sensitivity" analysis in 3.2, rather than requiring and expecting accurate representation of a dynamic load model. If this requirement is kept, a modeling standard should be written that is specific to dynamic loads. This change belongs in a modeling standard, not in TPL-001.
Yes
No
• Header note (i) in the first Table 1 (p. 10) The explicit representation of (voltage-dependent) load models is perfectly consistent with the requirements defined in R1 (which calls for a comprehensive representation of system components and their expected operating status in the planning assessment period) and the impetus to the creation of

more specific load models in dynamic assessments found Requirement 2.4 of this draft of TPL-001-2. It is a known that depressed voltage conditions cause certain system elements to perform below their rated capacity. For example, capacitors provide less voltage support and voltage controlling transformers are impeded by their finite tap range to direct VAR flow into areas affected by low voltage conditions. Certain load types, on the other hand, provide a self-compensating relief to depressed voltage by naturally decreasing demand in a manner proportional to their characteristics, without operator intervention. Choosing to negate the voltage-dependence of one of these system elements (load, in this case) results in an inaccurate system representation that, in turn, may lead to erroneous assessments of the reliability state of the interconnected system and, potentially, to the implementation of unwarranted system upgrades.

See NPCC comments

Yes

No

See NPCC comments

Individual

Spencer Tacke

Modesto Irrigation District

Yes

We commend the SDT for its work to continue the improvement on the proposed TPL-001-1. We were not able to find a place to include comment on Requirement R4; therefore, we have included our comments here: Section R4.3.1, bullet point 3 requires the stability analyses to include the impact of subsequent “[t]ripping of Transmission lines and transformers where transient swings cause Protection System operation based on generic or actual relay models”. As written, this bullet could be interpreted as requiring the inclusion of these relay models in stability data bases. We do not have generic or actual relay models in our dynamics data bases for tripping line faults on lines and transformers represented. We represent actual relay response and tripping times of relays, communications, and breakers to faults in tripping transmission lines and transformers. Requiring the inclusion of generic or actual relay models for all relays that can trip lines and transformers would add a large burden to the development and maintenance of accurate dynamics model files that would add little or no benefit. Please change this bullet to read: “Tripping of Transmission lines and transformers where transient swings cause Protection System operation based on known Protection System response”.

No

The definition as it is in the current standards is fine. The new proposed definition is unclear.

Yes

Yes

No

This new requirement will expand the scope of the study work beyond a reasonable extent.

Yes

Yes

Table 1, P5 currently requires the study of "[d]elayed Fault Clearing due to the failure of a relay¹³ protecting the Faulted element to operate as designed". As written, this requirement does not recognize the use of redundant relays for primary protection. In some cases side by side relays are used to provide primary fault tripping if one relay fails to operate. Per the requirement as stated, the redundant relay would provide no value in meeting this requirement. Please revise to acknowledge backup relays: "Single failure of a protection relay¹³ protecting the Faulted element to operate as designed, resulting in backup relay actions or Delayed Fault Clearing, for one of the following". In Table 1, P2 and P3, the last column "Non-Consequential Load Loss Allowed" where the requirement "No¹²" appears, and in footnote 12, the standard as proposed does not allow for any Non-Consequential Load Loss. When the Non-Consequential Load Loss (footnote b) issue is clarified in Project 2010-11 this requirement may be changed. Therefore, if this proposed Standard is enforced before Project 2010-11 is completed, entities will be required to meet this No Non-Consequential Load Loss requirement without the exception allowed in the existing TPL-002-0, footnote "b". This will require immediate redesigns to meet this particular requirement. The unintended consequence could be that operators of local systems that are currently networked may opt to begin operation as radial systems, and future designs for local systems may be radial, at any voltage level. We suggest that the proposed footnote 12 include a provision to default to the existing footnote "b" in TPL-002-0 until Project 2010-11 is decided. Please revise footnote 12 to read, "Note: Non-Consequential Load Loss is being decided in Project 2010-11. When that project is finalized, the resolution will be copied here. In the interim, planned or controlled interruption of electric supply to radial customers or some local Network customers, connected to or supplied by the Faulted element or by the affected area, may occur in certain areas without impacting the overall reliability of the interconnected transmission systems. To prepare for the next contingency, system adjustments are permitted, including curtailments of contracted Firm (non-recallable reserved) electric power Transfers." Timing of this project and project 2010-11 is critical. It would be very difficult to vote to approve the proposed TPL-001-2 prior to knowing the outcome of Project 2010-11 (footnote b issue).

Group

Pepco Holdings, Inc - Affiliates

Richard Kafka

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes
Yes
Yes
Individual
Alex Rost
NBSO
Yes
No
To avoid confusion, the formal definition for Year One should be eliminated and wording used to describe Year One be placed within the appropriate requirement. For example, R2.1.1 could be re-written to state: System peak Load representing a point in time 12-24 months and another point in time 48-65 months into the future from the time the study is initiated.
No
R1 should have some language to state that base case assumptions should be made such that they appropriately stress the system to be tested and are in accordance with good engineering practice.
No
NBSO agrees with the language for R2.1, but the language with R2.2 should be changed to be consistent with R2.1. NBSO disagrees with the revisions to R2.1.5. Requiring PAs to study instead of assess the possible unavailability of equipment with a lead time of a year or more will result in significant demand on resources with little impact on system reliability. NBSO also questions what additional value such studies will bring in addition to the N-1-1 requirements (P6).
No
Base case assumptions should be made such that they appropriately stress the system to be tested and are in accordance with good engineering practice. If the base cases are already stressed, the requirement to study sensitivity cases may result in the study of less severe conditions, and thus require additional time and resources while providing little additional value to the overall assessment.
No
By implication, the response of induction motor load would need to be considered when modeling the expected dynamic behaviour of loads that could impact the study area. NBSO suggests re-wording parts of R2.4.1 as follows: System peak load levels shall include a model which represents the expected dynamic behaviour of loads that could impact the study area. An aggregate system load model which represents the overall expected dynamic behaviour of load is acceptable.
Yes
Yes

For consistency, 'Protection System' should be replaced with 'relay' on Table 1 (p12) Stability Section, items 2a-2d.
Yes
Yes
NBSO suggests considering rewording the VSL so that they address the failure to distribute the final results of planning assessments.
Individual
Curtis A. Beveridge
Central Maine Power Company
Yes
No
The added clarification to the definition of Year One serves to remove most ambiguity with respect to Year One. However, the revision has added further ambiguity to the terms "year two" and "year five" which are not defined. For the Planning Assessment started in a given calendar year, the first year that is studied must include the forecasted peak Load period for one of the following two calendar years. An additional Near-term study must be performed that is four calendar years beyond the first year that is studied. We recommend defining Year Five as the twelve month period 4 to 6 calendar years from the date of the Planning Assessment. We further recommend revising R2.1.1 as follows: "System peak Load for Year One and for Year Five." Alternatively, the definition of Year One could be eliminated and described within the text of the requirements.
No
For R1 Ambiguity regarding base case assumptions, in combination with lack of clarity and clear direction of purpose regarding the sensitivity analysis, undermines the objectives of the standard; R1.1 Part 1.1.2. With respect to known outages, there needs to be greater flexibility in the standards (e.g. more tolerance to non-consequential load shedding or limitations to the contingencies that need to be considered (e.g. P0, P1, & P2)). Regional allowances for load shedding under this condition should be approved. Duration of known outages should be increased from six months to one year; R1.1 Part 1.1.6 Delete "required for Load". Resources may also be used for export to other areas, not just internal load.
No
We completely agree with the revision to R2.1, but this revision must be carried through to other sections (R2.2, 2.2.1) and R2.2 language should be consistent with 2.1 for example - use "current or qualified past studies" instead of "the following annual current study". Revisions made to Requirement R2.1.5 have made it worse than as originally drafted. This would require the PC & TP to study, or in other words perform technical analysis of, the impact and probability of the possible unavailability of any piece of equipment with a lead time of one year or more. Such an evaluation of spare equipment strategies would require significant additional resources and data, but provide no benefit to system reliability, as it is redundant to the existing N-1-1 contingency requirement (P6).
No
These sensitivities need to be considered if not already included in the base case assumptions.
No
We have not determined a need to model dynamic loads, and therefore have not benchmarked any such models. We recommend that prior to this requirement being in place, a modeling standard should exist that is specific to dynamic loads.

Yes
No
Header note (i) in the first Table 1 could imply that voltage-varying load shall not be used to meet steady state performance requirements. NYISO steady state load models include voltage-varying loads. This note should be revised to only reference loads which are disconnected due to voltage.
In Table 1 – Stability, Make language similar to wording in P5. Protection System should be removed and replaced with the words relay failure. This change should be made for 2a through 2d: 2. Local or wide area events affecting the Transmission System such as: a. 3Ø fault on generator with stuck breaker10 or a relay failure resulting in Delayed Fault Clearing. b. 3Ø fault on Transmission circuit with stuck breaker10 or a relay failure resulting in Delayed Fault Clearing. c. 3Ø fault on transformer with stuck breaker10 or a relay failure resulting in Delayed Fault Clearing. d. 3Ø fault on bus section with stuck breaker10 or a relay failure resulting in Delayed Fault Clearing. In Note 11 change wording as shown below to include the words “a total of”: Excludes circuits that share a common structure (Planning event P7, Extreme event steady state 2a) or common Right-of-Way (Extreme event, steady state 2b) for a total of 1 mile or less
Yes
No
Requirement 8 is an administrative burden to TPs and PCs that adds no value to reliability. PCs should be including TPs, neighboring PCs and interested parties in its planning processes when developing the Planning Assessments. Therefore, the inclusion of a set of VSLs for Requirement 8 is unnecessary. Furthermore, the requirement lacks a specified time frame to receive comments, thereby implying that TPs and PCs would be required to reply to comments forever following the finalization of a Planning Assessment. The NYISO proposes a limit of six months. Should the SDT decide to leave the VSLs for Requirement 8, Requirement 8.1 should be revised to reflect that comments only to the final Assessment (not drafts developed during a process) need a response as follows: If a recipient of the planning assessment final results provides documented comments on the results within 180 calendar days of the issuance of those final results, the respective Planning Coordinator or Transmission Planner shall provide a documented response to such recipient within 90 calendar days of receipt of those comments. We also have other comments not addressed by this Comment Form as follows – Section 2.7, Section 3.3, Section 4.3, and overall: Section 2.7 requires that Corrective Action Plans are included in each Planning Assessment and states “Such actions may include...” followed by a list of actions. Restricting allowable actions, and excluding runback/tripping of HVDC would have a direct impact on multiple existing facilities in New York and would adversely impact the reliability planning of the NYCA. Runback/tripping of HVDC must be added to the list. Section 3.3 - We feel that the last sentence of 3.3.1 should be removed. This is handled by PRC-023. Line ratings are addressed by PRC-023. PRC-023 requires coordination with the Reliability Coordinator. Remove “Tripping of Transmission elements where relay loadability limits are exceeded.” Section 4.3 - High speed reclosing is not defined. Overall – We have previously made comments which have not been addressed in the current version of the proposed standard. Support for the standard can at most be limited without addressing comments. We have previously commented on sensitivity analysis and guidance for base case assumptions. Also, extreme event analysis should not be mandated in this standard as no corrective action is required. The requirements for sensitivity analysis already address issues going beyond what is expected to meet reliability requirements. Requiring extreme event analysis is requiring two layers of event analysis beyond what is required, and there is no

requirement for corrective action if anything is identified. The standard is referring to requirements for sensitivity and other issues without a reference to base assumptions. The standard must describe base assumptions. To define a sensitivity condition, NERC must define base assumptions.

Group

Western Area Power Administration

Brandy A. Dunn

Yes

The whole bullet point section in the Effective Date section referring to Corrective Action Plans could be deleted and instead captured by Requirement R2.7.3. A seven year grace period is probably not favorable to FERC, and a better solution could be developed to meet industry needs. In R2.7.3, a possible example of "beyond the control of the Transmission Planner" could be that the physics of a significant percentage of induction motors in low inertia air-conditioning loads would tend to pull out for certain N-1 events. This may in significant part occur because such motors may have nearly no dynamic stability margin to withstand such N-1 events as close-in 3-phase faults with normal clearing during peak load conditions. So until the Transmission Planner has been able to institute changes in the industry to address the basic physics of such loads, this Requirement 2.7.3 would permit the use of such "Non-Consequential" Load Loss and curtailment of Firm Transmission Service. In this example, it may take longer than a seven year time period to fix the problem. On the other hand, some examples of Non-Consequential Load Loss could perhaps be mitigated in a shorter timeframe. Provided that an entity has a good technical justification and defined margin for "Non-Consequential" Load Loss or curtailment of Firm Transfers, then it may be acceptable. Requirement R2.7.3 seems to move in this direction. Section R4.3.1, bullet point 3 requires the stability analyses to include the impact of subsequent "[t]ripping of Transmission lines and transformers where transient swings cause Protection System operation based on generic or actual relay models". As written, this bullet could be interpreted as requiring the inclusion of these relay models in stability data bases. We do not have generic or actual relay models in our dynamics data bases for tripping line faults on lines and transformers represented. We represent actual relay response and tripping times of relays, communications, and breakers to faults in tripping transmission lines and transformers. Requiring the inclusion of generic or actual relay models for all relays that can trip lines and transformers would add a large burden to the development and maintenance of accurate dynamics model files that would add little or no benefit. Please change this bullet to read: "Tripping of Transmission lines and transformers where transient swings cause Protection System operation based on known Protection System response".

Yes

Yes, this clarification helps. The drafting team could also define "year five".

No

It's difficult to tell whether Requirement R1 is intended to require only one base case or whether it was intended to require creation of separate models for each possible N-0 condition ("normal system condition") under a variety of stressing scenarios. The inserted language does not seem to provide additional clarity. Suggested language may be "This establishes the initial 'Normal System' condition corresponding to category P0 in Table 1." Also, in Requirement R1.1.5, how are the Firm Transmission Service commitments supposed to be modeled in Power Flow Cases? Are they just to be modeled as loads, generation, and control area interchanges? Suppose a POR or POD is not at a generator or load bus. What selection of generation and load would represent the projected system conditions for this Firm Transmission Service commitment?

No

R 2.1.5: The issue in this Requirement is studied in the Operations next-day; next-week; next-month studies required under the TOP Standards; and are also covered by processes such as the Operational Transfer Capability Policy Committee (OTCPC) seasonal study process within the WECC. It would be quite onerous to run a complete power flow simulation on separate base cases for each transformer (or other equipment with long lead time) initially out of service. The revision in language from "Planning Assessment" to "studies" does not clarify that a power flow simulation is not necessarily required for each situation. A valid assessment could include other methods such as using sound technical reasoning to relate the initial out-of-service condition to a condition that has already been studied. This condition may have taken place in previous operational studies. The language in the standard could be improved to make this clarification – perhaps reference R2.6. Additionally, this Requirement still needs further clarification. Currently the scope of equipment applicable to the requirement could be misinterpreted as larger than that contemplated by FERC. The standard as written seems to say that the responsible entity needs to study the spare equipment strategy for all "major transmission equipment" with long lead times. In the directive to include this requirement, FERC used the term "critical facilities". In the NOPR to Order No. 693 they stated, "Critical facilities are those facilities that impact IROLs and deliverability of generation to firm load" (P1081). In Order No. 693 FERC also said, "if an entity's spare equipment strategy for the permanent loss of a transformer is to use a 'hot spare' or to relocate a transformer from another location in a timely manner, the outage of the transformer need not be assessed under peak system conditions" (P1725). Finally, the drafting team could clarify if this requirement applies to radial branches (such as generator step-ups or step-down to load). Such branches may be construed as "critical facilities" but the impediment to deliverability of generation to firm load is consequential to the initial outage.

Yes

In Requirement 2.1.4, "Sensitivity Analysis". How much change does it take in any of the modeling assumptions (load, generation, voltage support, topology, etc.) to significantly stress the system within a range of credible condition? As this Requirement relates to R2.7, Would it be necessary to have Corrective Action Plan(s) if needed to meet all the Sensitivity Cases? How many Sensitivities before must have Corrective Action Plan? Also – why is it essential to use the qualifier "annual" for "current studies" in Part 2.1? Can a study be considered current if it is conducted less frequently than once per year? Note that Parts 2.3, 2.4 and 2.5 do not use the "annual" qualifier, nor does Requirement R2. Recommend deleting this apparently non-essential qualifier in both R2.1 and R2.2. We are unable to appreciate why the wording in Part 2.3 is not consistent with that in Part 2.1, 2.2, 2.4 or 2.5. Note that the semantics of the wording "... (steady state / stability) analysis shall be assessed annually..." can be interpreted to be much different than the semantics of the Part 2.3 wording "The short circuit analysis.... shall be conducted annually ...". The former requires the analysis to be *assessed* annually but 2.3 requires the analysis to be *conducted* annually without explicitly requiring it be assessed -- is the usage of "conducted" instead of 'assessed' consistent with the intent? In Part 2.6.2, the intent is awkwardly conveyed within the phrase "...the System represented in the study shall not include any material changes unless...". In the context of a *past* study, how can the System represented possibly include any material changes (that would have presumably occurred after the study)? Suggest modifying Part 2.6.2 to read "For steady state, short circuit or Stability analysis: no material changes have occurred in the System represented in the study or, if material changes have occurred, a technical rationale shall be provided to explain why they do not significantly impact the study results."

Yes

Yes
The drafting team could provide guidance on what is "material". In Part 2.5, should "annually" be inserted after "shall be assessed" to make it consistent with Parts 2.1, 2.2, 2.3 and 2.4? If the omission is intentional in 2.5, please explain why.
Yes
Following is a suggested re-ordering of header notes to replace of the three categories concept – same information: a. Applicable Facility Ratings shall not be exceeded. The System shall remain stable. Cascading and uncontrolled islanding shall not occur. b. Planning event P0 is applicable to steady state only. c. Consequential Load Loss as well as generation loss is acceptable as a consequence of any event except P0. d. The response of voltage sensitive Load including Load that is disconnected from the System by end-user equipment as a consequence of any event shall not be used to meet steady state performance requirements. e. System steady state voltages and post-Contingency voltage deviations shall be within acceptable limits established by the Planning Coordinator and Transmission Planner. f. Transient voltage response shall be within acceptable limits as established by the Planning Coordinator and Transmission Planner. g. Planned System adjustments such as Transmission configuration changes and re-dispatch of generation are allowed if such adjustments are executable within the time duration applicable to the Facility Ratings. h. Simulate the removal of all elements that Protection Systems and other controls are expected to automatically disconnect for each event. Simulate Normal Clearing unless otherwise specified.
In footnotes 9 and 12, two critical issues are being addressed in large part via these "clarifying" footnotes. These are curtailment of "Firm Transmission Service" (which seems primarily to be a contract/scheduling issue) and the loss of "Non-Consequential Load." Perhaps these issues should receive more attention in the actual requirements. In P5 the term "Protection System" was removed and replaced with "relay". How are protection system elements other than relays accounted for? In studying a multiple contingency event with a communication system or control circuitry failure would it be necessary demonstrate P1 performance levels? These details could become critical as industry deals with issues such as FERC's interpretation of TPL-002-0 Requirement R1.3.10 (RM10-6-000). In Table 1 – Extreme Events – Stability – Items 2a-2d, change "Protection System failure" to "relay failure" to be consistent with changes in P5. Table 1, P5 currently requires the study of "[d]elayed Fault Clearing due to the failure of a relay ¹³ protecting the Faulted element to operate as designed". As written, this requirement does not recognize the use of redundant relays for primary protection. In some cases side by side relays are used to provide primary fault tripping if one relay fails to operate. Per the requirement as stated, the redundant relay would provide no value in meeting this requirement. Please revise to acknowledge backup relays: "Single failure of a protection relay ¹³ protecting the Faulted element to operate as designed, resulting in backup relay actions or Delayed Fault Clearing, for one of the following". Footnote 13 – Delete "voltage (#27, #59)" since the under/over voltage relays are not called upon to provide the primary protection for fault clearing on Transmission elements. Suggest modifying Event P4 description to be more consistent with Event P5 description by including Delayed Fault Clearing in the description in lieu of "Loss of multiple elements". Suggested Event P4 description is: "Delayed Fault Clearing caused by a stuck non Bus-tie Breaker attempting to clear a fault on one of the following:" In Table 1, P2 and P3, the last column "Non-Consequential Load Loss Allowed" where the requirement "No12" appears, and in footnote 12, the standard as proposed does not allow for any Non-Consequential Load Loss. When the Non-Consequential Load Loss (footnote b) issue is clarified in Project 2010-11 this requirement may be changed. Therefore, if this proposed Standard is enforced before Project 2010-11 is completed, entities will be required to meet

this No Non-Consequential Load Loss requirement without the exception allowed in the existing TPL-002-0, footnote "b". This will require immediate redesigns to meet this particular requirement. The unintended consequence could be that operators of local systems that are currently networked may opt to begin operation as radial systems, and future designs for local systems may be radial, at any voltage level. We suggest that the proposed footnote 12 include a provision to default to the existing footnote "b" in TPL-002-0 until Project 2010-11 is decided. Please revise footnote 12 to read, "Note: Non-Consequential Load Loss is being decided in Project 2010-11. When that project is finalized, the resolution will be copied here. In the interim, planned or controlled interruption of electric supply to radial customers or some local Network customers, connected to or supplied by the Faulted element or by the affected area, may occur in certain areas without impacting the overall reliability of the interconnected transmission systems. To prepare for the next contingency, system adjustments are permitted, including curtailments of contracted Firm (non-recallable reserved) electric power Transfers." Timing of this project and project 2010-11 is critical. It would be very difficult to vote to approve the proposed TPL-001-2 prior to knowing the outcome of Project 2010-11 (footnote b issue).

Yes

Yes

Individual

Darryl Curtis

Oncor Electric Delivery

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Group

IRC Standards Review Committee

Ben Li
Yes
Yes
Yes
Yes
No
The primary concern involves wording under 2.1.4 and 2.4.3 that sensitivities are required by varying one or more conditions. Subsequently, in requirement 2.7.2 corrective action plans need to be developed to resolve performance deficiencies “only” if identified in multiple conditions or require a rationalization why no corrective action plan is necessary. Multiple conditions sensitivities under 2.1.4 and 2.4.3 are necessary to satisfy requirement 2.7.2. Requirement 2.7.2 adds ambiguity and should be removed. Alternatively, Requirement 2.7.2 could be revised as follows: 2.7.2. Corrective Action Plans are not required for performance deficiencies identified in a sensitivity analysis. If a Planning Coordinator includes Corrective Action Plans to resolve performance deficiencies identified in multiple sensitivity analysis, the Planning Coordinator shall provide documentation to support those Plans.
Yes
Yes
However, the requirement infers that a subjective judgment from a compliance auditor will be required.
Yes
Yes
No
(AESO is not a party to the following comments since its VSLs are set by the Alberta regulatory authority.) Requirement 8 is an administrative burden to TPs and PCs that adds no value to reliability. PCs should be including TPs, neighboring PCs and interested parties in its planning processes when developing the Planning Assessments. Therefore, the inclusion of a set of VSLs for Requirement 8 is unnecessary. Should the SDT decide to leave the VSLs for Requirement 8, Requirement 8.1 should be revised to reflect that comments only to the final Assessment (not drafts developed during a process) need a response as follows: 8.1 If a recipient of the planning assessment final results provides documented comments on the results, the respective Planning Coordinator or Transmission Planner shall provide a documented response to such recipient within 90 calendar days of receipt of those comments. For a Planning Coordinator (PC) who distributes the Planning Assessment to many different entities (to adjacent PCs, TPs, and other functional entities), a concern regarding the Requirement R8 VSL is that it is overly restrictive to apply a violation for failing to distribute the results of its Planning Assessment to only one PC, TP, or functional entity (and to apply a High VSL for failing to distribute to more than one entity), particularly since an entity’s contact is subject to change over time, and since Measure M8 allows for

publicly posting the results of its Planning Assessment to its website. Should the SDT decide to include the VSLs for Requirement 8, we would recommend revising to use a percentage approach rather than applying a violation to a Planning Coordinator who fails to provide the results of its Planning Assessment to one PC, TP, or other functional entity (or applying a High VSL for failing to distribute to more than one entity.) Recommend applying a similar percentage approach to the VSLs drafted by NERC Staff for Project #2007-23 VSLs (e.g., for FAC-013-1) to be considered for the TPL-001-2 R8 VSLs. For example, • Lower VSL: The responsible entity failed to provide the Planning Assessment final results to 5% or less of the required entities. • Moderate VSL: The responsible entity failed to provide the Planning Assessment final results to more than 5% up to (and including) 10% of the required entities. • High VSL: The responsible entity failed to provide the Planning Assessment final results to more than 10% up to (and including) 15% of the required entities. • Severe VSL: The responsible entity failed to provide the Planning Assessment final results to more than 15% of the required entities OR [the existing language for the Severe VSL]. Explanation: The VSLs were modified for consistency with other standards and VSLs. Reference: Link to VSLs drafted by NERC Staff for Project #2007-23 VSLs (e.g., for FAC-013-1): http://www.nerc.com/docs/standards/sar/Staff_Proposed_VSLs_2010July27.pdf

Individual

Jeffrey McKinney

New York State Electric & Gas Corp

Yes

No

The added clarification to the definition of Year One serves to remove most ambiguity with respect to Year One. However, the revision has added further ambiguity to the terms "year two" and "year five" which are not defined. For the Planning Assessment started in a given calendar year, the first year that is studied must include the forecasted peak Load period for one of the following two calendar years. An additional Near-term study must be performed that is four calendar years beyond the first year that is studied. We recommend defining Year Five as the twelve month period 4 to 6 calendar years from the date of the Planning Assessment. We further recommend revising R2.1.1 as follows: "System peak Load for Year One and for Year Five." Alternatively, the definition of Year One could be eliminated and described within the text of the requirements.

No

For R1 Ambiguity regarding base case assumptions, in combination with lack of clarity and clear direction of purpose regarding the sensitivity analysis, undermines the objectives of the standard; R1.1 Part 1.1.2. With respect to known outages, there needs to be greater flexibility in the standards (e.g. more tolerance to non-consequential load shedding or limitations to the contingencies that need to be considered (e.g. P0, P1, & P2)). Regional allowances for load shedding under this condition should be approved. Duration of known outages should be increased from six months to one year; R1.1 Part 1.1.6 Delete "required for Load". Resources may also be used for export to other areas, not just internal load.

No

We completely agree with the revision to R2.1, but this revision must be carried through to other sections (R2.2, 2.2.1) and R2.2 language should be consistent with 2.1 for example - use "current or qualified past studies" instead of "the following annual current study". Revisions made to Requirement R2.1.5 have made it worse than as originally drafted. This would require the PC & TP to study, or in other words perform technical analysis of, the impact and probability of the possible unavailability of any piece of equipment with a lead time of one year or more. Such an evaluation of spare equipment strategies would require

significant additional resources and data, but provide no benefit to system reliability, as it is redundant to the existing N-1-1 contingency requirement (P6).
No
These sensitivities need to be considered if not already included in the base case assumptions.
No
We have not determined a need to model dynamic loads, and therefore have not benchmarked any such models. We recommend that prior to this requirement being in place, a modeling standard should exist that is specific to dynamic loads.
Yes
No
Header note (i) in the first Table 1 could imply that voltage-varying load shall not be used to meet steady state performance requirements. NYISO steady state load models include voltage-varying loads. This note should be revised to only reference loads which are disconnected due to voltage.
In Table 1 – Stability, Make language similar to wording in P5. Protection System should be removed and replaced with the words relay failure. This change should be made for 2a through 2d: 2. Local or wide area events affecting the Transmission System such as: a. 3Ø fault on generator with stuck breaker10 or a relay failure resulting in Delayed Fault Clearing. b. 3Ø fault on Transmission circuit with stuck breaker10 or a relay failure resulting in Delayed Fault Clearing. c. 3Ø fault on transformer with stuck breaker10 or a relay failure resulting in Delayed Fault Clearing. d. 3Ø fault on bus section with stuck breaker10 or a relay failure resulting in Delayed Fault Clearing. In Note 11 change wording as shown below to include the words “a total of”: Excludes circuits that share a common structure (Planning event P7, Extreme event steady state 2a) or common Right-of-Way (Extreme event, steady state 2b) for a total of 1 mile or less
Yes
No
Requirement 8 is an administrative burden to TPs and PCs that adds no value to reliability. PCs should be including TPs, neighboring PCs and interested parties in its planning processes when developing the Planning Assessments. Therefore, the inclusion of a set of VSLs for Requirement 8 is unnecessary. Furthermore, the requirement lacks a specified time frame to receive comments, thereby implying that TPs and PCs would be required to reply to comments forever following the finalization of a Planning Assessment. The NYISO proposes a limit of six months. Should the SDT decide to leave the VSLs for Requirement 8, Requirement 8.1 should be revised to reflect that comments only to the final Assessment (not drafts developed during a process) need a response as follows: If a recipient of the planning assessment final results provides documented comments on the results within 180 calendar days of the issuance of those final results, the respective Planning Coordinator or Transmission Planner shall provide a documented response to such recipient within 90 calendar days of receipt of those comments. We also have other comments not addressed by this Comment Form as follows – Section 2.7, Section 3.3, Section 4.3, and overall: Section 2.7 requires that Corrective Action Plans are included in each Planning Assessment and states “Such actions may include...” followed by a list of actions. Restricting allowable actions, and excluding runback/tripping of HVDC would have a direct impact on multiple existing facilities in New York and would adversely impact the reliability planning of the NYCA. Runback/tripping of HVDC must be added to the list. Section 3.3 - We feel that the last sentence of 3.3.1 should be removed. This is handled by PRC-023. Line ratings are

addressed by PRC-023. PRC-023 requires coordination with the Reliability Coordinator. Remove "Tripping of Transmission elements where relay loadability limits are exceeded." Section 4.3 - High speed reclosing is not defined. Overall – We have previously made comments which have not been addressed in the current version of the proposed standard. Support for the standard can at most be limited without addressing comments. We have previously commented on sensitivity analysis and guidance for base case assumptions. Also, extreme event analysis should not be mandated in this standard as no corrective action is required. The requirements for sensitivity analysis already address issues going beyond what is expected to meet reliability requirements. Requiring extreme event analysis is requiring two layers of event analysis beyond what is required, and there is no requirement for corrective action if anything is identified. The standard is referring to requirements for sensitivity and other issues without a reference to base assumptions. The standard must describe base assumptions. To define a sensitivity condition, NERC must define base assumptions.

Individual

Bart White

Progress Energy

Yes

Yes

Yes

No

While PE does not disagree with the basic premise of 2.1, PE disagrees with the language to the extent that 2.1 is qualified by language in 2.6 and 2.6.2. The issue of managing modeling of case data is already adequately handled in MOD Standards. Furthermore, PE does not feel that the term "material" can be defined with any mutually agreed-upon boundaries, and could be construed to require any and all Transmission Planners and/or Planning Authorities to make multiple revisions of base cases each year. PE therefore appeals to the SDT to remove the language referring to R2 Part 2.6.2 and furthermore appeals for the deletion of R2.6.2. Furthermore, PE appeals to the SDT to modify R2.6.1 to say "For steady state, short circuit, or Stability analysis: the study shall be five calendar years old or less, unless a technical rationale can be provided to demonstrate the validity of the results of any studies older than five years or any studies using cases containing major modeling differences from other submitted studies."

No

PE does not have concerns in general with either 2.1.4 or 2.4.3. PE does, however, disagree with the wording at the end of the main paragraph of 2.4.3. Whether or not analysis qualifies as sensitivity analysis should not be predicated upon the end results; rather, it should be based upon major case modeling differences. PE therefore recommends that the phrase "...that demonstrate a measurable change in performance" be removed so that the last sentence in the main paragraph read "...by a sufficient amount to stress the System within a range of credible conditions."

Yes

No

PE agrees in general with the changes made to R2.5. PE disagrees, however, with the language stipulating that current and past studies be qualified by the language in R2.6 Part

2.6.2 (see notes for Question 3.1 regarding recommending changes with regard to R2.6.2).
Yes
PE assumes the term "header notes" is referring to the "Planning Performance Events" at the top of Table 1. If this is the case, PE has no concerns with the present language.
PE remains concerned with the present draft of TPL-001-2 regarding the presence or absence of footnotes in particular events. PE believes that, for all events in Table 1 except P0, any "No" designation in the "Non-Consequential Load Loss allowed" column should have Footnote 12 appended to it. Several events do append footnote 12 to a "No" answer, but several do not. PE does not see why certain events should be denied the use of Footnote 12 as long as Footnote 12 is worded in a manner such that the BES will not be adversely affected. PE has additional concerns regarding two Footnotes. Footnote 9 contains language regarding firm transmission service that is very similar to language presently under review in NERC Project 2010-11. PE feels that Footnote 9 should have had a statement at the end similar to that of Footnote 12, such as "Note: Firm Transmission Service is being decided in Project 2010-11. When that project is finalized, the resolution will be copied into Footnote 9." Without such a statement, PE cannot understand why the Firm Transmission language in footnote (b) under Project 2010-11 is being reviewed, while it is apparently no longer being reviewed in Project 2006-02. Footnote 12 contains the following language as a place holder: "Note: Non-Consequential Load Loss is being decided in Project 2010-11. When that project is finalized, the resolution will be copied here." PE has filed substantial comments on the footnote (b) issue in previous drafts, pointing out that disallowance of curtailment of non-consequential load is a local load issue and not a BES concern. PE therefore cannot make any positive determination as to whether the draft Standard, TPL-001-2, and its associated Table 1, will be a viable Standard until the language in Footnote 12 is resolved via Project 2010-11. Given the potential for unresolved and confusing issues regarding the parallel development of Project 2006-02 and 2010-11, PE encourages NERC to resolve all issues within Project 2010-11 before taking the draft Standard TPL-001-2 to ballot in Project 2006-02.
Yes
Yes
Group
Bonneville Power Administration
Denise Koehn
Yes
Yes
No
Please clarify R1.1.2 to state "Known outage(s) of generation or Transmission Facility(ies) during the Planning Horizon with a duration of of at least six months."
Yes
Yes
Yes

Yes
It should be noted that if there is more generation proposed in an area than there load and export capability, all proposed material generation additions would not be represented. Determining what future generation additions to include in the Long-Term Transmission Planning Horizon may be based on a non-technical rationale rather than a technical rationale.
Yes
Table 1, P5 currently requires the study of “[d]elayed Fault Clearing due to the failure of a relay ¹³ protecting the Faulted element to operate as designed”. As written, this requirement does not recognize the use of redundant relays for primary protection. In some cases side by side relays are used to provide primary fault tripping if one relay fails to operate. Per the requirement as stated, the redundant relay would provide no value in meeting this requirement. Please revise to acknowledge backup relays: “Single failure of a protection relay ¹³ protecting the Faulted element to operate as designed, resulting in backup relay actions or Delayed Fault Clearing, for one of the following”. In Table 1, P2 and P3, the last column “Non-Consequential Load Loss Allowed” where the requirement “No ¹² ” appears, and in footnote 12, the standard as proposed does not allow for any Non-Consequential Load Loss. When the Non-Consequential Load Loss (footnote b) issue is clarified in Project 2010-11 this requirement may be changed. Therefore the proposed footnote 12 should include a provision to default to the existing footnote “b” in TPL-002-0 until Project 2010-11 is decided. Please revise footnote 12 to read, “Note: Non-Consequential Load Loss is being decided in Project 2010-11. When that project is finalized, the resolution will be copied here. In the interim, planned or controlled interruption of electric supply to radial customers or some local Network customers, connected to or supplied by the Faulted element or by the affected area, may occur in certain areas without impacting the overall reliability of the interconnected transmission systems. To prepare for the next contingency, system adjustments are permitted, including curtailments of contracted Firm (non-recallable reserved) electric power Transfers.”
Individual
L Zotter, M Morais, J Billo, J Conto, S Jue, JC Culberson, J Teixeira, G Gnanam, S Myers
ERCOT ISO
Yes
Yes
Yes
No
Previous Comment unaddressed: Requirement 2.1.5: Including the spare equipment strategy will be difficult for a PC that doesn’t own or manage the transmission equipment or the strategies. This requirement should only be applicable to TP. Furthermore, R7 should be deleted and the responsibilities of each entity should be explicitly stated within the specific requirements.
No
The stress test requirements should be deleted. The purpose of this proposed Standard is to establish planning performance standards that support reliable operation. This is

achieved by imposing performance requirements relative to specific conditions and contingencies. Compliance with the performance metrics within these boundaries is presumably indicative of a reliable system. It is unclear what value is added by stress testing the system in accordance with undefined, vague parameters, as required by Requirements 2.1.4 and 2.4.3. The criteria in the relevant requirements that govern the stress testing are defined by the following ambiguous phrase: 1) "by a sufficient amount"; 2) "range of credible conditions"; and 3) "measurable change of performance". Application of these criteria introduces uncertainty for both the regulated community and the relevant compliance enforcement authorities, which, in turn, creates audit risks for regulated entities. Furthermore, there is no reliability value because the stress test requirements do not establish objective criteria and do not prescribe any actions based on the stress test results. Reliability Standards should set specific obligations that are readily discernible and achievable on a consistent basis. The existing Standard does this by setting specific performance obligations relative to specific conditions and contingencies. Conversely, the stress test requirements introduce ambiguity and uncertainty with no reliability benefit; the only apparent effect is unnecessary audit liability risk for regulated entities. Accordingly, ERCOT believes that these requirements should be deleted.

No

ERCOT ISO suggests adding "best available" as a descriptor to load models. Distribution Providers (DPs)/Load Serving Entities (LSEs) are the appropriate NERC functional entities to provide dynamic load data. Accordingly, Planning Coordinators (PCs) and Transmission Planners (TPs) must rely on those entities for that data. Despite reliance on DPs/LSEs for this data, the Standard proposes to impose an obligation on PCs and TPs to include a load model representative of "expected" dynamic behavior. Simply put, PCs and TPs do not have this information and should not be subject to compliance liability risk for an issue that is beyond their control. This change will still accomplish the goal of reflecting dynamic data in the relevant models, while mitigating PC/TP compliance risk by basing their compliance on information that is within their control – i.e. the "best available" information. Based on this change, the language should read - "System peak Load levels shall include best available Load models which represent the expected dynamic behavior of Loads that could impact the study area, considering the behavior of induction motor Loads". This language is also a more accurate reflection of the Consideration of Comments by the Standard Drafting Team after the March 2010 comment period. To address this issue in the most appropriate manner, the Standard should be revised to establish an appropriate process for collection, reporting and use of dynamic data based on assigning obligations to the appropriate functional entities. In essence, DPs/LSEs should be required to collect the data and report it to TPs. Because TP models are the basis for PC models, the dynamic data will be included in PC models as part of the process. However, DPs and TPs should still only be required to use the "best available" data. Continued use of this language will mitigate the liability risk associated with a requirement related to data that is within the control of a third party. Even under a construct where DPs/LSEs are required to collect and report dynamic data, there is no guarantee they will do so and PCs/TPs should not be held accountable in those circumstances. Accordingly, PC/TP compliance risk will be mitigated by use of a "best available" standard.

Yes

Yes

Yes

Yes
ADDITIONAL COMMENTS: Short circuit analysis (R2.3 and R2.8) should only be applicable to TPs. Fault duty issues are typically local in nature and it would be an overlap for PCs to perform this same analysis done by the local Transmission Planner. Furthermore, R7 should be deleted and the responsibilities of each entity should be explicitly stated within the specific requirements. Previous Comment Unaddressed : Requirement 2.6.2: Reads as if a change is being made to an existing study. It is confusing. Possibly restate: "2.6.2 For steady state, short circuit, or stability analysis: previous studies can be used only if a material change to the system has not occurred or if a change that did occur does not impact the study area." R4.1.2 – Planning Coordinators do not perform protection coordination nor do they have access to the relay settings information required to do this analysis. This requirement should apply to Transmission Planners only because they perform system protection. The substantive scope of the standard is relative to Long-Term Transmission Planning Horizon and Near-Term Transmission Planning Horizon. The Purpose section is described in terms of the “planning horizon” generally. It may be worthwhile aligning the two to mitigate the potential for any confusion. ERCOT proposes the following revisions to the Purpose section: 3.Purpose: Establish Transmission system planning performance requirements within the relevant planning horizon (i.e. Long-Term or Near-Term) to develop a Bulk Electric System (BES) that will operate reliably over a broad spectrum of System conditions and following a wide range of probable Contingencies. In addition, the “Time Horizon” for the Standard is “Long-Term Planning”. Obviously, this necessarily encompasses both Long-Term and Near-Term Transmission Planning Horizons. However, the scope of the Long-Term Planning time horizon is not readily apparent. ERCOT recommends appropriate revisions that clearly define the applicable time horizons.
Individual
Gary Trent
Tucson Electric Power Company
Yes
We commend the SDT for its work to continue the improvement on the proposed TPL-001-1. We have included additional comments here since we were not able to find a place to include comments on the following: Requirement R4; Requirement, Parts 2.1.5, 2.3, and 2.8; Requirement 3, Part 3.3.2; and Requirement 4, Parts 4.3.1 and Part 4.3.2 Requirement 2, Part 2.1.5: The spare equipment strategy does not improve reliability performance. If an outage of a long lead time piece of equipment occurs, the system should still be able to operate in a reliable manner that meets the performance measures of Categories P3 and P6. If an entity cannot meet its performance requirements under this standard, a capital project is indicated. Spare equipment being available would not mitigate this need it only increases expenses until the item is needed. Requirement 2, Parts 2.3 and 2.8: Short circuit fault duty is a localized phenomena that is mainly impacted by the addition of new generation or transmission facilities. Due to proprietary concerns of generation and transmission interconnection requests, short circuit studies are performed in forums outside the annual Planning Assessment. Normally, these studies will be conducted before the projects can be included in regional base cases. As such, short circuit analysis should not be included in this Standard since it would provided limited benefit. Requirement 3, Part 3.3.2 and Requirement 4, Part 4.3.2 Steady state response of dynamic control devices should also be included in the Part 3.3.2. and the list of possible devices included should be removed from Part 3.3.2 and 4.3.2. Section R4.3.1, bullet point 3 requires the stability analyses to include the impact of subsequent “[t]ripping of Transmission lines and transformers where transient swings cause Protection System operation based on generic or actual relay models”. As written, this bullet could be interpreted as requiring the inclusion of these relay models in stability data bases. We do not have generic or actual

relay models in our dynamics data bases for tripping line faults on lines and transformers represented. We represent actual relay response and tripping times of relays, communications, and breakers to faults in tripping transmission lines and transformers. Requiring the inclusion of generic or actual relay models for all relays that can trip lines and transformers would add a large burden to the development and maintenance of accurate dynamics model files that would add little or no benefit. Please change this bullet to read: "Tripping of Transmission lines and transformers where transient swings cause Protection System operation based on known Protection System response".
No
A seasonal reference should be included in the example. Alternative language beginning with the second sentence: For the Planning Assessment started in a given calendar year, Year One must include the forecasted peak load period for the forecasted peak load season that is between 12 and 24 months into the future from the current season. For example, if a Planning Assessment was started in 2011 prior to the forecasted peak season, then Year One must include the forecasted peak load for 2012. If the Planning Assessment was started in 2011 during or after the forecasted peak season, then Year One must include the forecasted peak load for 2013.
No
Proposed changes 1.1.1 Existing Facilities that will not be changed before the study year 1.1.3 New planned Facilities and planned changes to existing facilities
Yes
No
TEP agrees with removing the phrase "not already included in the studies." However, TEP does not understand the purpose of sensitivity studies. TEP is concerned that imposing additional sensitivity studies could lead to requirements that exceed the proposed standards. TEP recommends removing sensitivity analysis from the standard.
Yes
No
If a material change (generator addition/retirement, new generator models based on unit testing, or transmission line or non-distribution transformer addition) is not planned for the longer-term planning horizon, do the longer-term stability studies need to be performed? TEP's agreement/disagreement with Part 2.4.1 is dependent on the response to this question. If the answer is the studies do not need to be performed, then TEP supports these changes.
Yes
Table 1, P5 currently requires the study of "[d]elayed Fault Clearing due to the failure of a relay¹³ protecting the Faulted element to operate as designed". As written, this requirement does not recognize the use of redundant relays for primary protection. In some cases side by side relays are used to provide primary fault tripping if one relay fails to operate. Per the requirement as stated, the redundant relay would provide no value in meeting this requirement. Please revise to acknowledge backup relays: "Single failure of a protection relay¹³ protecting the Faulted element to operate as designed, resulting in backup relay actions or Delayed Fault Clearing, for one of the following". In Table 1, P2 and P3, the last column "Non-Consequential Load Loss Allowed" where the requirement "No¹²" appears, and in footnote 12, the standard as proposed does not allow for any Non-Consequential Load Loss. When the Non-Consequential Load Loss (footnote b) issue is

clarified in Project 2010-11 this requirement may be changed. Therefore, if this proposed Standard is enforced before Project 2010-11 is completed, entities will be required to meet this No Non-Consequential Load Loss requirement without the exception allowed in the existing TPL-002-0, footnote "b". This will require immediate redesigns to meet this particular requirement. The unintended consequence could be that operators of local systems that are currently networked may opt to begin operation as radial systems, and future designs for local systems may be radial, at any voltage level. We suggest that the proposed footnote 12 include a provision to default to the existing footnote "b" in TPL-002-0 until Project 2010-11 is decided. Please revise footnote 12 to read, "Note: Non-Consequential Load Loss is being decided in Project 2010-11. When that project is finalized, the resolution will be copied here. In the interim, planned or controlled interruption of electric supply to radial customers or some local Network customers, connected to or supplied by the Faulted element or by the affected area, may occur in certain areas without impacting the overall reliability of the interconnected transmission systems. To prepare for the next contingency, system adjustments are permitted, including curtailments of contracted Firm (non-recallable reserved) electric power Transfers." Timing of this project and project 2010-11 is critical. It would be very difficult to vote to approve the proposed TPL-001-2 prior to knowing the outcome of Project 2010-11 (footnote b issue). Non-Consequential Load Loss and curtailment of Firm Transmission Service should be allowed for loss of EHV BES elements for Category P4 and P5 events.

Yes

Yes

Individual

Gregory Campoli

New York Independent System Operator

Yes

No

The added clarification to the definition of Year One serves to remove most ambiguity with respect to Year One. However, the revision has added further ambiguity to the terms "year two" and "year five" which are not defined. NYISO recommends defining Year Five as the twelve month period 4 to 6 calendar years from the date of the Planning Assessment. NYISO further recommends revising R2.1.1 as follows: "System peak Load for Year One and for Year Five." Alternatively, the definition of Year One could be eliminated and described within the text of the requirements.

Yes

No

NYISO completely agrees with the revision to R2.1, but this revision must be carried through to other sections (R2.2, 2.2.1). Revisions made to Requirement R2.1.5 have made it worse than as originally drafted. This would require the PC & TP to study, or in other words perform technical analysis of, the impact and probability of the possible unavailability of any piece of equipment with a lead time of one year or more. Such an evaluation of spare equipment strategies would require significant additional resources and data, but provide no benefit to system reliability, as it is redundant to the existing N-1-1 contingency requirement (P6). R2.7 requires that Corrective Action Plans are included in each Planning Assessment and states "Such actions may include..." followed by a list of actions. Restricting

allowable actions, and excluding runback/tripping of HVDC would have a direct impact on multiple existing facilities in New York and would adversely impact the reliability planning of the NYCA. Runback/tripping of HVDC must be added to the list.
No
Our concern involves wording under 2.1.4 and 2.4.3 that sensitivities are required varying one or more conditions. Subsequently, in requirement 2.7.2 corrective action plans need to be developed to resolve performance deficiencies "only" if identified in multiple conditions or require a rationalization why no corrective action plan is necessary. Multiple conditions sensitivities under 2.1.4 and 2.4.3 are necessary to satisfy requirement 2.7.2. Requirement 2.7.2 adds ambiguity and should be removed. Requirement 2.7.2 should be revised as follows: 2.7.2. Corrective Action Plans are not required for performance deficiencies identified in a sensitivity analysis.
No
The NYISO, along with many other systems, has not determined a need to model dynamic loads, and therefore has not benchmarked any such models. The NYISO recommends that prior to this requirement being in place, a modeling standard should exist that is specific to dynamic loads.
Yes
No
Header note (i) in the first Table 1 could imply that voltage-varying load shall not be used to meet steady state performance requirements. NYISO steady state load models include voltage-varying loads. This note should be revised to only reference loads which are disconnected due to voltage.
There are two tables labeled "Table 1". The extreme events table should be renamed "Table 2".
Yes
No
Requirement 8 is an administrative burden to TPs and PCs that adds no value to reliability. PCs should be including TPs, neighboring PCs and interested parties in its planning processes when developing the Planning Assessments. Therefore, the inclusion of a set of VSLs for Requirement 8 is unnecessary. Furthermore, the requirement lacks a specified time frame to receive comments, thereby implying that TPs and PCs would be required to reply to comments forever following the finalization of a Planning Assessment. The NYISO proposes a limit of six months. Should the SDT decide to leave the VSLs for Requirement 8, Requirement 8.1 should be revised to reflect that comments only to the final Assessment (not drafts developed during a process) need a response as follows: If a recipient of the planning assessment final results provides documented comments on the results within 180 calendar days of the issuance of those final results, the respective Planning Coordinator or Transmission Planner shall provide a documented response to such recipient within 90 calendar days of receipt of those comments.
Group
PacifiCorp
Sandra Shaffer
Yes
Yes

Yes
Yes
Yes
Yes
Yes
Yes
Under Category P2 (Single Contingency) and Normal System Conditions, the performance table indicates that, for both HV and EHV, interruption of firm transmission service and non-consequential load loss are not allowed following the opening of a line section without a fault. This section of the performance table should distinguish between EHV and HV – performance requirements following the opening of a line section without a fault should be the same as those for a bus section fault. As with the bus section fault, interruption of firm transmission service and non-consequential load loss should be allowed for HV.
Yes
No
The language for Requirement R8 is ambiguous with regard to which adjacent entities must request in writing the results of the Planning Assessment. The language should be clarified to read: "Upon request made in writing, each Planning Coordinator and Transmission Planner shall distribute its Planning Assessment results to adjacent Planning Coordinators, adjacent Transmission Planners, and any other functional entity that has a reliability related need." The Requirement R8 VSL language should also be revised accordingly.
Individual
Claudiu Cadar
GDS Associates, Inc.
No
We disagree with the Implementation Plan and we suggest changes as follows: - The title should read "Implementation Plan for TPL-001-2" - With regards to the Prerequisite Approvals, NERC project #2010-11 still in progress (Table 1, Footnote 'b') must be implemented before this current TPL-001-2 standard gets implemented. However, while the 2010-11 NERC project does not define any of the new terms such as consequential / non-consequential load, the footnote 'b' cannot be just copied into the new standard (see TPL-001-2 standard Table 1, note 12). Note 'b' may further change to reflect the verbiage in the TPL-001-2 standard. - Not sure what is the intent of the last paragraph. While the proposed changes to Table 1, footnote 'b' are quite precise, are we still open a door to those entities that will continue to trip Non-Consequential Load and curtail Firm Transmission Service? If no penalties for such practices while the proposed standard allows a sufficient time frame to correct any deficiencies, then what is the point to all the effort behind the development of a new TPL standard?
No
The definition it seem both incomplete and exhaustive: - If taken out of the planning

assessment context, the definition is missing the matter that is supposed to identify. We suggest changing the first sentence such as "The first twelve month period to which the functional entity is responsible for the assessment of Transmission System Planning performance." - While it will be a burdensome task to define each year that follows Year One, the definition of Year One may include a sentence that define the rule for the following years such as "All of the twelve months period following Year One shall commence immediately after the end of the preceding twelve months period." - The definition should not include examples.

No

The Time Horizon should be for both Near-Term and Long-Term Planning.

Yes

No

The requirements are extremely burdensome. We recommend changing the last sentence of 2.1.4 requirement by removing "by a sufficient amount to stress the System within a range of credible conditions that demonstrate a measurable change in performance:" because there are instances where listed conditions may not result in measurable changes in performance (Ex. An increase in load in a well built system may not cause any measurable changes in performance because there is sufficient transmission capacity to serve the load).

No

We disagree with the content of this requirement based on several facts: - We believe that the dynamic behavior of the load cannot be accurately estimated beyond current time. We are concern about the effort required to ascertain the dynamic response of the load - The requirement references "Loads that could impact the study area" without specifying how an entity will identify these loads. Perhaps the standard should provide guidelines to determine which loads would impact the study area.

No

We are not sure what will be included in these "material generation additions or changes". Perhaps the standard should provide guidelines to determine what are these material changes or additions?

Yes

Individual

Terry Harbour

MidAmerican Energy

Yes

Yes

No

There are concerns over the FERC outstanding March order on TPL and how FERC interprets "normal" or base case conditions and "assuming" an entities primary protection system is out of service and must rely on its backup protection system to operate. This concept combined with the new tables cannot be perpetuated.

Yes
Yes
R2.1.4 bullet #7 – Replace the adjective “planned” with “known” for consistency with R1.1.2 and R2.1.3. R2.3 Replace “conducted” with “assess” for consistency with R1.1.2 and R2.1.3. R2.4 Replace “current or past studies as qualified” with “current or qualified past studies as indicated” for consistency with R2
No
MidAmerican questions if the widespread use of composite load models really provides significant benefits to additional dynamic analyses over generic load conversion assumptions which have been historically used. The use of composite load models may result in more precise individual load models, but no more accurate dynamic simulations. This poorly worded requirement should be deleted in its entirety as providing additional burden without any additional reliability benefits. If the composite load model requirement must be kept, it should be modified to include the following bolded text: “...System peak Load levels shall include a Load model which represents the expected dynamic behavior of Loads that could impact the study area, considering the behavior of induction motor Loads, but without requiring a detailed load survey be conducted...”
Yes
No
The reference to BES should be placed back into Note a in the header above table 1.
Voting "no" - Footnote 6 – Further clarify the applicable shunt devices in Footnote 6 with this suggested text: 6. Requirements which are applicable to shunt devices, also apply to FACTS devices that are connected to ground, but not instrument voltage transformers or surge arresters
No
Revise measures to be consistent with requirements. 1. R6 Delete “any”. The use of the word any in standards should not be allowed. 2. Revise the Planning Assessment definition to more explicitly apply to the BES and the TPL-001 requirements. We suggest text of: “Planning Assessment: Documented evaluation of future Transmission System performance and Corrective Action Plans to remedy identified deficiencies in the BES from the steady state and stability performance requirements set forth in the TPL-001 standard.” 3. R2.1.5 – We propose replacing the term ‘major Transmission’ with “BES” because BES is a well defined term, while the term, ‘major Transmission’, is not. 4. Add R2.3.1 – We suggest the addition of a R2.3.1 requirement to emulate the distinction between the requirement to perform a short circuit assessment and conduct required studies or analysis to support the assessment (e.g. R2.1/R2.1.1 and R2.2/R2.2.1). We propose wording such as, “Perform an analysis for at least one year in the Near Term Transmission Planning Horizon.” This requirement would set an expectation that an analysis should be conducted to at least one or more years in the near-term planning horizon, rather than imply that an analysis of all five years in the near-term planning horizon must be conducted. 5. R2.7.2 – Delete 2.7.2. With regard to “include actions to resolve performance deficiencies identified in multiple sensitivity studies”, mitigation plans should not be required for deficiencies found in multiple sensitivity studies because the conditions in some sensitivity studies are more extreme and less likely than base case conditions. Some of the sensitivity study conditions are not credible. 6. R2.7.4 – We suggest that the wording of R2.7.4 be the same as R.2.8.2. 7. R3.5 - We interpret that R3.5 requires the TP and PC to conduct an evaluation of possible actions to reduce the likelihood or impact of extreme events, which produce the more severe impacts, if cascading outages may occur. Does the drafting team intend for

the TP and PC to fulfill this requirement for at least one event in each of the five categories (i.e. 3 steady state and 2 stability) or in each of the 21 categories/sub-categories (i.e. 14 steady state and 7 stability). Also, if the resulting cascading outages do not result in any overloads, under-voltages, voltage collapse, or loss of generator synchronization, then should the evaluation of possible actions to reduce likelihood or impact be required? 8. R4.1.1 – We suggest that there should be some qualification of which generating units are referred to in this requirement. We propose that the requirement say, “No generating unit with a Point of Interconnection connected to the BES shall pull out of synchronism.” For example, some utilities include smaller generation units that are connected at voltages below 100 kV and even down to distribution voltage in their base cases. 9. R4.1.2 – We propose that the wording of this requirement be revised to reflect the same BES qualification of the generating unit that we noted in R4.1.1 above. 10. R4.3.1 – This requirement refers to high speed reclosing and we presume that this is special high speed reclosing that is completed in several cycles, rather than the normal high speed reclosing that is completed in a number of seconds. We recommend that the term high speed reclosing be more clearly defined for this sub-requirement. 11. R.4.3.2 – We suggest qualifying which generating units to consider and which voltage limits to simulate with revised wording like, “Trip generating units that are connected to the BES when actual or assumed minimum generator transient voltage limits are known and simulations show voltages may fall below the voltage limit. If assumed voltage limits are used, then they should be included in the assessment”. The requirement should not apply to all relevant generating units until one of the MOD standards requires all Generator Owners to provide their minimum generating unit voltage limits to the TP and PC. If the wording of R4.3.2 must be different from its counterpart, R3.3.2, then please explain the reasons for any differences. 12. R5 – This requirement should allow the applicable entity (such as the TOP / TO) to define a “Post-Contingency Voltage Deviation” as this criteria is not used widely enough in the industry to be a well established criteria. 13. Revise R8 to limit the need to provide the Planning Assessment as follows “adjacent Planning Coordinators and adjacent Transmission Planners and to any registered functional entity...” 14. Data Retention for R3, R5, R6, & R7 - The MRO NSRS proposes that the wording in these elements be revised to change “All” to “The”. The word “All” is unnecessary and could encourage over-the-top compliance monitoring and enforcement. The revised data retention would read as follows: “The studies performed in support....”

Yes

Individual

Catherine Koch

Puget Sound Energy

Yes

We commend the SDT for its work to continue the improvement on the proposed TPL-001-1. We were not able to find a place to include comment on Requirement R4; therefore, we have included our comments here: Section R4.3.1, bullet point 3 requires the stability analyses to include the impact of subsequent “[t]ripping of Transmission lines and transformers where transient swings cause Protection System operation based on generic or actual relay models”. As written, this bullet could be interpreted as requiring the inclusion of these relay models in stability data bases. We do not have generic or actual relay models in our dynamics data bases for tripping line faults on lines and transformers represented. We represent actual relay response and tripping times of relays, communications, and breakers to faults in tripping transmission lines and transformers. Requiring the inclusion of generic or actual relay models for all relays that can trip lines and transformers would add a large burden to the development and maintenance of accurate

dynamics model files that would add little or no benefit. Please change this bullet to read: "Tripping of Transmission lines and transformers where transient swings cause Protection System operation based on known Protection System response".

Yes

Yes

Yes

Yes

Yes

Yes

Table 1, P5 currently requires the study of "[d]elayed Fault Clearing due to the failure of a relay¹³ protecting the Faulted element to operate as designed". As written, this requirement does not recognize the use of redundant relays for primary protection. In some cases side by side relays are used to provide primary fault tripping if one relay fails to operate. Per the requirement as stated, the redundant relay would provide no value in meeting this requirement. Please revise to acknowledge backup relays: "Single failure of a protection relay¹³ protecting the Faulted element to operate as designed, resulting in backup relay actions or Delayed Fault Clearing, for one of the following". In Table 1, P2 and P3, the last column "Non-Consequential Load Loss Allowed" where the requirement "No¹²" appears, and in footnote 12, the standard as proposed does not allow for any Non-Consequential Load Loss. When the Non-Consequential Load Loss (footnote b) issue is clarified in Project 2010-11 this requirement may be changed. Therefore, if this proposed Standard is enforced before Project 2010-11 is completed, entities will be required to meet this No Non-Consequential Load Loss requirement without the exception allowed in the existing TPL-002-0, footnote "b". This will require immediate redesigns to meet this particular requirement. The unintended consequence could be that operators of local systems that are currently networked may opt to begin operation as radial systems, and future designs for local systems may be radial, at any voltage level. We suggest that the proposed footnote 12 include a provision to default to the existing footnote "b" in TPL-002-0 until Project 2010-11 is decided. Please revise footnote 12 to read, "Note: Non-Consequential Load Loss is being decided in Project 2010-11. When that project is finalized, the resolution will be copied here. In the interim, planned or controlled interruption of electric supply to radial customers or some local Network customers, connected to or supplied by the Faulted element or by the affected area, may occur in certain areas without impacting the overall reliability of the interconnected transmission systems. To prepare for the next contingency, system adjustments are permitted, including curtailments of contracted Firm (non-recallable reserved) electric power Transfers." Timing of this project and project 2010-11 is critical. It would be very difficult to vote to approve the proposed TPL-001-2 prior to knowing the outcome of Project 2010-11 (footnote b issue).

Individual

Joe Tarantino

Sacramento Municipal Utility District
Yes
We commend the SDT for its work to continue the improvement on the proposed TPL-001-1. We were not able to find a place to include comment on Requirement R4; therefore, we have included our comments here: Section R4.3.1, bullet point 3 requires the stability analyses to include the impact of subsequent “[t]ripping of Transmission lines and transformers where transient swings cause Protection System operation based on generic or actual relay models”. As written, this bullet could be interpreted as requiring the inclusion of these relay models in stability data bases. We do not have generic or actual relay models in our dynamics data bases for tripping line faults on lines and transformers represented. We represent actual relay response and tripping times of relays, communications, and breakers to faults in tripping transmission lines and transformers. Requiring the inclusion of generic or actual relay models for all relays that can trip lines and transformers would add a large burden to the development and maintenance of accurate dynamics model files that would add little or no benefit. Please change this bullet to read: “Tripping of Transmission lines and transformers where transient swings cause Protection System operation based on known Protection System response”.
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Table 1, P5 currently requires the study of “[d]elayed Fault Clearing due to the failure of a relay ¹³ protecting the Faulted element to operate as designed”. As written, this requirement does not recognize the use of redundant relays for primary protection. In some cases side by side relays are used to provide primary fault tripping if one relay fails to operate. Per the requirement as stated, the redundant relay would provide no value in meeting this requirement. Please revise to acknowledge backup relays: “Single failure of a protection relay ¹³ protecting the Faulted element to operate as designed, resulting in backup relay actions or Delayed Fault Clearing, for one of the following”. In Table 1, P2 and P3, the last column “Non-Consequential Load Loss Allowed” where the requirement “No ¹² ” appears, and in footnote 12, the standard as proposed does not allow for any Non-Consequential Load Loss. When the Non-Consequential Load Loss (footnote b) issue is clarified in Project 2010-11 this requirement may be changed. Therefore, if this proposed Standard is enforced before Project 2010-11 is completed, entities will be required to meet this No Non-Consequential Load Loss requirement without the exception allowed in the existing TPL-002-0, footnote “b”. This will require immediate redesigns to meet this particular requirement. The unintended consequence could be that operators of local systems that are currently networked may opt to begin operation as radial systems, and future designs for local systems may be radial, at any voltage level. We suggest that the

proposed footnote 12 include a provision to default to the existing footnote "b" in TPL-002-0 until Project 2010-11 is decided. Please revise footnote 12 to read, "Note: Non-Consequential Load Loss is being decided in Project 2010-11. When that project is finalized, the resolution will be copied here. In the interim, planned or controlled interruption of electric supply to radial customers or some local Network customers, connected to or supplied by the Faulted element or by the affected area, may occur in certain areas without impacting the overall reliability of the interconnected transmission systems. To prepare for the next contingency, system adjustments are permitted, including curtailments of contracted Firm (non-recallable reserved) electric power Transfers." Timing of this project and project 2010-11 is critical. It would be very difficult to vote to approve the proposed TPL-001-2 prior to knowing the outcome of Project 2010-11 (footnote b issue).

Individual

Patrick Farrell

Southern California Edison Company

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

SCE supports the revised performance table.

Yes

Yes

Individual

John Mayhan

Omaha Public Power District

Why is Footnote 12 used for some occurrences of the word "No" in the last column of Table 1 but not other occurrences of the word "No"?

Consideration of Comments on Reliability Coordination (Project 2006-06)

The Reliability Coordination Standard Drafting Team thanks all commenters who submitted comments on the proposed revisions to the standards for Project 2006-06 — Reliability Coordination. These standards were posted for a 45-day public comment period from January 4, 2010 through February 18, 2010. The stakeholders were asked to provide feedback on the standards through a special Electronic Comment Form. There were 42 sets of comments, including comments from more than 150 different people from over 50 companies representing all of the 10 Industry Segments as shown in the table on the following pages.

http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html

Summary Consideration:

Stakeholders had three general concerns with the definition of Interpersonal Communications.

- 1) The definition of Interpersonal Communication to be ambiguous in terms of distinguishing between verbal communications and data transfers; The SDT believes that Webster's definition of Interpersonal: (being, relating to, or involving relations between persons) clarifies the exclusion of media dedicated to Telemetry or other data exchange.**

The RCSDT believes that data communication is covered under IRO-010, R3 which states:

Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. (Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations)

- 2) The definition should also clarify that the communication is between individuals in different entities or physical locations; The SDT believes that the revised Requirements of COM-001-2 satisfy this concern.**

- 3) Use of the term "method" may imply a communication style; The RCSDT changed "method" to "medium" in definition.**

Several stakeholders indicated that a definition of Alternative Interpersonal Communications was not needed. The RCSDT disagrees because there is an important part of the definition of "Alternative Interpersonal Communications" that distinguishes it from simply being an alternative "Interpersonal Communications". The proposed definition contains the words: "which does not utilize the same infrastructure (medium)". Also, some stakeholders had concerns with the usage of "normal". The RCSDT does not propose defining "Normal" Interpersonal Communications and has removed it from the definition. Based on the consensus of stakeholders, we have revised the two definitions to:

Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information.

Alternative Interpersonal Communication: Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.

Stakeholders pointed out that COM-001, R1 was a compound requirement and suggested creating separate requirements. Stakeholders also suggested revising the VRF to “Medium” as it does not meet the guidelines for a “High” VRF. The intent of R1 was three-fold.

- 1 Identify (have) an Alternative Interpersonal Communication capability**
- 2 Test that capability periodically and**
- 3 If the test failed, fix it or identify another Alternative Communications Capability.**

Based on comments received, we have revised R1 (now R9) to eliminate the compound requirement and therefore created more specific requirements to delineate Interpersonal and Alternative Interpersonal Communication, and applicable entity responsibility. The VRF is changed to “Medium.”

The RCSDT also made extensive revisions to COM-001 to provide explicit Interpersonal Communications and Alternative Interpersonal Communications capabilities based on the relationships between various entities. The RCSDT believes that the proposed requirements meet the reliability objectives of the standard as well as the FERC Order 693 directives.

The comments received regarding the definition of Reliability Directive (for COM-002 and IRO-001) ranged from the being “too open-ended” (PPL) to not “flexible” enough (Public Service Enterprise Group Companies). The SDT expected and viewed these as attempting to reach middle ground.

There were also value added comments such as removing the unnecessary and redundant terms “actual or expected” from the definition, which the SDT agrees with. The definition was revised to:

A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an Emergency.

A number of commenter’s expressed a concern about the definition not including three-part communication, clearly identifying a Reliability Directive at the time of issue, and applying to verbal communications. The SDT believes responsibilities should not be imbedded in a definition and, as drafted, the requirements of COM-002 with the proposed definition of Reliability Directive fully address the identification and verbal concerns.

The bulk of the comments received on COM-002 regarded the VSL for R3. The SDT agreed with suggestions for the VSLs and has deleted the Severe VSL and moved the High VSL to Severe. We believe that there are two possible actions within the requirement and failure to perform either warrants a Severe VSL.

Several commenter’s expressed concern about three-part communication. The SDT believes that the requirements as drafted, with the issue, repeat back, and acknowledgement of a Reliability Directive, three-part communication is covered.

There was one commenter suggesting the addition of the DP to the applicability. The RCSdT notes that, per the Functional Model, a DP may “direct” an LSE to communicate requests for voluntary load curtailment and not reliability situations: Item 9 on page 47 of version 5 of the Functional Model: “Directs Load-Serving Entities to communicate requests for voluntary load curtailment.” Furthermore, The RCSdT will forward this comment to the FMWG for their consideration in revising the language.

The comments regarding the use of Reliability Directive in IRO-001 ranged from small entities being excluded to whether regulatory or statutory requirements covers NERC standards. The SDT addressed these by noting registration is not in the SDT scope and NERC’s general council should be contacted for regulatory issues.

A few commenter’s expressed concern with the VSL for R2 and one suggested the words “per Requirement 2,” should be added. The SDT believes the phrase “per Requirement 2” is not necessary as a VSL is only applied AFTER a compliance violation is determined.

Value added comments such as a concern of the use of the word “threat” as it can be defined as cyber-related and suggested replacing “Operating Personnel” with “System Operator” were also made. The SDT concurred and removed the word “threat” and replaced it with “condition” and also made the revision to System Operator.

There were numerous comments regarding the definition of Reliability Directive with multiple wording suggestions. While slightly out of scope for question six, the SDT expected and viewed these as attempting to reach middle ground.

Some commenter’s expressed concern over clarify that the RC has three separate actions. The RC can act, direct others to act, or issue Reliability Directives. The SDT modified R1 to read: “Each Reliability Coordinator shall take actions or direct actions, which could include issuing Reliability Directives, of Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts”

Note: Based on discussions with FERC Staff, the SDT agreed to make the following changes:

IRO-001-2 Requirements R4, R5 and associated Measures and VSLs are moved to IRO-005-4

IRO-001-2 Requirements R6, R7 and associated Measures and VSLs are moved to IRO-002-2

Several commenters made suggestions regarding IRO-014, R2. The original requirement was designed to accomplish in one requirement what is proposed by the commenters as three procedural requirements. R2 is worded to focus on defining what a “compliant plan” is. In the current requirement a “proposed plan” is not the same as a “compliant plan”.

The SDT viewed what the commenters are suggesting as follows:

- The initiating RC would submit its “proposed plan” to the other RCs
- The receiving RCs would provide the initiating RC with their responses indicating whether or not they agree with the proposed roles/actions offered by the initiating RC

- If one or more RCs do not agree with the roles/actions, then the initiating RC would be required to offer an alternative proposal (and go back to the first bullet)
- When all RCs acknowledge that the proposed roles/actions in the revised “proposed plan” are acceptable, then and only then would the “proposed plan” become a “compliant plan”

A closer reading of the current R2 would show the current R2 accomplishes the exact same result but does so without interjecting the need for documenting the intervening processes. The SDT does not see the need to document why each proposal was or was not accepted; nor does the SDT see the need for document the negotiations that are involved in getting to “an agreed to plan”. For example the comments’ subrequirement to show the RC submitted its plan would require a paper trail for the request; followed by a paper trail for the responses, followed by more paperwork if the RCs are not in agreement. In the end, the only action that matters (in both the SDT version and in the commenters alternative version) is a plan that works, and a plan that if others are involved must have their concurrence that those others will participate.

R2 does not impose a requirement to get agreements; what R2 does is to require that a “compliant plan” be developed. A proposed plan does not solve problems. That proposed plan is NOT compliant with R2 if it only assumes that other RC will effect the actions in the proposal; neither is it compliant if the proposed actions are not acceptable to the other RCs who are required to act. To be compliant the initiating RC must either have the concurrence (i.e. agreement) of the other RCs for their respective part(s) in the proposed plans OR the plan must not include those RCs.

R2 says to be compliant the other RC must agree with the “proposed plan” before that “proposed plan” is acceptable as a “compliant plan”. Having a plan that requires someone else to do an action, but that other entity will not effect that action, will not resolve the problem at hand. Further having documentation that someone refuses to participate in the proposed plan does nothing to solve the problem at hand.

In general, the RC SDT feels that the concept of a Reliability Directive is an important tool for RC, BA and TOP to maintain reliability and that the revisions are consistent with the applicable parts of the directives in FERC Order 693. The work of the RC SDT along with the OCPD SDT and the RTO SDT, as currently recognized, will cover the original intent of COM-002 and still provide a “defense in depth strategy” as suggested by commenters. Consensus appears to have been achieved with respect to the definition of Reliability Directive and the requirements that the RC SDT have developed for COM-002. This will further the efforts of the OCPD SDT in achieving stakeholder consensus for their proposed requirements in COM-003. The intent of this DT is to preserve a method for RCs, BAs and TOPs to make the determination of “what actions are required” and clearly communicate the importance to the receiver at a heightened method to normal day-to-day operational communications. The trigger of “Reliability Directive” by the issuer highlights these actions as needed to maintain BES reliability and shall be carried out as directed (unless such actions would violate safety, equipment, regulatory or statutory requirement per the language of the requirement) and all parties to the conversation need to be very cognizant of the system conditions that are requiring actions. The DT has attempted to craft clear and specific language that support BES reliability and hopes that this work can

support and enhance the development of the OPCP SDT. The RCSDT has also attempted to eliminate redundancy and ambiguity while not creating any reliability gaps. Several comments were received on the RC's ability to "act". The RC must "act" (ie. do something, "to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts". This may include analysis, coordination of cooperative actions or the issuance of "Reliability Directives". "Act" does not imply solely the manipulation of BES elements.

RC control of "analysis tools" is critical to maintaining the wide area view. Control by the RC over the tools is imperative and beyond administrative, since it is intended to prevent planned reliability tool outages without the consent or knowledge of operating personnel. Although the DT agrees with the premise that many other requirements may be violated by ineffective communications, the intent of the requirement is to ensure there are effective communications methods in place for communicating BES activity across entities. Effective communication are a cornerstone of BES reliability and the intent of the requirement is to prevent the violation of other more significant performance type standard requirements due to ineffective communications before they impact the BES. Failure of the RC to control outages of analysis tools was mentioned as a contributing factor in the 2003 blackout.

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Gerry Adamski, at 609-452-8060 or at gerry.adamski@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.¹

¹ The appeals process is in the Reliability Standards Development Procedures: <http://www.nerc.com/standards/newstandardsprocess.html>.

Index to Questions, Comments, and Responses

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Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

The Industry Segments are:

- 1 — Transmission Owners
- 2 — RTOs, ISOs
- 3 — Load-serving Entities
- 4 — Transmission-dependent Utilities
- 5 — Electric Generators
- 6 — Electricity Brokers, Aggregators, and Marketers
- 7 — Large Electricity End Users
- 8 — Small Electricity End Users
- 9 — Federal, State, Provincial Regulatory or other Government Entities
- 10 — Regional Reliability Organizations, Regional Entities

		Commenter	Organization	Industry Segment									
				1	2	3	4	5	6	7	8	9	10
1.	Group	Guy Zito	Northeast Power Coordinating Council										X
	Additional Member		Additional Organization	Region					Segment Selection				
1.	Alan Adamson		New York State Reliability Council, LLC	NPCC					10				
2.	Gregory Campoli		New York Independent System Operator	NPCC					2				
3.	Roger Champagne		Hydro-Quebec TransEnergie	NPCC					2				
4.	Kurtis Chong		Independent Electricity System Operator	NPCC					2				
5.	Sylvain Clermont		Hydro-Quebec TransEnergie	NPCC					1				
6.	Chris de Graffenried		Consolidated Edison Co. of New York, Inc.	NPCC					1				
7.	Brian D. Evans-Mongeon		Utility Services	NPCC					8				
8.	Mike Garton		Dominion Resources Services, Inc.	NPCC					5				
9.	Brian L. Gooder		Ontario Power Generation Incorporated	NPCC					5				
10.	Kathleen Goodman		ISO - New England	NPCC					2				
11.	David Kiguel		Hydro One Networks Inc.	NPCC					1				
12.	Michael R. Lombardi		Northeast Utilities	NPCC					1				
13.	Randy MacDonald		New Brunswick System Operator	NPCC					2				
14.	Greg Mason		Dynegy Generation	NPCC					5				

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

	Commenter	Organization	Industry Segment									
			1	2	3	4	5	6	7	8	9	10
15.	Bruce Metruck	New York Power Authority	NPCC					6				
16.	Chris Orzel	FPL Energy/NextEra Energy	NPCC					5				
17.	Robert Pellegrini	The United Illuminating Company	NPCC					1				
18.	Saurabh Saksena	National Grid	NPCC					1				
19.	Michael Schiavone	National Grid	NPCC					1				
20.	Peter Yost	Consolidated Edison Co. of New York, Inc.	NPCC					3				
21.	Lee Pedowicz	Northeast Power Coordinating Council	NPCC					10				
22.	Gerry Dunbar	Northeast Power Coordinating Council	NPCC					10				
2.	Group	Gerald Beckerle	OC Standards Review Group			X			X			
	Additional Member	Additional Organization	Region					Segment Selection				
1.	Laura Lee	Duke						1, 3, 5				
2.	Al DiCaprio	PJM						2				
3.	Gene Delk	SCE&G						1, 3, 5				
4.	Jim Griffith	Southern						1, 3, 5				
5.	Mike Hardy	Southern						1, 3, 5				
6.	Dale Walters	CWLP						1, 3, 5, 9				
7.	Alvis Lanton	SIPC						3, 5				
8.	Larry Rodriguez	Union Power Partners						5				
9.	Tim Lyons	OMU						1, 3, 5				
10.	Barry Hardy	OMU						1, 3, 5				
11.	Dwayne Roberts	OMU						1, 3, 5				
12.	Fred Krebs	Calpine						5				
13.	Tim Hattaway	PowerSouth						3, 5, 9				
14.	Jim Case	Entergy						1, 3				
15.	Rene' Free	Santee Cooper						9, 1, 3, 5				
16.	Glenn Stephens	Santee Cooper						1, 3, 5, 9				
17.	Robert Thomasson	Big Rivers						1, 3, 5, 9				
18.	John Neagle	AECI						3, 5				

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		Commenter	Organization	Industry Segment									
				1	2	3	4	5	6	7	8	9	10
19. John Troha			SERC	10									
3.	Group	Sam Ciccone	FirstEnergy	X		X	X	X	X				
		Additional Member	Additional Organization	Region					Segment Selection				
1. Dave Folk			FE	RFC					1, 3, 4, 5, 6				
2. Doug Hohlbaugh			FE	RFC					1, 3, 4, 5, 6				
3. kevin Querry			FES	RFC					6				
4. Larry Herman			FE	RFC					3				
4.	Group	Carol Gerou	NERC Standards Review Subcommittee										X
		Additional Member	Additional Organization	Region					Segment Selection				
1. Chuck Lawrence			American Transmission Company	MRO					1				
2. Tom Webb			WPS	MRO					3, 4, 5, 6				
3. Terry Bilke			Midwest ISO Inc.	MRO					2				
4. Jodi Jenson			Western Area Power Administration	MRO					1, 6				
5. Ken Goldsmith			Alliant Energy	MRO					4				
6. Dave Rudolph			Basin Electric Power Cooperative	MRO					1, 3, 5, 6				
7. Eric Ruskamp			Lincoln Electric System	MRO					1, 3, 5, 6				
8. Joseph Knight			Great River Energy	MRO					1, 3, 5, 6				
9. Joe DePoorter			Madison Gas & Electric	MRO					3, 4, 5, 6				
10. Scott Nickels			Rochester Public Utilities	MRO					4				
11. Terry Harbour			MidAmerican Energy Company	MRO					1, 3, 5, 6				
5.	Group	Jalal babak	Electric Market Policy	X		X		X	X				
		Additional Member	Additional Organization	Region					Segment Selection				
1. Louis Slade				SERC					1, 4				
2. Mike Garton				NPCC					5				
6.	Group	Brenda Lyn Truhe	PPL	X				X	X				
		Additional Member	Additional Organization	Region					Segment Selection				

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

		Commenter	Organization	Industry Segment										
				1	2	3	4	5	6	7	8	9	10	
1.		Brenda Truhe	PPL Electric Utilities	RFC					1					
2.		Jon Williamson	PPL EnergyPlus	WECC					6					
3.		Mark Heimbach	PPL EnergyPlus	MRO					6					
4.		Mark Heimbach	PPL EnergyPlus	NPCC					6					
5.		Mark Heimbach	PPL EnergyPlus	RFC					6					
6.		Mark Heimbach	PPL EnergyPlus	SERC					6					
7.		Mark Heimbach	PPL EnergyPlus	SPP					6					
8.		Annette Bannon	PPL Generation	RFC					5					
9.		Annette Bannon	PPL Generation	NPCC					5					
10.		Annette Bannon	PPL Generation	WECC					5					
7.	Group	Harry Tom	Operating Personnel Communications Protocols SDT	X	X	X	X	X		X	X			
	Additional Member		Additional Organization		Region					Segment Selection				
1.		Lloyd Snyder	GSOC	SERC					1					
2.		Leanne Harrison	PJM	RFC					2					
3.		Laura Zotter	ERCOT	ERCOT					2					
4.		Tom Irvine	HydroOne	NPCC					1, 5, 6, 7					
5.		Bill Ellard	CAISO	WECC					2					
6.		John Stephens	City of Springfield	RFC					4, 8					
7.		Mike Brost	JEA	FRCC					1, 3, 5, 7					
8.		Mark Bradley	ITC	MRO					1					
9.		Fred Waites	Southern Company	SERC					1, 3, 5, 7					
10.		Wayne Mitchell	Entergy	SPP					1, 3, 5, 7					
8.	Group	Howard Gugel	NERC											
Please complete the following information.														
	Additional Member		Additional Organization		Region					Segment Selection				
1.		Laurel Heacock	NERC	NA - Not Applicable										
2.		Bob Cummings	NERC	NA - Not Applicable										

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

	Commenter	Organization	Industry Segment									
			1	2	3	4	5	6	7	8	9	10
3.	Larry Kezele	NERC										
4.	Ed Ruck	NERC										
5.	Todd Thompson	NERC										
6.	Mark Vastano	NERC										
7.	Roman Carter	NERC										
8.	Jule Tate	NERC										
9.	David Taylor	NERC										
10.	Al McMeekin	NERC										
11.	Maureen Long	NERC										
12.	Andy Rodriguez	NERC										
13.	Michael Moon	NERC										
14.	Stephanie Monzon	NERC										
15.	Gerry Adamski	NERC										
9.	Group	Linda Perez	Western Electricity Coordinating Council									X
Additional Member			Additional Organization			Region			Segment Selection			
1.	Steve Rueckert	WECC	WECC						10			
10.	Group	Jason L. Marshall	Midwest ISO Standards Collaborators		X							
Additional Member			Additional Organization			Region			Segment Selection			
1.	Bob Thomas	Illinois Municipal Electric Agency	SERC						4			
2.	Jose Medina	NextEra Energy Resources, LLC	WECC						5			
3.	Joe O'Brien	NIPSCO	RFC						1			
4.	Joe Knight	Great River Energy	MRO						1, 3, 5, 6			
5.	Kirit Shah	Ameren	SERC						1			
11.	Group	JT Wood	Southern Company Services	X		X						
Additional Member			Additional Organization			Region			Segment Selection			
1.	Hugh Frances		SERC						1			

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

		Commenter	Organization	Industry Segment									
				1	2	3	4	5	6	7	8	9	10
12.	Group	Frank Gaffney	Florida Municipal Power Agency and Some Members	X		X	X	X	X				
		Additional Member	Additional Organization	Region					Segment Selection				
1.		Jim Howard	Lakeland Electric	FRCC					1, 3, 5				
2.		Greg Woessner	Kissimmee Utilities Authority	FRCC					1, 3, 4, 5				
13.	Group	Kenneth D. Brown	Public Service Enterprise Group Companies	X		X		X	X				
		Additional Member	Additional Organization	Region					Segment Selection				
1.		Jeffrey Mueller	PSE&G	RFC					1, 3				
2.		Dave Murray	PSEG Fossil	RFC					5				
3.		Jim Hebson	PSEG ER&T	ERCOT					5, 6				
4.		Clint Bogan	PSEG Power Connecticut	NPCC					5				
14.	Group	Denise Koehn	Bonneville Power Administration	X		X		X	X				
		Additional Member	Additional Organization	Region					Segment Selection				
1.		Steve Davis	BPA, Generation Support	WECC					3, 5, 6				
2.		Tedd Snodgrass	BPA, Transmission Dispatch	WECC					1				
3.		Tim Loepker	BPA, Transmission Dispatch	WECC					1				
4.		Huy Ngo	BPA, Transmission Control Cntr HW Design & Maint						1				
15.	Group	Ben Li	IRC Standards Review Committee		X								
		Additional Member	Additional Organization	Region					Segment Selection				
1.		Charles Yeung	SPP	SPP					2				
2.		James Castle	NYISO	NPCC					2				
3.		Bill Phillips	MISO	MRO					2				
4.		Lourdes Estrada-Salinerio	CAISO	WECC					2				
5.		Steve Myers	ERCOT	ERCOT					2				
6.		Matt Goldberg	ISO-NE	NPCC					2				
7.		Patrick Brown	PJM	RFC					2				

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

		Commenter	Organization	Industry Segment									
				1	2	3	4	5	6	7	8	9	10
8. Mark Thompson			AESO	WECC 2									
16.	Individual	Sandra Shaffer	PacifiCorp	X		X		X	X				
17.	Individual	Brent Ingebrigtsen	E.ON U.S.	X		X		X	X				
18.	Individual	Duncan Brown	Calpine Corporation					X					
19.	Individual	Ron Sporseen	PNGC Power (15 member utilities)				X						
20.	Individual	Chris Scanlon	Exelon	X		X		X	X				
21.	Individual	Steve Alexanderson	Central Lincoln			X							
22.	Individual	Denise Roeder	North Carolina Municipal Power Agency #1			X	X		X				
23.	Individual	Jon Kapitz	Xcel Energy	X		X		X	X				
24.	Individual	Martin Bauer	US Bureau of Reclamation			X							
25.	Individual	Kasia Mihalchuk	Manitoba Hydro	X		X		X	X				
26.	Individual	Howard Rulf	We Energies			X	X	X					
27.	Individual	Michael R. Lombardi	Northeast Utilities	X		X		X					
28.	Individual	CJ Ingersoll	CECD										
29.	Individual	Brandy A. Dunn	Western Area Power Administration	X									
30.	Individual	Michael J Ayotte	ITC Holdings	X									
31.	Individual	Kathleen Goodman	ISO New England Inc		X								

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

		Commenter	Organization	Industry Segment									
				1	2	3	4	5	6	7	8	9	10
32.	Individual	James H. Sorrels, Jr.	American Electric Power	X		X		X	X				
33.	Individual	Greg Rowland	Duke Energy	X		X		X	X				
34.	Individual	James Sharpe	South Carolina Electric and Gas	X		X		X	X				
35.	Individual	Jason Shaver	American Transmission Company	X									
36.	Individual	Richard Kafka	Pepco Holdings, Inc	X		X		X	X				
37.	Individual	Kirit Shah	Ameren	X		X		X	X				
38.	Individual	Charles Yeung	Southwest Power Pool		X								
39.	Individual	Roger Champagne	Hydro-Québec TransEnergie (HQT)	X									
40.	Individual	Dan Rochester	Independent Electricity System Operator		X								
41.	Individual	Laura Zotter	ERCOT ISO		X								X
42.	Individual	Catherine Koch	Puget Sound Energy	X									

- 1 Do you agree with the proposed definition of Interpersonal Communication (COM-001-2)? If not, please explain in the comment area.**

Summary Consideration: Stakeholders had three general concerns with the definition of Interpersonal Communications.

- 1) The definition of Interpersonal Communication to be ambiguous in terms of distinguishing between verbal communications and data transfers; The SDT believes that Webster's definition of Interpersonal: (being, relating to, or involving relations between persons) clarifies the exclusion of media dedicated to Telemetry or other data exchange.**

The RCSDT believes that data communication is covered under IRO-010, R3 which states:

Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. (Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations)

- 2) The definition should also clarify that the communication is between individuals in different entities or physical locations; The SDT believes that the revised Requirements of COM-001-2 satisfy this concern.**
- 3) Use of the term "method" may imply a communication style; changed "method" to "medium" in definition.**

Organization	Yes or No	Question 1 Comment
Calpine Corporation		
North Carolina Municipal Power Agency #1		
Public Service Enterprise Group Companies		
We Energies		

Organization	Yes or No	Question 1 Comment
Operating Personnel Communications Protocols SDT		No comment
CECD	No	CECD agrees that the term should be very broad and allow a registered entity to establish appropriate communication tools, devices, processes or systems to suit their operation. However, there is a need to include the term "normal" interpersonal communication methods based on the definition of alternative interpersonal communication.
Response: The RCSDT thanks you for your comment. RCSDT does not propose defining “Normal” Interpersonal Communications and has removed it from the alternative definition and included “...used for day-to-day operation.” Based on the consensus of stakeholders, we have revised the two definitions to: Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information. Alternative Interpersonal Communication: Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.		
ITC Holdings	No	Comments: As written, the definition could be interpreted to include data communications. Suggest modifying the definition to “Any method that allows two or more individuals to verbally interact, consult, or exchange information.” Interpersonal Communication to operate the BES must be timely and non voice communication cannot be relied upon to be timely in all situations.
Response: The RCSDT thanks you for your comment. The intent of this definition is to exclude data, but not preclude e-mail, text, etc. The RCSDT believes that data communication is covered under IRO-010, R3 which states: Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. (Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations)		
NERC	No	Comments: NERC staff believes the definition is unnecessary. “Interpersonal” is a common term and this definition provides no additional clarity. In addition, COM-001 should maintain the current coverage of voice and data. The requirements should address both primary and alternative/backup capabilities for voice and data. Approved standards including TOP-005-1.1 and IRO-010-1, as well as several others under development rely on the communication capabilities specified in COM-001. By limiting the focus of COM-001-

Organization	Yes or No	Question 1 Comment
		2 to this definition of Interpersonal Communication, there will no longer be an obligation to ensure that data telecommunication paths between entities are adequate and reliable.
Response: The RCSDT thanks you for your comment. The RCSDT and the industry disagree with NERC staff's assessment. A strong industry request to clarify "facilities" led to the definition of interpersonal communication which has been modified to: Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information. Primary communication is inferred when reference to alternative is made. Moreover, the primary capability is used/tested on a daily basis. The RCSDT contends that IRO-010 covers the requirement for data and information that includes a requirement for providing specified data when automated Real-Time system operating data is unavailable.		
Exelon	No	Definition is vague and subject to interpretation. Requirement should be to have primary and backup capabilities. Disagree that a definition is required.
Response: The RCSDT thanks you for your comment. The RCSDT and the industry disagree. A strong industry demand to clarify "facilities" led to the definition of interpersonal communication which has been modified to: Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information. Primary communication is inferred when reference to alternative is made. Moreover, the primary capability is used/tested on a daily basis.		
Southern Company Services	No	If there is going to be an alternative definition, than this should be a definition for Normal Interpersonal Communication.
Response: The RCSDT thanks you for your comment. Primary communication is inferred when reference to alternative is made. Moreover, the primary capability is used/tested on a daily basis.		
Ameren	No	In previous postings, the drafting team confirmed that they intended for COM-001-2 to apply only to verbal communication systems and not data. However, the phrase "or exchange information." could still imply data (information). We suggest that the team should explicitly exclude data in definition.
Midwest ISO Standards Collaborators	No	In previous postings, the drafting team confirmed that they intended for COM-001-2 to apply only to verbal communication systems. We believe this definition had inadvertently brought data back into the standard. Specifically, we are concerned about "or exchange information." Data can be considered information and thus some may now interpret SCADA and ICCP being included. We suggest the definition would be sufficient with the "or exchange information" redacted and would avoid this confusion.

Organization	Yes or No	Question 1 Comment
Response: The RCSDT thanks you for your comment. The SDT believes that Webster’s definition of Interpersonal: (being, relating to, or involving relations between persons) clarifies the exclusion of media dedicated to Telemetry or other data exchange. The RCSDT believes that data communication is covered under IRO-010, R3 which states: Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. (Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations)		
NERC Standards Review Subcommittee	No	In previous postings, the drafting team confirmed that they intended for COM-001-2 to apply only to verbal communication systems. We believe this definition had inadvertently brought data back into the standard. Specifically, we are concerned about “or exchange information.” Data can be considered information and thus some may now interpret SCADA and ICCP being included. To avoid this confusion, we suggest the definition would be sufficient with the “or exchange information” redacted. We believe the proposed definition for the term “Interpersonal Communication” is too broad and ambiguous. We recommend the following instead: “Verbal Communication between two or more registered entities (not within the same organization) to exchange reliability-related information.” The inclusion of this term “registered entities” removes the ambiguity which we believe is contained in the proposed definition. In addition, the inclusion of the phrase “not within the same organization” clarifies that the focus of definition is to address communication between different registered entities.
Response: The RCSDT thanks you for your comment. The SDT believes that Webster’s definition of Interpersonal: (being, relating to, or involving relations between persons) clarifies the exclusion of media dedicated to Telemetry or other data exchange. The RCSDT believes that data communication is covered under IRO-010, R3 which states: Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. (Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations) Also, the SDT believes that the revised Requirements of COM-001-2 satisfy your ambiguity concern.		
Southwest Power Pool	No	It appears as if the following two definitions have the same meaning: COM-001-2 Interpersonal Communication: Any method that allows two or more individuals to interact, consult, or exchange information. COM-003 -1 Interoperability Communication - Communication between two or more entities to exchange reliability-related information to be used by the entities to change the state or status of an element or facility of

Organization	Yes or No	Question 1 Comment
		the Bulk Electric System. SPP recommends changing the word “method” to medium in Interpersonal Communication. For Alternative Interpersonal Communication, that definition uses the term “infrastructure (medium)” as in type of equipment used. These terms should use consistent words if they are referring to the same thing.
Response: The RCSDT thanks you for your comment. We concur and have revised the two definitions to: Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information. Alternative Interpersonal Communication: Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.		
Duke Energy	No	Need to revise this definition to clarify that Interpersonal Communication is the primary method of communication, and that it is limited to verbal or written communications (not data such as SCADA data), and that it is limited to real-time operations (time horizon is Real-time Operations). Suggested wording: Interpersonal Communication: The primary verbal or written method that allows two or more individuals to interact, consult, or exchange information for real-time operations.
Response: The RCSDT thanks you for your comment. . The SDT believes that Webster’s definition of Interpersonal: (being, relating to, or involving relations between persons) clarifies the exclusion of media dedicated to Telemetry or other data exchange. The RCSDT believes that data communication is covered under IRO-010, R3 which states: Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. (Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations) The RCSDT does not believe “primary” is needed because “primary” communication is inferred when reference to “alternative” is made.		
PPL	No	The definition should be clarified to state that it is interpersonal communications between functional entities and not interpersonal communications within the functional entity that the standard is addressing.
Response: The RCSDT thanks you for your comment. The SDT believes that the revised Requirements of COM-001-2 satisfy your concern		
Hydro-Québec TransEnergie (HQT)	No	The definition should be worded to be more explicit, such as: When two or more individuals interact, consult, or exchange information.

Organization	Yes or No	Question 1 Comment
Northeast Power Coordinating Council	No	The definition should be worded to be more explicit, such as: When two or more individuals interact, consult, or exchange information.
Response: The RCSDT thanks you for your comment. We concur and have revised the definition to: Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information.		
Electric Market Policy	No	The SDT has proposed a definition that is meant to limit the standard to two-way person-to-person communication between functional entities. However, as written the definition can also be viewed as so open-ended as to apply to pens and papers used by system operators to show another system operator in the same control room some operational data. The proposed standard does further constrain the application to “real-time operation information”, but may be better served to explicitly constrain the definition to functional-entity-to-functional entity. It is these media that the standard means to address.
Response: The RCSDT thanks you for your comment. The SDT believes that the revised Requirements of COM-001-2 satisfy your concern		
Bonneville Power Administration	No	The term, ‘interpersonal communication’ as defined by common usage and Webster’s Dictionary is sufficient for the work at hand. To provide an additional definition via the NERC Standards Development Process unnecessarily adds to an already convoluted task and provides no further benefit to the user of this proposed standard.
Response: The RCSDT thanks you for your comment. The RCSDT and the industry disagree. A strong industry request to clarify “facilities” led to the definition of interpersonal communication which has been modified to: Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information.		
Northeast Utilities	No	The use of “Any method” as the start of the definition of Interpersonal Communication is too board a qualifier. In normal interpersonal communications only 5 to 10% of the total communication is verbal while 90 to 95% is non-verbal. As it is not the intent of this standard to address non-verbal communications the use of “Any method” should be eliminated from the definition and more specific terms that clearly convey the intent of the standard should be used.

Organization	Yes or No	Question 1 Comment
Response: The RCSDT thanks you for your comment. We concur and have modified the definition to: Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information.		
FirstEnergy	No	This definition should be revised as follows to ensure clarity of scope by excluding electronic data exchange and for consistency with the proposed requirements: "Interpersonal Communication Capability: Any method that allows two or more individuals to interact, consult, or exchange real-time Bulk Electric System operating information using verbal communication equipment."
Response: The RCSDT thanks you for your comment. We agree in principle; however, the SDT believes that Webster's definition of Interpersonal: (being, relating to, or involving relations between persons) clarifies the exclusion of media dedicated to Telemetry or other data exchange. The RCSDT believes that data communication is covered under IRO-010, R3 which states: Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. (Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations)		
Manitoba Hydro	No	When "Interpersonal Communication" is added to the NERC Glossary without the obvious reference to COM-001-2 which is "To ensure that operating entities have adequate Interpersonal capabilities" could and does infer that the definition means "protocol or forum of speaking, interacting or exchanging" information. The suggested definition does not immediately indicate the normal medium of communications, such a land line, mobile, radio, electronic, etc. A suggested definition: Interpersonal Communication: The normal mediums that carry messages, verbal or electronic, between two or more entities, internal or external, for the operation of the Interconnected Bulk Electric System.
Response: The RCSDT thanks you for your comment. We agree in principle and have modified the definition to: Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information. The SDT believes that the revised Requirements of COM-001-2 satisfy your concern of communication between entities.		

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Organization	Yes or No	Question 1 Comment
American Electric Power	Yes	
American Transmission Company	Yes	
Central Lincoln	Yes	
E.ON U.S.	Yes	
Florida Municipal Power Agency and Some Members	Yes	
Independent Electricity System Operator	Yes	
IRC Standards Review Committee	Yes	
ISO New England Inc	Yes	
OC Standards Review Group	Yes	
PacifiCorp	Yes	
Pepco Holdings, Inc	Yes	
PNGC Power (15 member utilities)	Yes	
Puget Sound Energy	No	The proposed definition for this term addresses a method of communication, but not the communication itself. As a result, the defined term is incomplete as proposed. Recommend the addition of the word “capability” so that the defined term is “Interpersonal Communication Capability”. The addition of this word to the term is also consistent with the use of the term in the proposed standard language, where Interpersonal Communication is consistently used in conjunction with the words “capability” or “capabilities”.

Organization	Yes or No	Question 1 Comment
		Response: The RCSDT thanks you for your comment. We agree in principle and have modified the definition which replaces “method” with “medium”: Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information. The RCSDT believes the definition itself infers “capability.”
South Carolina Electric and Gas	Yes	
US Bureau of Reclamation	Yes	
Western Area Power Administration	Yes	
Western Electricity Coordinating Council	Yes	
Xcel Energy	Yes	
ERCOT ISO	No	1) ERCOT ISO considers the definition of Interpersonal Communication to be ambiguous in terms of distinguishing between verbal communications and data transfers; the definition should specify that it applies to verbal communication systems. 2) The definition should also clarify that the communication is between individuals in different physical locations to mitigate any potential for application to communications between employees of the same company communicating to each other in person at the same physical location – e.g. a control center. 3) Additionally, use of the term “method” could imply a communication style (e.g. 3-part communications) as opposed to mode. It should be clear that the Standard only applies to modes of communication. Examples should be provided (e.g. phone, email, etc.) to clarify the scope.
Response: The RCSDT thanks you for your comment. 1. The definition of Interpersonal Communication to be ambiguous in terms of distinguishing between verbal communications and data transfers; the SDT believes that Webster’s definition of Interpersonal: (being, relating to, or involving relations between persons) clarifies the exclusion of media dedicated to Telemetry or other data exchange. The RCSDT believes that data communication is covered under IRO-010, R3 which states:		

Organization	Yes or No	Question 1 Comment
		Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. (Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations) 2. The SDT believes that the revised Requirements of COM-001-2 satisfy your concern of communication in different physical locations. 3. The RCSDT concurs and revised the definition, Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information.

2 Do you agree with the proposed definition of Alternative Interpersonal Communication (COM-001-2)? If not, please explain in the comment area.

Summary Consideration: Several stakeholders indicated that a definition of Alternative Interpersonal Communications was not needed. The RCSDT disagrees because there is an important part of the definition of “Alternative Interpersonal Communications” that distinguishes it from simply being an alternative “Interpersonal Communications”. The proposed definition contains the words: “which does not utilize the same infrastructure (medium)”. Also, some stakeholders had concerns with the usage of “normal”. The RCSDT does not propose defining “Normal” Interpersonal Communications and has removed it from the definition. Based on the consensus of stakeholders, we have revised the two definitions to:

Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information.

Alternative Interpersonal Communication: Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.

Organization	Yes or No	Question 2 Comment
Calpine Corporation		
North Carolina Municipal Power Agency #1		
Public Service Enterprise Group Companies		
We Energies		
Operating Personnel Communications Protocols SDT		No Comment

Organization	Yes or No	Question 2 Comment
Manitoba Hydro	No	“Alternative Interpersonal Communication” also when added to the NERC Glossary without the obvious reference to COM-001-2 which is “To ensure that operating entities have adequate Interpersonal capabilities” could and does infer that the definition means “ other protocols or forums of speaking, interacting or exchanging” information. The suggested definition does not immediately indicate the backup or alternate mediums of communications, such a redundant land lines, Satellite phones, battery or diesel back up electronics, etc. A suggested definition: Alternative Interpersonal Communication: Backup or alternate mediums that during planned or failure of normal medium systems, that can carry messages, verbal or electronic, between two or more entities, internal or external, for the operation of the Interconnected Bulk Electric System.
Response: The RCSDT thanks you for your comment. We have revised the definition to: Alternative Interpersonal Communication: Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation. The RCSDT believes “medium” stands alone in the definition and needs no descriptors.		
Exelon	No	Disagree that a definition is required.
Response: The RCSDT thanks you for your comment. The RCSDT disagrees because there is an important part of the definition of “Alternative Interpersonal Communications” that distinguishes it from simply being an alternative “Interpersonal Communications”. The proposed definition contains the words: “which does not utilize the same infrastructure (medium)”.		
Western Electricity Coordinating Council	No	Do not need an alternate definition
Response: The RCSDT thanks you for your comment. The RCSDT disagrees because there is an important part of the definition of “Alternative Interpersonal Communications” that distinguishes it from simply being an alternative “Interpersonal Communications”. The proposed definition contains the words: “which does not utilize the same infrastructure (medium)”.		
Southern Company Services	No	Interpersonal Communication includes any method. If this includes all possibilities why is an additional definition needed?
Response: The RCSDT thanks you for your comment. The RCSDT revised the definition as: Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information. The RCSDT believes that an important part of the definition of “Alternative Interpersonal Communications” that distinguishes it from simply being an		

Organization	Yes or No	Question 2 Comment
alternative “Interpersonal Communications” are the words: “which does not utilize the same infrastructure (medium)”.		
Duke Energy	No	Need to revise this definition to clarify that Alternative Interpersonal Communication is the identified substitute method for the Interpersonal Communication method. Suggested wording: Alternative Interpersonal Communication: The identified verbal or written method that is able to serve as the substitute for and is redundant to Interpersonal Communication and does not utilize the same infrastructure (medium) as Interpersonal Communication.
Response: The RCSDT thanks you for your comment. The RCSDT does not believe that the definition should be revised as suggested as “Alternative” is clear when the requirements are viewed.		
Southwest Power Pool	No	Replace Alternative Interpersonal Communication definition with: Backup Interpersonal Communication: Any method that is able to serve as a substitute for and is redundant to the primary normal Interpersonal Communication and does not utilize the same infrastructure (medium) as the primary normal Interpersonal Communications. Consistent terms should be used across standards if they are referring to the same thing.
Response: The RCSDT thanks you for your comment. The RCSDT feels that the use of “Alternative” is appropriate and provides flexibility within this standard. The RCSDT does not believe that the definition should be revised as suggested as “Alternative” is clear when the requirements are viewed. There is sufficient stakeholder support to retain “Alternative”.		
NERC	No	See response to Question 1.
Response: The RCSDT thanks you for your comment. Please see response to Question 1.		
E.ON U.S.	No	Suggested edit to definition: Alternative Interpersonal Communication: A Interpersonal Communication method that is able to serve as a substitute for and is functionally redundant to the normal Interpersonal Communication method but does not utilize the same infrastructure (medium) as the normal Interpersonal Communication method. The intent of the edit is to clarify that the entity must to have identified one (1) normal Interpersonal Communication and one (1) Alternative Intercommunication method.
Response: The RCSDT thanks you for your comment. A definition can not impose requirements that are not explicitly stated in the standard. The suggested edit is not necessary as the requirements define what an entity must do to be compliant. The RCSDT has also removed the words “and is redundant to” from the definition based on other stakeholders comments.		

Organization	Yes or No	Question 2 Comment
Bonneville Power Administration	No	The proposed definition adds value for the user of this proposed standard by adding the ideas of the alternate mode of communications being both independent and redundant to normal communications. However, this having been said, the term chosen by the SDT, the term 'Alternative Interpersonal Communication' appears to focus attention on the wrong aspect of what's being discussed. Since the definition focuses on an alternative mode or 'method' of communicating, clarity would be added if the SDT changed the term to be defined to either 'Alternative Mode of Communication' or 'Alternative Method of Communication.' The use of the word 'interpersonal' would be optional, but not necessary.
Response: The RCSDT thanks you for your comment. To clarify our intent, the RCSDT changed “method” to “medium” in the definition. The proposed definition is: Alternative Interpersonal Communication: Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.		
Hydro-Québec TransEnergie (HQT)	No	The proposed definition of Alternative Interpersonal Communication is equally ambiguous as the aforementioned definition of Interpersonal Communication. A precise definition of Interpersonal Communication and “Normal” Interpersonal Communication is required before an agreed upon definition of Alternative Interpersonal Communication can be reached.
Northeast Power Coordinating Council	No	The proposed definition of Alternative Interpersonal Communication is equally ambiguous as the aforementioned definition of Interpersonal Communication. A precise definition of Interpersonal Communication and “Normal” Interpersonal Communication is required before an agreed upon definition of Alternative Interpersonal Communication can be reached.
Northeast Utilities	No	The proposed definition of Alternative Interpersonal Communication is equally ambiguous as the aforementioned definition of Interpersonal Communication. A precise definition of Interpersonal Communication and “Normal” Interpersonal Communication is required before an agreed upon definition of Alternative Interpersonal Communication can be reached.
Response: The RCSDT thanks you for your comment. The RCSDT does not propose defining “Normal” Interpersonal Communications and has removed it from the definition. Based on the consensus of stakeholders, we have revised the two definitions to: Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information. Alternative Interpersonal Communication: Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same		

Organization	Yes or No	Question 2 Comment
infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.		
FirstEnergy	No	The word "normal" in the proposed definition adds some ambiguity to the definition. This definition should be revised as follows to ensure clarity of scope by excluding electronic data exchange and for consistency with the proposed requirements: Alternative Interpersonal Communication Capability: Any verbal communication equipment that is able to serve as a substitute for and is redundant to Interpersonal Communication equipment used during day-to-day operations and does not utilize the same infrastructure as the Interpersonal Communication equipment.
Response: The RCSDT thanks you for your comment. The RCSDT does not propose defining “Normal” Interpersonal Communications and have removed it from the definition. Based on the consensus of stakeholders, we have revised the two definitions to: Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information. Alternative Interpersonal Communication: Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.		
Ameren	Yes	
American Electric Power	Yes	
CECD	Yes	
Central Lincoln	Yes	
Florida Municipal Power Agency and Some Members	Yes	
Independent Electricity System Operator	Yes	
IRC Standards Review Committee	Yes	
ISO New England Inc	Yes	

Organization	Yes or No	Question 2 Comment
Midwest ISO Standards Collaborators	Yes	
OC Standards Review Group	Yes	
PacifiCorp	Yes	
Pepco Holdings, Inc	Yes	
PNGC Power (15 member utilities)	Yes	
PPL	Yes	
Puget Sound Energy	No	As for the proposed term for “Interpersonal Communication”, the proposed definition for this term addresses a method of communication, but not the communication itself. As a result, the defined term is incomplete as proposed. Recommend the addition of the word “capability” so that the defined term is “Alternative Interpersonal Communication Capability”. The addition of this word to the term is also consistent with the use of the term in the proposed standard language, where Alternative Interpersonal Communication is consistently used in conjunction with the words “capability” or “capabilities”.
Response: The RCSDT thanks you for your comment. Based on a consensus of stakeholder comments, the RCSDT has revised the proposed definitions to: Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information. The definition itself describes “capability.” Alternative Interpersonal Communication: Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.		
South Carolina Electric and Gas	Yes	
US Bureau of Reclamation	Yes	
Western Area Power Administration	Yes	

Organization	Yes or No	Question 2 Comment
Xcel Energy	Yes	
American Transmission Company	Yes	However, clarity is needed for the word “infrastructure (medium)”. ATC’s interpretation is that satellite phones, cell phones, radio and land lines are all different mediums.
Response: The RCSDT thanks you for your comment. The RCSDT agrees that the types of communication that you list are all different media which could be used as a form of Alternative Interpersonal Communications.		
ITC Holdings	Yes	None
NERC Standards Review Subcommittee	Yes	Please clarify. We believe the proposed definition for the term “Interpersonal Communication” is too broad and ambiguous. We recommend the following instead: “Verbal Communication between two or more registered entities (not within the same organization) to exchange reliability-related information.” The inclusion of this term “registered entities” removes the ambiguity which we believe is contained in the proposed definition. In addition, the inclusion of the phrase “not within the same organization” clarifies that the focus of definition is to address communication between different registered entities.
Response: The RCSDT thanks you for your comment. The SDT believes that Webster’s definition of Interpersonal: (being, relating to, or involving relations between persons) clarifies the exclusion of media dedicated to Telemetry or other data exchange. The RCSDT believes that data communication is covered under IRO-010, R3 which states: Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. (Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations) The SDT believes that the revised Requirements of COM-001-2 satisfy your concern of communication in different physical locations.		
Electric Market Policy	Yes	Subject to adequate resolution of comments provided for Question 1
Response: The RCSDT thanks you for your comment. Please see response to question 1 comments.		
ERCOT ISO	No	Although this definition indirectly clarifies the intent of the definition of Interpersonal Communication by noting that communication mediums/infrastructure are at issue, it does not specify verbal or data communication, and needs to be clarified accordingly; ERCOT notes clarification of Interpersonal Communication (IC) on this issue will indirectly clarify this point with respect to the Alternative IC definition.

Organization	Yes or No	Question 2 Comment
		Furthermore, ERCOT ISO considers the definition of Alternative Interpersonal Communication unnecessary. The Standard could simply say an entity must have multiple (at least two) ICs, one if which is primary and others that serve as back-ups. This would eliminate the need for yet another defined term susceptible to conflicting interpretations. In additions, calling the Alternative Interpersonal Communication a substitute and redundant also seems contradictory, or at least confusing in terms of timing. Redundant implies that the entity has two means that are applied at the same time. Substitute seems to mean that the entity have a back-up that only has to be used when the primary isn't used. Also, if Interpersonal Communication is intended to be verbal communication, what are considered acceptable alternates (i.e.: fax, email, etc)? Examples here would be helpful. Is it sufficient to have redundant/substitute means of verbal communication (i.e.: satellite phones, cell phones, etc.). ERCOT ISO believes non-verbal proxies for verbal communications should be eligible ICs – e.g. email. As noted above, ERCOT ISO believes the most efficient way to approach this is to eliminate the use of Alternative Interpersonal Communication and have the standard require that entities have to have at least two means of Interpersonal Communication.
Response: The RCSDT thanks you for your comment. . The SDT believes that Webster’s definition of Interpersonal: (being, relating to, or involving relations between persons) clarifies the exclusion of media dedicated to Telemetry or other data exchange. The RCSDT believes that data communication is covered under IRO-010, R3 which states: Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. (Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations) The RCSDT disagrees that the definition is not needed because there is an important part of the definition of “Alternative Interpersonal Communications” that distinguishes it from simply being an alternative “Interpersonal Communications”. The proposed definition contains the words: “which does not utilize the same infrastructure (medium)”. We concur and have removed the “redundant” portion of the definition. Interpersonal Communication can include voice and text; examples are satellite phones, cell phones, radio and land lines. We have revised the proposed definitions to add clarity: Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information.		

Organization	Yes or No	Question 2 Comment
Alternative Interpersonal Communication: Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.		

3 Do you agree with the revisions made to Requirement 1 in COM-001-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Summary Consideration: Stakeholders pointed out that R1 was a compound requirement and suggested creating separate requirements. Stakeholders also suggested revising the VRF to “Medium” as it does not meet the guidelines for a “High” VRF. The intent of R1 was three-fold.

4 Identify (have) an Alternative Interpersonal Communication capability

5 Test that capability periodically and

6 If the test failed, fix it or identify another Alternative Communications Capability.

Based on comments received, we have revised R1, now R9, to eliminate the compound requirement and therefore created more specific requirements to delineate Interpersonal and Alternative Interpersonal Communication, and applicable entity responsibility. The VRF is changed to “Medium.”

Requirement R1 is now R9; R2 is now R10; R3 is now R11; R4 is now R7 and R8.

Organization	Yes or No	Question 3 Comment
Calpine Corporation		
North Carolina Municipal Power Agency #1		
Operating Personnel Communications Protocols SDT		No Comment
American Electric Power	No	AEP is concerned with the use of a sixty minute window without having a broadcast methodology in place to support the required notifications. As mentioned in other comments, perhaps RCIS could be modified to help support communications and the confirmation of such communications.
Response: The RCSDT thanks you for your comment. Having a failure of the Alternative Interpersonal Communications per R1 does not indicate that the Interpersonal Communications used in day-to-day operations is out of service. It is expected that the Interpersonal Communications used in day-to-day operations is indeed operational to make the notifications required in R3 regarding alternative failure.		

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Organization	Yes or No	Question 3 Comment
We Energies	No	An Alternative Personnel Communications (APC) is intended for use at a Primary Control Center for real-time voice communications. That needs to be clear in the definitions and standards. The time to either restore or recognize that the Alternative Communications cannot be re-established should be aligned with proposed EOP-008 which allows 2 hours. This should also apply to COM-001 R2 which would give an hour past the 2 hours that the APC is unavailable to contact impacted parties. Along with conforming changes to measures and the like...
Response: The RCSDT thanks you for your comment. The Alternative Interpersonal Communications capability is intended for use as an alternative for the Interpersonal Communications capability, regardless of whether the normal capability continues to be available or regardless of the location, be it a primary control center or a back-up facility. R1, now R9, includes “...If the test is unsuccessful, the entity shall initiate action to repair or designate a replacement Alternative Interpersonal Communications within 2 hours.”		
ITC Holdings	No	Comments: The intent of the 60 minute requirement is unclear. As written, the 60 minute requirement could be interpreted to apply to the initiation of restoration or, alternatively, to the completion of restoration. If the latter is the intent, then effectively 3 voice communication mediums would be required to ensure compliance which we believe is not warranted. Suggest modifying the requirement to “If the test is unsuccessful, the entity shall take action within 60 minutes to initiate restoration of the identified alternative or...”. In addition, we would suggest separating R1 into two requirements. From an audit perspective, there are two discrete actions being identified: quarterly testing and initiating repairs.
Response: The RCSDT thanks you for your comment. We concur with your comment and have changed the requirement R1, now R9, to state “...If the test is unsuccessful, the entity shall initiate action to repair or designate a replacement Alternative Interpersonal Communications within 2 hours.” The SDT believes that R1, now R9, has a discreet relationship with successful and unsuccessful tests and therefore should remain as one requirement for clarity.		
Public Service Enterprise Group Companies	No	Initiating actions within the hour should be specified, rather than taking action. It could take longer than an hour to take (complete) action that resolves the issue.
Response: The RCSDT thanks you for your comment. We concur with your comment and have changed the requirement to state “...If the test is unsuccessful, the entity shall initiate action to repair or designate a replacement Alternative Interpersonal Communications within 2 hours.”		
Southern Company Services	No	It is quite possible for entities to interpret this requirement as not applicable if they include all of there communications as interpersonal communication.
Response: The RCSDT thanks you for your comment. The requirement states that an entity will “designate” an Alternative Interpersonal		

Organization	Yes or No	Question 3 Comment
Communications capability. To do so, the entity would not be able to declare all communications as Interpersonal Communications.		
FirstEnergy	No	It should be clear that this requirement applies only to BES information. The requirement should be revised as follows to improve clarity: Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, its Alternative Interpersonal Communications capability used for communicating real-time Bulk Electric System operating information.
Response: The RCSDT thanks you for your comment. The RCSDT does not believe that adding BES to the requirement adds any clarity as NERC standards apply to the BES.		
Duke Energy	No	- o Need to clarify who the RC, TOP and BA are required to have Interpersonal Communications and Alternative Interpersonal Communications capability with (i.e., each other and the DP and GOP). We believe that R4 is redundant to R1, and the entities in R4 could be added to R1, and R4 deleted. Also make conforming changes to the Measures, Data Retention and VSLs. - o Need to clarify that that the requirement is to take action to restore the Alternative Interpersonal Communications capability, or take action to identify a substitute within 60 minutes, (not actually restore or identify a substitute within 60 minutes - which may not be possible). Also need to revise the Measure and the Lower VSL to conform with this clarification to the requirement - o Need to strike the phrase “used for communicating real-time operating information”, because this should be included in the definition of Interpersonal Communication, as we propose in Comment #1 above, and it would be redundant to also include it in R1. - o The VRF for R1 should be Medium instead of High, because this is a quarterly test of the alternative capability - doesn’t meet the criteria for a High VRF. - o Need to clarify in Requirement R2 that the 60 minute clock for notifications BEGINS when you KNOW you have a failure that has lasted for 30 or more minutes. - o Strike the word “normal” in Requirement R2, because the definition of Interpersonal Communications as proposed above already includes the word “primary”.
Response: The RCSDT thanks you for your comment. - o To provide better clarity the SDT created more specific requirements to delineate Interpersonal and Alternative Interpersonal Communication, and applicable entity responsibility. - o The RCSDT has revised the requirement R1, now R9, to state “...If the test is unsuccessful, the entity shall initiate action to repair or designate a replacement Alternative Interpersonal Communications within 2 hours.” The Measure and VSL for R1, now R9, reflect the revision		

Organization	Yes or No	Question 3 Comment
- o The definition was not revised to include the phrase “used for communicating real-time operating information” since the Time Horizon is designated as Real-time Operations. - o VRF: The RCSDT agrees and has revised the VRF to “Medium.” - o R2 now R10: The RCSDT believes the requirement as written satisfies your request. The “detection” of failure is the beginning. - o “Normal”: The RCSDT revised R2, now R10, and deleted “normal.”		
Exelon	No	R1. It is not possible to test without identifying, “identify and” is not required. Suggest the requirement say: The applicable entities shall have primary and backup communication capabilities used for communicating real-time operating information. The entities shall test and demonstrate system capabilities on a quarterly basis. Telling someone to “take action” if they identify a failure in their systems is unnecessary. It must be presumed that an entity will “take action”; otherwise they will be non-compliant with the standard. Allowing an entity to “identify a substitute” in lieu of taking action to restore within 60 minutes points to the difficulties inherent in writing prescriptive requirements. The drafting team recognizes all entities may not be able to restore their capabilities within 60 minutes and therefore provides an alternative. The 60 minute requirement becomes a guideline, not a requirement under these conditions it is left to auditors to evaluate the technical and business case that an entity makes for why they can not make the 60 minute deadline.
Response: The RCSDT thanks you for your comment. The RCSDT has revised requirements of COM-001, R1 is now R9, to require an entity to “designate” an Alternative Interpersonal Communication capability rather than to “identify”. The RCSDT agrees with you that an entity must identify something in order to be able to designate it or to test it. An Alternative Interpersonal Communication capability is an alternative regardless of whether one is considering the primary location or a back-up facility. Back-up tends to indicate that it would only be used in the case of the loss of some other primary capability; that is not the intent. The intent is that an alternative is to be designated and periodically tested to verify its continued availability and functionality. The alternative capability may or may not be used in normal operations activities. The SDT changed “take action” to “initiate action” in the requirement and believes the verbiage is needed to identify the start of timing to satisfy “...repair or designate a replacement Alternative Interpersonal Communications within 2 hours.		
Manitoba Hydro	No	R1. Removal of “develop a mitigation plan” and replacing with “take action within 60 minutes” has been done, this improves the Requirement. R2. As suggested in a previous SAR, the time line should be delineated further, “if the ICC will not be in service within 30 minutes, the impacted entities shall be notified within 60 minutes of the detection of the failure”. R3. The addition of “dictated by law or otherwise” disclaimers defogs the requirement for Canadian entities that have varying laws, mandates and obligations: Canada’s basic definition of “Official bilingualism” was

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Organization	Yes or No	Question 3 Comment
		found as follows: - o The federal government must conduct its business and provide services in both official languages English and French. - o The law encourages or mandates lower tiers of government such as provinces, territories and municipalities to provide services in both official languages. - o The law places obligations on private sectors to provide access to services in both official languages, including that products be labeled in both English and French. - o The government provides support to sectors to encourage and promote the use of one or the other of the two official languages, for instance English speaking minorities in Quebec and French Speaking minorities in other provinces. - o New Brunswick is the only official bilingual province and Quebec is officially unilingual (French only).
Response: The RCSDT thanks you for your comment. Thank you for your affirmations with respect to R1 and R3. With respect to R2 (now R10). , it is the intent of the RCSDT to have notifications performed for outages of 30 minutes or longer within 60 minutes		
E.ON U.S.	No	Requiring a 60 minute response to a problem with the Alternative Interpersonal Communication method which is only tested quarterly doesn't seem reasonable. One (or more) entities may need to involve IT/telecom personnel or order parts or material to resolve the problem or agree to the substitute Alternative Interpersonal Communication method. A 48 hour response requirement would be more appropriate.
Response: The RCSDT thanks you for your comment. Requirement R1, now R9, has been revised to clarify the intent for the entity to “initiate actions to repair or designate a replacement Alternative Interpersonal Communications within 2 hours.”		
Puget Sound Energy	Yes	
CECD	No	The requirement to identify an alternative interpersonal communication method within 60 minutes should only apply if the registered entity only has a single alternative interpersonal communication method in place.
Response: The RCSDT thanks you for your comment. Requirement R1, now R9, has been revised to clarify the intent for the entity to “initiate actions to repair or designate a replacement Alternative Interpersonal Communications within 2 hours.”		
NERC	No	There is a disparity in the timing requirements listed in COM-001. If it is important that a known communication path interruption be restored in 60 minutes, why would it be necessary to check a path quarterly only? The drafting team should consider proposing that no concurrent outage of primary and alternative/backup paths can exceed 5 minutes for voice paths. Additionally, NERC staff believes that data path concerns still need to be addressed. As written, there is no requirement coverage for ensuring that data telecommunication paths between entities are adequate and reliable.
Response: The RCSDT thanks you for your comment. The requirement R1, now R9, does not state that a communication path be restored in 60		

Organization	Yes or No	Question 3 Comment
minutes but “...shall initiate action to repair or designate a replacement Alternative Interpersonal Communication within 2 hours.” The SDT believes that it is not feasible to propose that concurrent outages of a primary or backup communication cannot exceed 5 minutes. The SDT believes that IRO-010-1 Requirement R1 and specifically R1.4, adopted by the NERC BOT, address your concerns regarding data paths.		
Southwest Power Pool	No	This standard does want the RC, TOP, and BA to report in R2 if Interpersonal Communication goes down within 60mins to report it. However, we cannot find a specific requirement that subjects the RC, TOP, and BA to have Interpersonal Communication in the first place.
o Response: The RCSDT thanks you for your comment. To provide better clarity the SDT created more specific requirements to delineate Interpersonal and Alternative Interpersonal Communication, and applicable entity responsibility.		
Hydro-Québec TransEnergie (HQT)	No	We agree with the revisions made to R1 to remove the requirement for developing a mitigation plan but have a concern with “...shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communication Capability”. This can be interpreted to mean completing the repair within 60 minutes, and hence can present a difficulty for the responsible entity if the spare parts to facilitate a repair or if a new piece of equipment cannot be obtained within that time frame. More time is needed to fully repair or replace the lost capability. A suggested rewording is “shall initiate action within 60 minutes to restore....” Alternatively, the requirement can be revised to require the identification of a substitute Alternative Interpersonal Communication means within the 60 minute time frame.
Independent Electricity System Operator	No	We agree with the revisions made to R1 to remove the requirement for developing a mitigation plan but have a concern with “...shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communication Capability”. This can be interpreted to mean completing the repair within 60 minutes, and hence can present a difficulty for the responsible entity if the spare parts to facilitate a repair or if a new piece of equipment cannot be obtained within that time frame. More time is needed to fully repair or replace the lost capability. We suggest the wording be revised to “shall initiate action within 60 minutes to restore....” Alternatively, the requirement can be revised to require the identification of a substitute Alternative Interpersonal Communication means within the 60 minute time frame.
Northeast Power Coordinating Council	No	We agree with the revisions made to R1 to remove the requirement for developing a mitigation plan but have a concern with “...shall take action within 60 minutes to restore the identified alternative or identify a substitute Alternative Interpersonal Communication Capability”. This can be interpreted to mean completing the repair within 60 minutes, and hence can present a difficulty for the responsible entity if the spare parts to facilitate a repair or if a new piece of equipment cannot be obtained within that time frame. More time is needed to fully repair or replace the lost capability. A suggested rewording is "shall initiate action within 60 minutes to

Organization	Yes or No	Question 3 Comment
		restore..." Alternatively, the requirement can be revised to require the identification of a substitute Alternative Interpersonal Communication means within the 60 minute time frame.
Response: The RCSDT thanks you for your comment. The RCSDT agrees and has revised R1, now R9, to clarify the intent for the entity to "initiate actions to repair or designate a replacement Alternative Interpersonal Communications within 2 hours."		
Western Electricity Coordinating Council	No	We do not need the definition for alternate, when the definition for interpersonal communication states all methods of communications. What we think the drafting team is getting at is that we need to test our back up communication systems.
Response: The RCSDT thanks you for your comment. The RCSDT has revised R1, now R9, and R2, now R10, to clarify that an Alternative Interpersonal Communication capability be designated and that alternative capability to be tested at least monthly to verify an alternative is available should the capability normally used be lost. If the test of the Alternative Interpersonal Communication capability is failed, then the entity must initiate actions within 60 minutes. The RCSDT has intentionally avoided the concept of back-up because back-up could be mistakenly believed to apply only in back-up facilities or in the case of loss of some unnecessarily designated primary capability.		
Midwest ISO Standards Collaborators	No	We mostly agree with the revisions and thank the drafting team for modifying the requirement to remove the need for a mitigation plan per our comments from the last posting. However, we do believe that introduction of a requirement to fix the Alternate Interpersonal Communication within 60 minutes could be a compliance problem. Our issue is with the time requirement. For example, our stakeholders have experienced situations with certain communications systems in which a part had to be shipped overnight to fix the communication system. While we still don't believe a mitigation plan is necessary in this case, we are concerned that ordering the part may not be viewed as taking action. Please confirm that SDT believes that the 60 minutes applies to beginning to repair the Alternative Interpersonal Communication and not to full restoration of the Alternative Interpersonal Communication. Further, please confirm that identification of a substitute Alternative Interpersonal Communication could simply mean relying on an already existing and identified secondary or tertiary Alternative Interpersonal Communication? Similar to our concern identified in Q1, we are concerned about the clause "used for communicating real-time operating information." We believe data could be drawn into the requirement with this clause. Redacting the clause from the requirement will clarify that the requirement applies to only verbal communications.
NERC Standards Review Subcommittee	No	We mostly agree with the revisions and thank the drafting team for modifying the requirement to remove the need for a mitigation plan per our comments from the last posting. However, we do believe that introduction of a requirement to fix the Alternate Interpersonal Communication within 60 minutes could be a compliance problem. Our issue is with the time requirement. For example, our stakeholders have experienced situations with certain communications systems in which a part had to be shipped overnight to fix the communication system. While we still don't believe a mitigation plan is necessary in this case, we are concerned that

Organization	Yes or No	Question 3 Comment
		ordering the part may not be viewed as taking action. Please confirm that SDT believes that the 60 minutes applies to beginning to repair the Alternative Interpersonal Communication and not to full restoration of the Alternative Interpersonal Communication. Further, please confirm that identification of a substitute Alternative Interpersonal Communication could simply mean relying on an already existing and identified secondary or tertiary Alternative Interpersonal Communication. Similar to our concern identified in Q1, we are concerned about the clause “used for communicating real-time operating information.” We believe data could be drawn into the requirement with this clause. Redacting the clause from the requirement will clarify that the requirement applies to only verbal communications.
Response: The RCSDT thanks you for your comment. R1, now R9, has been revised to clarify the intent for the entity to “intiate actions to repair or designate a replacement Alternative Interpersonal Communications within 2 hours.” The verbiage, “used for communicating real-time operating information” is redacted as you suggest. The SDT believes that Alternative Interpersonal Communication is clearly defined.		
Ameren	No	We mostly agree with the revisions. However, we believe that introduction of a requirement to fix the Alternate Interpersonal Communication (AIC) within 60 minutes could be a compliance problem. The issue is with the time requirement. It seems illogical to only test the AIC every 90 days but have to replace the capability in 60 minutes when the IC means is working, It seems more reasonable to have the 60 minutes apply when both are out. Similar to our concern expressed in response to Q1 above, we are concerned about the phrase “used for communicating real-time operating information.”, which could also imply data. We suggest that the team should remove this phrase from the requirement to clarify that the requirement applies to only verbal communications.
Response: The RCSDT thanks you for your comment. R1, now R9, has been revised to clarify the intent for the entity to “intiate actions to repair or designate a replacement Alternative Interpersonal Communications within 2 hours.” Verbiage “used for communicating real-time operating information” is redacted.		
OC Standards Review Group	No	We suggest changing “its” in the first sentence to “their respective” such that the sentence will read, “Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall identify and test, on a quarterly basis, “their respective”” We also suggest that the risk factor should be “Medium”
Response: The RCSDT thanks you for your comment. The SDT believes that “its” shows appropriate ownership for each respective entity. The risk factor is revised to “Medium” as suggested.		
IRC Standards Review	No	We thank the drafting team for modifying the requirement to remove the need for a mitigation plan per our comments from the last posting. However, we do believe that introduction of a requirement to fix the

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

Organization	Yes or No	Question 3 Comment
Committee		Alternate Interpersonal Communication within 60 minutes could be a compliance problem. Our issue is with the time requirement. It is possible that a communications system may require a part that is currently not available. The requirement should be simply to initiate action to repair the system or to have another Alternate Interpersonal Communication system available. Further, please confirm that identification of a substitute Alternative Interpersonal Communication could simply mean relying on an already existing and identified secondary or tertiary Alternative Interpersonal Communication? To resolve these issues, we suggest the wording be revised to “shall initiate action within 60 minutes to restore....” Alternatively, the requirement can be revised to require the identification of a substitute Alternative Interpersonal Communication means within the 60 minute time frame.
ISO New England Inc	No	We thank the drafting team for modifying the requirement to remove the need for a mitigation plan per our comments from the last posting. However, we do believe that introduction of a requirement to fix the Alternate Interpersonal Communication within 60 minutes could be a compliance problem. Our issue is with the time requirement. It is possible that a communications system may require a part that is currently not available. The requirement should be simply to initiate action to repair the system or to have another Alternate Interpersonal Communication system available. Further, please confirm that identification of a substitute Alternative Interpersonal Communication could simply mean relying on an already existing and identified secondary or tertiary Alternative Interpersonal Communication? To resolve these issues, we suggest the wording be revised to “shall initiate action within 60 minutes to restore....” Alternatively, the requirement can be revised to require the identification of a substitute Alternative Interpersonal Communication means within the 60 minute time frame.
Response: The RCSDT thanks you for your comment. R1, now R9, has been revised to clarify the intent for the entity to “initiate actions to repair or designate a replacement Alternative Interpersonal Communications within 2 hours.” The SDT believes that Alternative Interpersonal Communication is clearly defined.		
Pepco Holdings, Inc	No	Why is a requirement for alternate communications given a VRF of High while a requirement (R2) for normal communications given a VRF of Medium?
Response: The RCSDT thanks you for your comment. The VRF for R1, now R9, has been revised to “Medium.”		
Bonneville Power Administration	Yes	
Central Lincoln	Yes	

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

Organization	Yes or No	Question 3 Comment
Florida Municipal Power Agency and Some Members	Yes	
Northeast Utilities	Yes	
PacifiCorp	Yes	
PNGC Power (15 member utilities)	Yes	
PPL	Yes	
South Carolina Electric and Gas	Yes	
US Bureau of Reclamation	Yes	
Western Area Power Administration	Yes	
Xcel Energy	Yes	
American Transmission Company	Yes	If the “infrastructure” is defined as we have noted in question 2, then we support the revisions to this Requirement.
Response: The RCSDT thanks you for your comment.		
Electric Market Policy	Yes	Subject to adequate resolution of comments provided for Question 1
Response: The RCSDT thanks you for your comment. Please see response to question1.		
ERCOT ISO	No	To follow on the concern noted in Question 1, ERCOT ISO requests that the scope of Interpersonal Communication be clarified. Without specifically limiting Alternative Interpersonal Communication to verbal communications, ERCOT ISO considers this requirement to be too broad in that it could potentially encompass all types of data exchanges and the means for such exchanges.

Organization	Yes or No	Question 3 Comment
		ERCOT ISO also has concerns regarding the intent of the 60 minute requirement. Is noting the failure and identified remedy within 60 minutes sufficient? If not, it may take significantly longer to acquire new equipment or parts to address a problem thereby making compliance with the 60-minute timeframe practically impossible. ERCOT ISO recommends that the 60 minute requirement be replaced with “as soon as practical/possible” to provide the flexibility necessary to cover those types of situations. ERCOT recognizes that the requirement gives the entity the option of restoring the means within 60-minutes or identifying another alternative, but to the extent an entity only has two options available and/or identified, the 60-minute restoration option would practically be the only option. With respect to the third option (i.e. the option if the first “alternative” fails), the requirement does not state any need to test that communication option. It only requires the entity to identify the additional alternative. If the intent is that the second alternative needs to be tested, that should be clarified. If the intent is merely to identify it and then test it on the next quarterly schedule, that should also be clarified./ Also, the need to “identify” the Alternative ICs for the quarterly test seems pointless. The Alternative ICs would already be identified; presumably the entity would have established these means in advance of having to test them. It seems like a pointless exercise to “identify” means already identified. The requirement should impose an obligation to establish ICs and Alternative ICs, and the testing of those should be an independent requirement. With respect to R2, ERCOT recommends clarifying the scope of “impacted entities”. ERCOT ISO believes that the scope should be left to the discretion of the RC/TOP/BA, or that it should be expressly limited to the entities that were the subject of the failed communication. For R3, ERCOT ISO recommends deleting the pre-condition language related to “inter entity” BES “reliability communications”. This introduces confusion as to the scope and timing of communications under this requirement, especially where other standards are subject to Reliability Directives. For example, is a reliability communication a Reliability Directive? If not, what constitutes a reliability communication? The requirement should simply state that English is required for communications from the relevant functional entities. Finally, the risk factor seems inappropriate for the requirement. This is a testing requirement, not real time. The entity has 60 minutes to correct any issues or have a third option already identified and ready to deploy. This requirement does not seem to indicate the need for a high risk factor.
Response: The RCSDT thanks you for your comment. R1 is now R9; R2 is now R10; R3 is now R11; R4 is now R7 and R8. The SDT believes that Webster’s definition of Interpersonal: (being, relating to, or involving relations between persons) clarifies the exclusion of media dedicated to Telemetry or other data exchange and, SDT believes that data communication is covered under IRO-010, R3 which states: Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission		

Organization	Yes or No	Question 3 Comment
Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. (Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations)		
The SDT believes that the revised Requirements of COM-001-2 now satisfy your concern regarding R1, R2 and R3.		

4 Do you agree with the definition of Reliability Directive (COM-002-2)? If not, please explain in the comment area.

Summary Consideration:

The comments received regarding the definition of Reliability Directive ranged from the being “to open-ended” (PPL) to not “flexible” enough (Public Service Enterprise Group Companies). The SDT expected and viewed these as attempting to reach middle ground.

There were also value added comments such as removing the unnecessary and redundant terms “actual or expected” from the definition, which the SDT agrees with.

A number of commenter’s expressed a concern about the definition not including three-part communication, clearly identifying a Reliability Directive at the time of issue, and applying to verbal communications. While valid concerns, the SDT believes responsibilities should not be imbedded in a definition and, as drafted, the requirements of COM-002 fully address the identification and verbal concerns.

While outside of the scope of question four, one commenter suggested assigning the COM standard project to either the OPCPRC or RCS DT projects. The SDT explained the close coordination and collaboration between the two projects.

Organization	Yes or No	Question 4 Comment
Calpine Corporation		
North Carolina Municipal Power Agency #1		
Operating Personnel Communications Protocols SDT		The OPCP SDT received NERC staff comments to our proposed draft of COM-003-1. In those comments NERC staff proposed the term “Operating Communication”, defined as “communication with the intent to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System.” The OPCP SDT is accepting this proposed term in the next version of COM-003-1 for posting. Per agreement reached during the November 17, 2009 joint meeting of the OPCP, RC and RTO SDTs in Charlotte, NC,

Organization	Yes or No	Question 4 Comment
		pending the outcome of the industry evaluation of your proposed “Reliability Directive” term, the OPCP SDT will incorporate the term into COM-003-1 Requirement R?. The OPCP SDT recommends adding the Transmission Owner to the entities that may issue a Reliability Directive because in many cases (e.g., PJM) Transmission Owners “operate” the transmission system from local control centers. The OPCP SDT points out however that the RC SDT have not adhered to scope coordination efforts between our projects. At the outset of both SDT’s work, the OPCP project would focus upon Requirement R2 of COM-002-2 and the RC SDT would focus on Requirement R1 of COM-002-2.
Response: The RCSDT thanks you for your comment. The RCSDT does not believe that the Transmission Owner should be added to the definition as this would be inconsistent with the Functional Model and the registration process. Regarding the scope issue: The RCSDT received strong consensus comments on our first posting to make revisions to the original R2. The RCSDT began making these revisions in response to stakeholder comments.		
American Electric Power	No	AEP would recommend that the words "actual or expected" be removed from the definition as unnecessary and redundant. Since, Emergency: Any abnormal system condition that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System, then an "expected emergency" is by definition the same as an emergency. If you already have an 'expected' emergency that causes intervention of some sort, then you are already in and "emergency." Therefore, you are either in an emergency condition or not in an emergency condition.
Response: The RCSDT thanks you for your comment. The RCSDT agrees with your comment and we have struck “actual or expected” from the proposed definition.		
Southwest Power Pool	No	By NERC’s Functional Model the RC, BA, TOP, and DP issues directives. (DP to LSE)Reliability Directive - A communication initiated by a RC, TOP, BA or DP where action by the recipient is necessary to address an actual or expected Emergency.
Response: The RCSDT thanks you for your comment. The RCSDT notes that, per the Functional Model, a DP may “direct” an LSE to communicate requests for voluntary load curtailment and not reliability situations: Item 9 on page 47 of version 5 of the Functional Model: “Directs Load-Serving Entities to communicate requests for voluntary load curtailment.” The RCSDT will forward this comment to the FMWG for their consideration in revising the language.		
Public Service Enterprise Group	No	It is reasonable to require the directing entity to identify which of its communications is a Reliability Directive

Organization	Yes or No	Question 4 Comment
Companies		either when first communicated or if questioned by the recipient. Flexibility is the key.
Response: The RCSDT thanks you for your comment. The SDT agrees it might be reasonable however, it is not appropriate to imbed requirements in definitions.		
Also please see Requirement R1 of COM-002-3 (When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient.) If the RC, BA, and TOP comply with R1 there is no need for the recipient to question if it is Reliability Directive.		
NERC	No	NERC staff proposed the term “Operating Communication” in our comments to Project 2007-02 Operating Personnel Communications Protocols. Operating Communication would be defined as “communication with the intent to change or maintain the state, status, output, or input of an Element or Facility of the Bulk Electric System.” This captures all communication that affects BES reliability, not just communication between function entities and Reliability Coordinators. If the proposed COM-003 is adopted with the definition of “Operating Communication” and the corresponding three-part communication requirements, this term “Reliability Directive” is not needed in the COM standard family. However because we cannot pre-judge the outcome of the changes proposed in Project 2007-02, we must view the proposal here on its own merits. The proposal herein limits the scope of coverage to emergency situations, a regression from the current coverage in FERC-approved COM-002 and eliminates a key component of the defense in depth strategy the standards as a body attempt to provide. Furthermore, we believe that COM-002 is outside the scope of Project 2006-06 Reliability Coordination and should properly be addressed by Project 2007-02 Operating Personnel Communications Protocols. The fact that two teams are addressing aspects of the same standard and requirements is confusing and because the projects are not linked, there is a real potential to be disjointed if one or the other project modifies its approach. This could create a gap in reliability coverage. One team should be the primary “owner” of this issue. Analysis of past Bulk Electric System reliability events has shown that the lack of three-part communication has been a contributing factor to adverse reliability issues. We believe it is absolutely imperative that standards concerning all verbal instructions to change or maintain the state of a BES element must involve three-part communication in order to provide defense-in-depth and reduce human error in these events.
Response: The RCSDT thanks you for your comment. The RCSDT believes that we are addressing the Blackout Recommendation #26 regarding “tighten communications protocols, especially during alert and emergency situations”. Our contention is that we have made a good faith effort at addressing the scope of our SAR and feel that this current position has been validated by stakeholder comments and the NERC Standards Committee (see November 17, 2009 meeting of RCSDT, OPCSDT and RTOSDT concerning this issue). We understand the concerns expressed above and fully support proceeding with the efforts of the OPCP SDT at improving all communications protocols.		
However, the RCSDT recognizes that the scope of our proposed revisions to COM-002 is limited to Emergency situations only. The RCSDT feels that		

Organization	Yes or No	Question 4 Comment
the concept of a Reliability Directive is an important tool for RC, BA and TOP to maintain reliability and that the revisions are consistent with parts of the directives in FERC Order 693. The work of the RCSDT along with the OPCPSDT, as currently recognized, will cover the original intent of COM-002 and still provide a “defense in depth strategy”. Stakeholder requests and consensus appears to have been achieved with respect to the definition of Reliability Directive and the requirements that the RCSDT have developed for COM-002. This will further the efforts of the OCPC SDT in achieving stakeholder consensus for their proposed requirements in COM-003.		
Western Electricity Coordinating Council	No	No, we think IRO 001 R3 covers this more effectively and may be expanded to include transmission operators and balancing authorities. “The Reliability Coordinator shall have clear decision-making authority to act and to direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities within its Reliability Coordinator Area to preserve the integrity and reliability of the Bulk Electric System. These actions shall be taken without delay, but no longer than 30 minutes.”
Response: The RCSDT thanks you for your comment. The revised IRO-001, R3 is to establish the authority of the RC to act or issue Reliability Directives. It does not identify the protocols under which a Reliability Directive needs to be issued, acknowledged and carried out. This is handled through the proposed definition as well as the requirements of COM-002.		
Manitoba Hydro	No	Reliability Directive is more clearly defined in the FRCC website: “Reliability Directives are used during times of emergency or in situations where reliability may be an issue. A Reliability Directive is usually issued to control or prevent emergency situations. ”Extrapolated from proposed and FRCC: Reliability Directive: An instruction initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority that is used during emergencies or reliability issue which will be used to prevent, control or resolve the situation. This definition makes it clear that it is for reliability issues (Thus Reliability Directive) and clarifies better that this is to be used to control or prevent emergency situations. The existing proposed definition doesn't fully infer this. With the addition of this glossary term, so should the addition of a definition for Operational Directive (though not used in this requirement). The new items would further compliment and assist each other in the understanding of the two new Glossary terms. From the FRCC website: “Operational Directives are issued by System Operators when it is necessary to perform a critical function on the BPS, i.e., to manipulate or change the status of a BES element such as a circuit breaker or substation disconnects. For example, Balancing Authorities often issue Operational Directives to Generator Operators to raise or lower the MW or MVAR output of generators during the course of balancing load and generation on the BPS. Transmission Operators often issue Operational Directives to substation operators to change the status of voltage control devices or clearing BPS substation equipment or transmission lines for routine maintenance, etc”. Extrapolated from proposed and FRCC: Operational Directive: An instruction initiated by a Transmission Operator or Balancing Authority that is used to perform planned or routine critical functions on the Bulk Power System.
Response: The RCSDT thanks you for your comment. The RCSDT believes that our proposed definition of Reliability Directive along with the existing		

Organization	Yes or No	Question 4 Comment
definition of Emergency address all of the concepts that you suggest. The comments regarding Operational Directive are more suited to the work of the OPCP SDT as they are developing requirements along this line. We will forward your comment to that team for their consideration.		
Midwest ISO Standards Collaborators	No	The combination of the COM-002-3 standard and the definition of Reliability directive do not clearly specify that the communication is verbal and between only two responsible entities. Otherwise, the communication could be considered a blast call, written correspondence or conversation between operators within the same responsible entity. We believe that the Reliability Directive definition should be: "A verbal communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority to another responsible entity where action by the recipient is necessary to address an actual or expected emergency and the RC, TOP or BA operator clearly identifies in the communication that this is a Reliability Directive."
NERC Standards Review Subcommittee	No	The combination of the COM-002-3 standard and the definition of Reliability directive do not clearly specify that the communication is verbal and between only two responsible entities. Otherwise, the communication could be considered a blast call, written correspondence or conversation between operators within the same responsible entity. We believe that the Reliability Directive definition should be: "A verbal communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority to another registered entity where action by the recipient is necessary to address an actual or expected emergency and the RC, TOP or BA operator clearly identifies in the communication that this is a Reliability Directive."
Response: The RCSDT thanks you for your comment. First issue: verbal communication: The intent of the definition is to not preclude text or other forms of communication for issuing Reliability Directives. However, entities are still obligated to comply with the requirements of COM-002. Second issue: "to another registered entity": The way that COM-002 is crafted, it focuses on functional entity communication between and among functions. Adding this verbiage is not appropriate. Third issue: By adding "clearly identifies in the communication that this is a Reliability Directive", we would have added a requirement to the definition. This is better included in the requirements rather than the definition.		
We Energies	No	The measures of COM-002-3 imply verbal one-to one communication which needs to be clear within the definition. Recommend replacing "A communication" with the draft defined term "Interpersonal Communication" assuming it gets approved.
Response: The RCSDT thanks you for your comment. The intent of the definition and requirements of COM-002 is to not preclude text or other forms of communication to issue Reliability Directives. However, entities are still obligated to comply with the requirements of COM-002. Interpersonal Communications is a medium rather than a protocol or message.		

Organization	Yes or No	Question 4 Comment
PPL	No	The proposed definition is too open-ended especially since this definition will be used in other standards. Limiting the application of the standard to announced Reliability Directives in the definition itself will ensure only announced Reliability Directives are covered by this standard and other standards.
Response: The RCSDT thanks you for your comment. Including the language that you suggest would impose a requirement within the definition. Potential use of the definition in other requirements would have to be reconciled with COM-002 requirements through the standard development process.		
E.ON U.S.	No	The term “Interoperability Communication” has been proposed and defined in COM-003 (Project 2007-02), but, the term and definition have not been finalized. Is a “Reliability Directive” communication different from, a subset of, or related to Interoperability Communication? The definition of Reliability Directive should recognize and clarify the linkage to Interoperability Communication.
Response: The RCSDT thanks you for your comment. The RCSDT believes that we are addressing the Blackout Recommendation #26 regarding “tighten communications protocols, especially during alert and emergency situations” in our proposed definition and requirements for COM-002. The RCSDT feels that the concept of a Reliability Directive is unique and an important tool for the RC, BA and TOP to maintain reliability. The proposed definition and revisions to COM-002 are consistent with parts of the directives in FERC Order 693. The work of the RCSDT and the OPCPSDT (Project 2007-02) compliment each other and will be coordinated.		
Southern Company Services	No	This definition is not needed with the way that the requirements of the standard are written. This definition used with the definition of Emergency could be interpreted to include such routine operations as turning on capacitor banks and next day planning. Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority to an entity inside their Reliability, Transmission, or Balancing Areas where action outside of normal operating practices by the recipient is necessary to address an actual or expected Emergency or when an action is identified as a reliability directive.
Response: The RCSDT thanks you for your comment. The RCSDT believes that the proposed definition of Reliability Directive, along with the existing definition of Emergency, provides the heightened awareness that is the goal of the standard and it comports with the directives of Order 693.		
Ameren	No	We believe that a reference in the question is to COM-002-3 and not -2. The definition of Reliability directive is not clear to indicate that it only applies to verbal communications. We suggest the definition should be: “A verbal communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority to another responsible entity where action by the recipient is necessary to address an actual or expected emergency and the RC, TOP or BA operator clearly identifies in the communication that this is a Reliability Directive.”

Organization	Yes or No	Question 4 Comment
Response: The RCSDT thanks you for your comment. The question does reference COM-002-3 as suggested. First issue: verbal communication: The intent of the definition is to not preclude text or other forms of communication for issuing Reliability Directives. However, entities are still obligated to comply with the requirements of COM-002. Second issue: “to another registered entity”: The way that COM-002 is crafted, it focuses on functional entity communication between and among functions. Adding this verbiage is not appropriate. Third issue: By adding “clearly identifies in the communication that this is a Reliability Directive”, we would have added a requirement to the definition. This is better included in the requirements rather than the definition.		
Hydro-Québec TransEnergie (HQT)	No	We believe that the Reliability Directive definition as defined in COM-002-3 should be: “A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where action by the recipient is necessary to address an actual or expected emergency and the RC, TOP or BA operator clearly identifies in the communication that this is a Reliability Directive.”
Northeast Power Coordinating Council	No	We believe that the Reliability Directive definition as defined in COM-002-3 should be: “A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where action by the recipient is necessary to address an actual or expected emergency and the RC, TOP or BA operator clearly identifies in the communication that this is a Reliability Directive.”
IRC Standards Review Committee	No	We believe that the Reliability Directive definition should be: “A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where action by the recipient is necessary to address an actual or expected emergency and the RC, TOP or BA operator clearly identifies in the communication that this is a Reliability Directive.”
ISO New England Inc	No	We believe that the Reliability Directive definition should be: “A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where action by the recipient is necessary to address an actual or expected emergency and the RC, TOP or BA operator clearly identifies in the communication that this is a Reliability Directive.”
Response: The RCSDT thanks you for your comment. First issue: verbal communication: The intent of the definition is to not preclude text or other forms of communication for issuing Reliability Directives. However, entities are still obligated to comply with the requirements of COM-002. Second issue: “to another registered entity”: The way that COM-002 is crafted, it focuses on functional entity communication between and among functions. Adding this verbiage is not appropriate. Third issue: By adding “clearly identifies in the communication that this is a Reliability Directive”, we would have added a requirement to the		

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

Organization	Yes or No	Question 4 Comment
definition. This is better included in the requirements rather than the definition.		
FirstEnergy	No	We believe that this standard should be either handed to the OPCPSDT (Project 2007-02) or the OPCPSDT should hand over the COM-003-1 standard to this RCSDT (Project 2006-06); and then COM-002 and COM-003 should be merged. For further explanation of our suggestions, see our comments in Question #8.
Response: The RCSDT thanks you for your comment. The RCSDT feels that the concept of a Reliability Directive is an important tool for RC, BA and TOP to maintain reliability and that the revisions are consistent with parts of the directives in FERC Order 693. The work of the RCSDT along with the OPCPSDT, as currently recognized, will cover the original intent of COM-002 and still provide a “defense in depth strategy” as suggested by the NERC comment. Stakeholder requests and consensus appears to have been achieved with respect to the definition of Reliability Directive and the requirements that the RCSDT have developed for COM-002. This will further the efforts of the OCPC SDT in achieving stakeholder consensus for their proposed requirements in COM-003. Merging of the two standards is a work in progress and will ultimately be decided by stakeholder consensus.		
Independent Electricity System Operator	No	We suggest the Reliability Directive definition be modified as follows to further clarify the communication protocol: “A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority and made clear by the initiating entity that this is a Reliability Directive which requires action by the recipient to address an actual or expected Emergency.”
Response: The RCSDT thanks you for your comment. The RCSDT believes that your suggested revision would impose a requirement within the definition.		
Duke Energy	No	We think that Requirement R1 should be folded into the definition, and R1 deleted. Also delete the Measure and VSL. Suggested rewording of the definition: Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority, and identified as a Reliability Directive to the recipient, where action by the recipient is necessary to address an actual or expected Emergency.
Response: The RCSDT thanks you for your comment. The RCSDT believes that your suggested revision would impose a requirement within the definition.		
Bonneville Power Administration	Yes	
CECD	Yes	
Central Lincoln	Yes	

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Organization	Yes or No	Question 4 Comment
Exelon	Yes	
Florida Municipal Power Agency and Some Members	Yes	
Northeast Utilities	Yes	
OC Standards Review Group	Yes	
PacifiCorp	Yes	
Pepco Holdings, Inc	Yes	
PNGC Power (15 member utilities)	Yes	
Puget Sound Energy	Yes	
South Carolina Electric and Gas	Yes	
US Bureau of Reclamation	Yes	
Xcel Energy	Yes	
American Transmission Company	Yes	Errata comment: It is COM-002-3.
Response: The RCSDT thanks you for your comment. It is COM-002-3.		
ITC Holdings	Yes	None
Response: The RCSDT thanks you for your comment.		
Western Area Power	Yes	Suggested wording to add clarity: “A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority requiring action by the recipient to address an actual or expected

Organization	Yes or No	Question 4 Comment
Administration		Emergency.”
Response: The RCSDT thanks you for your comment. The RCSDT believes that your proposed revision does not materially add clarity to the proposed definition. Stakeholders generally concur with our proposed definition.		
Electric Market Policy	Yes	While I technically agree with the definition, I think it should be expanded to state that a directive that meets this definition must be clearly identified as such by the issuing BA, RC or TOP. In other words, action is mandatory on the recipient’s part only if the issuing party clearly states “this is a Reliability Directive”. In many organized markets, participants (particularly LSE, GOP and PSE) are required to follow instructions only if an Emergency is declared. This concept has historically been used throughout this industry although such use may have been implicit.
Response: The RCSDT thanks you for your comment. Your concerns are covered by the requirement R1 of COM-002 which states: R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. A requirement can not be imposed by a definition.		
ERCOT ISO	No	ERCOT ISO is concerned about defining Reliability Directive in terms of “expected” emergencies. Obviously all relevant entities will operate to avoid emergency situations. However, the term “expected” is vague and ambiguous, and, as such, is open to subjective interpretation thereby creating uncertainty for regulated entities. The definition should put entities on clear notice as to when they have to comply with the relevant requirements. The only way to provide that certainty is to establish a clear, identifiable trigger. To accomplish this, the definition should be limited to actual emergencies. Actual emergencies are specifically defined, not subjective, and lend themselves to demonstration of compliance in an audit. The definition of Emergency lends itself to alignment with specific circumstances that clearly indicate to a regulated entity that it must use Reliability Directives and follow the rules that apply to such directives – “expected emergencies” do not. The requirement should also be revised to clarify that Reliability Directives only apply to communications between separate entities in distinct locations and do not apply to employees of the same company communicating in person in the same location – e.g. a control center.
Response: The RCSDT thanks you for your comment. We have removed the words “actual or expected” from the definition. The way that COM-002 is crafted, it focuses on functional entity communication between and among functions. Face-to-face communication of Reliability Directives are subject to the requirements of COM-002 and can be measured for COM-002 by allowing Operator Logs as possible evidence to support compliance.		

5 Do you agree with the revisions to the Requirements in COM-002-3 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Summary Consideration: The bulk of the comments were about the VSL. The SDT agreed and has deleted the Severe VSL and moved the High VSL to Severe. We believe that there are two possible actions within the requirement and failure to perform either warrants a Severe VSL

Several commenters's expressed concern about three-part communication. The SDT believes that as drafted with the issue, repeat back, and acknowledgement three-part communication is covered.

There was one commenter suggesting the addition of the DP to the applicability The RCSDT notes that, per the Functional Model, a DP may "direct" an LSE to communicate requests for voluntary load curtailment and not reliability situations: Item 9 on page 47 of version 5 of the Functional Model: "Directs Load-Serving Entities to communicate requests for voluntary load curtailment." Furthermore, The RCSDT will forward this comment to the FMWG for their consideration in revising the language.

While outside of the scope of question five, one commenter suggested assigning the COM standard project to either the OPCPRC or RCSDT projects. The SDT explained the close coordination and collaboration between the two projects.

Organization	Yes or No	Question 5 Comment
Calpine Corporation		
North Carolina Municipal Power Agency #1		
Public Service Enterprise Group Companies		
We Energies		
Xcel Energy		

Organization	Yes or No	Question 5 Comment
Operating Personnel Communications Protocols SDT		The OPCP SDT offers the following Requirements language that addresses a Three-Part Communication Protocol. (It is comprised of two primary Requirements and contains a footnote): R_. Each Reliability Coordinator, Balancing Authority, Transmission Operator, and Transmission Owner that issues a Reliability Directive during verbal Operating Communications shall employ three-part Communication Protocol to ensure that the receiving party has repeated the communication, and shall verbally confirm the communication to be correct or reinitiate the communication until a correct response is given by the recipient. An exception is allowed for Reliability Directives that are issued via “All-Call”, during which the initiator shall ensure that all the receiving parties have positively acknowledged receipt of message rather than verbally repeating the message. [Violation Risk Factor: High][Time Horizon: Real-time Operations] R_. Each Reliability Coordinator, Balancing Authority, Transmission Owner, Transmission Operator, Generator Operator, Transmission Service Provider, Load Serving Entity, Distribution Provider and Purchasing-Selling Entity that receives a Reliability Directive during verbal Operating Communications shall employ three-part communication protocol [footnote 1] to repeat the communication back to the initiator and await verbal confirmation from the initiator. An exception is allowed for the recipient of an “All-Call” Reliability Directive to acknowledge receipt of the message and is responsible to contact initiator if message is not understood rather than verbally repeating the message. [Violation Risk Factor: High][Time Horizon: Real time] Footnote 1: A Communication Protocol where information is verbally stated by a party initiating a communication, the information is repeated back correctly (not necessarily verbatim) to the party that initiated the communication by the second party that received the communication, and the same information is verbally confirmed to be correct by the party who initiated the communication.
Response: The RCSDT thanks you for your comment. The RCSDT believes that we are addressing the Blackout Recommendation #26 regarding “tighten communications protocols, especially during alert and emergency situations” in our proposed definition and requirements for COM-002. We have not precluded issuance of Reliability Directives by non-verbal means and the requirements of proposed COM-002 would apply. Respecting the importance of Reliability Directives during Emergency situations, the RCSDT does not believe that exceptions to the clear, concise three part communications indicated in COM-002 are appropriate regardless of the medium used to communicate. In addition, the current format of the requirements provides more effective way to measure compliance.		
Ameren	No	(1) As stated in #4 above, the definition of Reliability Directive is not clear. (2) The VSLs for R3 appear to have some redundancy. (3) Also in R3, the phrase regarding R2 should be changed to “(as described in R2, above)”
Response: The RCSDT thanks you for your comment. 1) Please see response to question 4.		

Organization	Yes or No	Question 5 Comment
2) The RCSDT concurs. We have deleted the Severe VSL and moved the High VSL to the Severe category. 3) We have revised the phrase to be consistent with the verbiage in R2 as follows: “per Requirement R2” which meets the intent of your comment “as described”.		
Southwest Power Pool	No	1) By NERC’s Functional Model the RC, BA, TOP, and DP issues directives. (DP to LSE)COM-002-3 R2... the recipient of a Reliability Directive issued per Requirement R1, shall repeat the intent of the Reliability Directive back to the issuer of the Reliability Directive. 2) COM-003-1 R5... shall use Three-part Communications when issuing a directive during verbal Interoperability Communications. Implementation Plan for COM-002-3 states R2 will stay, for COM-003-1 states that COM_002-3 R2 will go away. The two requirements don’t agree with each other, COM-002-3 R2 wants the Intent repeated back, where COM-003-1 R5 per the Three-part Communication definition “...the information is repeated back correctly to the party that initiated the communication”.
Response: The RCSDT thanks you for your comment. 1) The RCSDT notes that, per the Functional Model, a DP may “direct” an LSE to communicate requests for voluntary load curtailment and not reliability situations: Item 9 on page 47 of version 5 of the Functional Model: “Directs Load-Serving Entities to communicate requests for voluntary load curtailment.” The RCSDT will forward this comment to the FMWG for their consideration in revising the language. 2) The RCSDT believes that we are addressing the Blackout Recommendation #26 regarding “tighten communications protocols, especially during alert and emergency situations” in our proposed definition and requirements for COM-002. The RCSDT feels that the concept of a Reliability Directive is an important tool for RC, BA and TOP to maintain reliability and that the revisions are consistent with parts of the directives in FERC Order 693. The work of the RCSDT along with the OPCPSDT, as currently recognized, will cover the original intent of COM-002 and still provide a “defense in depth strategy” as suggested by the NERC comment. Stakeholder requests and consensus appears to have been achieved with respect to the definition of Reliability Directive and the requirements that the RCSDT have developed for COM-002. This will further the efforts of the OCPC SDT in achieving stakeholder consensus for their proposed requirements in COM-003. Merging of the two standards is a work in progress and will ultimately be decided by stakeholder consensus.		
Central Lincoln	No	Consider the following example. Director calls Directee. Telephone is answered by the Directee's receptionist. Director states that he has a Reliability Directive, and proceeds to deliver it. Receptionist manages to parrot the directive, but has no clue what is being asked. Director confirms receptionist has parroted the directive accurately. Both parties have met the requirements (avoiding a high risk, severe violation), but the three way conversation only wasted the time of both parties and delayed the performance of the directive. The Director should be required to attempt to reach someone with the authority and understanding needed to carry out the

Organization	Yes or No	Question 5 Comment
		directive.
Response: The RCSDT thanks you for your comment. The requirements of the standard do not consider how staffing at a particular functional entity is achieved. This is covered in the PER standards. It is incumbent on the registered entity to comply with the requirements of the COM-002 standard as well as all other requirements, some of which will likely be violated in the example above.		
CECD	No	For R3, the drafting team should clarify that if a directive is reissued due to a misunderstanding the receiving party should repeat the reissued directive so that the RC, BA or TOP can verify that the directive is understood correctly.
Response: The RCSDT thanks you for your comment. The RCSDT believes that this situation is covered by R2.		
Duke Energy	No	- o It is not clear whether Requirements R2 and R3 are intended to apply to other than verbal Reliability Directives. We have difficulty envisioning how “repeat back” and “acknowledge the response” would be expected to work with electronic communications. - o Delete the phrase “issued per Requirement R1” from R2, since R1 should be deleted per our Comment #4 above. - o Revise R3 as follows, to conform to our proposed revised definition in Comment #4 above: “Each Reliability Coordinator, Transmission Operator, and Balancing Authority that initiates a Reliability Directive shall acknowledge the response from the recipient as correct, or reissue the Reliability Directive to resolve any misunderstandings.” - o We believe that only 2 VSLs are appropriate for R3. o Lower - The responsible entity issued a Reliability Directive, but did not acknowledge that the recipient repeated the intent of the Reliability Directive correctly. - o Severe - The responsible entity issued a Reliability Directive and failed to reissue the Reliability Directive to resolve any misunderstandings when the intent of the Reliability Directive was not repeated correctly by the recipient.
Response: The RCSDT thanks you for your comment. The requirements of COM-002 do not preclude non-verbal issuance of directives. It is incumbent on the entity to ensure compliance with the requirements		
R2: We have not retired R1 (see response to Q4) and therefore do not feel this is an appropriate revision.		
R3: See response to question 4. The RCSDT believes that R3 is appropriate as written.		
VSL: The RCSDT has deleted the Severe VSL and moved the High VSL to Severe. We believe that there are two possible actions within the		

Organization	Yes or No	Question 5 Comment
requirement and failure to perform either warrants a Severe VSL.		
Exelon	No	Please clarify R2 to 'repeat back' a Directive; the definition of Directive does not distinguish between verbal and other methods of communication. Is an electronic response to a verbal or non-verbal Directive allowed?
Response: The RCSDT thanks you for your comment. The requirements of COM-002 do not preclude non-verbal issuance of directives. It is incumbent on the entity to ensure compliance with the requirements.		
Manitoba Hydro	No	R2 requires "recipient to repeat back" and R3 requires "RC, TOP, BA to acknowledge". This procedure is NOT identified as Three Part Communication which in fact is. Three Part Communication should be a common theme for all entities, including RC's. So why not use the same or similar Requirement as used in COM-002-2 R2 Three-Part Communication.
Response: The RCSDT thanks you for your comment. The concept of three part communication is in existing COM-002-2, R2 and a definition for the term is being proposed by the OCPD SDT. The RCSDT feels that the concept of a Reliability Directive is a unique and important tool for RC, BA and TOP to maintain reliability that is separate from that effort. The requirements of COM-002 are explicit for Reliability Directives and are consistent with parts of the directives in FERC Order 693. Stakeholder requests and consensus appears to have been achieved with respect to the definition of Reliability Directive and the requirements that the RCSDT have developed for COM-002. This will further the efforts of the OCPD SDT in achieving stakeholder consensus for their proposed requirements in COM-003. Merging of the two standards is a work in progress and will ultimately be decided by stakeholder consensus.		
E.ON U.S.	No	See comment to question 8.
Response: The RCSDT thanks you for your comment. Please see response to question 8.		
NERC	No	See response to Question 4.
Response: The RCSDT thanks you for your comment. Please see response to question 4.		
PPL	No	Suggest removing Purchasing-Selling Entity from the standard as a PSE does not receive Reliability Directives from a BA, RC, or TOP.
Response: The RCSDT thanks you for your comment. Prior stakeholder comments (during previous postings of this standard) indicated that PSE should be an applicable entity.		

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Organization	Yes or No	Question 5 Comment
Independent Electricity System Operator	No	The High and Severe VSLs for R3 appear to be the same. We suggest to remove the High VSL and change the Severe VSL to: "The responsible entity issued a Reliability Directive, but did not acknowledge that the recipient in R2 repeated the intent of the Reliability Directive correctly OR resolve any misunderstandings when the intent of the Reliability Directive was not repeated correctly by the recipient."
Response: The RCSDT thanks you for your comment. We have deleted the Severe VSL and moved the High VSL to the Severe category. We believe this meets the intent of your comment.		
South Carolina Electric and Gas	No	The SDT needs to evaluate the redundancy associated with COM-003-1 Req 5 and COM-002-3 Req 2&3.
Response: The RCSDT thanks you for your comment. The RSDT does not believe that there is redundancy between the standards. COM-002 relates only to Reliability Directives while COM-003 deals with other forms of communication.		
Hydro-Québec TransEnergie (HQT)	No	The VSLs for R3 appear to have some redundancy. The Severe VSL and the second condition in the High VSL appear to be similar or the same. We suggest remove the High VSL, and revise the Severe VSL to:"The responsible entity issued a Reliability Directive, but did not acknowledge that the recipient in R2 repeated the intent of the Reliability Directive correctly OR resolve any misunderstandings when the intent of the Reliability Directive was not repeated correctly by the recipient."
Northeast Power Coordinating Council	No	The VSLs for R3 appear to have some redundancy. The Severe VSL and the second condition in the High VSL appear to be similar or the same. Suggest removing the High VSL, and revise the Severe VSL to:"The responsible entity issued a Reliability Directive, but did not acknowledge that the recipient in R2 repeated the intent of the Reliability Directive correctly OR resolve any misunderstandings when the intent of the Reliability Directive was not repeated correctly by the recipient."
Response: The RCSDT thanks you for your comment. We have deleted the Severe VSL and moved the High VSL to the Severe category. We believe this meets the intent of your comment.		
PNGC Power (15 member utilities)	No	There is a chance that a reliability directive given to a smaller entity will be taken by a receptionist or answering service. Requirement R2 should be more specific about contacting an operational authority directly to relay reliability directives.
Response: The RCSDT thanks you for your comment. The requirements of the standard do not consider how staffing at a particular functional entity is achieved. This is covered in the PER standards. It is incumbent on the registered entity to comply with the requirements of the COM-002 standard as well as all other requirements, some of which will likely be violated in the example above.		

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

Organization	Yes or No	Question 5 Comment
Midwest ISO Standards Collaborators	No	We agree with most of this standard and the apparent intent. However, there are some specific issues. For instance, measurement of compliance to R1 could be challenging. As the VSL is written, it would appear the compliance auditor could judge if a Reliability Directive should have been issued. The VSL language that is problematic is “The responsible entity that required actions to be executed”. Who determines that actions were required? One could argue that failure to identify a communication as a Reliability Directive means that actions weren’t required but it is doubtful the compliance authorities would take this approach. Thus, there would appear to be great judgment left to the compliance auditor in determining if a Reliability Directive should have been issued. The combination of the COM-002-3 standard and the definition of Reliability directive do not clearly specify that the communication is verbal and between only two responsible entities. Otherwise, the communication could be considered a blast call, written correspondence or conversation between operators within the same responsible entity. We have offered proposed modifications to the definition of Reliability Directive in Q5 to solve this issue. Alternatively, the issue could be addressed by modifying the requirements. The VSLs for R3 appear to have some redundancy. The Severe VSL and the second condition in the High VSL appear to be similar or the same.
NERC Standards Review Subcommittee	No	We agree with most of this standard and the apparent intent. However, there are some specific issues. For instance, measurement of compliance to R1 could be challenging. As the VSL is written, it would appear the compliance auditor could judge if a Reliability Directive should have been issued. The VSL language that is problematic is “The responsible entity that required actions to be executed”. Who determines that actions were required? One could argue that failure to identify a communication as a Reliability Directive means that actions weren’t required but it is doubtful the compliance authorities would take this approach. Thus, there would appear to be great judgment left to the compliance auditor in determining if a Reliability Directive should have been issued. The combination of the COM-002-3 standard and the definition of Reliability directive do not clearly specify that the communication is verbal and between only two responsible entities. Otherwise, the communication could be considered a blast call, written correspondence or conversation between operators within the same responsible entity. We have offered proposed modifications to the definition of Reliability Directive in Q5 to solve this issue. Alternatively, the issue could be addressed by modifying the requirements. The VSLs for R3 appear to have some redundancy. The Severe VSL and the second condition in the High VSL appear to be similar or the same.
Response: The RCSDT thanks you for your comment. R1: The VSL is a compliance tool that is ONLY used after a violation of the requirement has been determined. COM-002 does not provide guidance on when to issue a Reliability Directive, only that, when they issue Reliability Directives, they comply with the requirements of COM-002. Proposed IRO-		

Organization	Yes or No	Question 5 Comment
001-2, R1 covers the issue of conditions that merit issuing a Reliability Directive. Blast Call: The intent of the definition is to not preclude text or other forms of communication for issuing Reliability Directives. However, entities are still obligated to comply with the requirements of COM-002. VSL: We have deleted the Severe VSL and moved the High VSL to the Severe category. We believe this meets the intent of your comment.		
FirstEnergy	No	We believe that this standard should be either handed to the OPCPSDT (Project 2007-02) or the OPCPSDT should hand over the COM-003-1 standard to this RCSDT (Project 2006-06); and then COM-002 and COM-003 should be merged. For further explanation of our suggestions, see our comments in Question #8 .
Response: The RCSDT thanks you for your comment. The RCSDT feels that the concept of a Reliability Directive is an important tool for RC, BA and TOP to maintain reliability and that the revisions are consistent with parts of the directives in FERC Order 693. The work of the RCSDT along with the OPCPSDT, as currently recognized, will cover the original intent of COM-002 and still provide a “defense in depth strategy” as suggested by the NERC comment. Stakeholder requests and consensus appears to have been achieved with respect to the definition of Reliability Directive and the requirements that the RCSDT have developed for COM-002. This will further the efforts of the OCPC SDT in achieving stakeholder consensus for their proposed requirements in COM-003. Merging of the two standards is a work in progress and will ultimately be decided by stakeholder consensus.		
American Transmission Company	Yes	
Bonneville Power Administration	Yes	
Electric Market Policy	Yes	
Florida Municipal Power Agency and Some Members	Yes	
IRC Standards Review Committee	Yes	
ISO New England Inc	Yes	
OC Standards Review Group	Yes	
PacifiCorp	Yes	

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Organization	Yes or No	Question 5 Comment
Pepco Holdings, Inc	Yes	
Southern Company Services	Yes	
US Bureau of Reclamation	Yes	
Western Area Power Administration	Yes	
Western Electricity Coordinating Council	Yes	
Puget Sound Energy	No	Under the current proposed language of R2, it appears possible that a recipient of a Reliability Directive not identified as such may still be held responsible for failing to comply with R2, because the word “per” has several meanings. While those meanings do include “in accordance with”, it would be clearer to simply use that phrase. As a result, recommend the replacement of the phrase “issued per” with “identified as such in accordance with”.
Response: The RCSDT thanks you for your comment. The RCSDT believes that the suggested revision does not provide additional clarity to the requirements.		
ITC Holdings	Yes	None
Northeast Utilities	Yes	Support the intent of the changes. However, it is unclear if the mechanics of R1 require the initiator to actually state “This is a Reliability Directive ...”.
Response: The RCSDT thanks you for your comment. The RCSDT intends for such a statement to be made. Using that exact verbiage in a requirement is too prescriptive and we leave the exact language up to the issuer as long as they identify it as a Reliability Directive.		
American Electric Power	Yes	Why is the term “three part communications” not used in this set of requirements?
Response: The RCSDT thanks you for your comment. While the requirements embody three part communications, the RCSDT believes it is clearer to have explicit requirements for each part of the process that requires a specific action.		
ERCOT ISO	No	R1: ERCOT ISO recommends that the requirement be revised to simply state that the entity has to identify

Organization	Yes or No	Question 5 Comment
		when it is a reliability directive, such that it reads as follows: R1. When applicable, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i> The deleted language introduces subjectivity and is unnecessary. The use of the defined term implicitly determines when Reliability Directives are issued and it is unnecessary to impose the condition precedent of identifying an action as Reliability Directive. This is unnecessary and just creates confusion. R2: ERCOT ISO recommends removal of “the intent” such that it reads as follows: R2. Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat the Reliability Directive back to the issuer of the Reliability Directive. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i> ERCOT ISO believes using “intent” in this requirement was intended to mitigate the practical fact that it is difficult to repeat, verbatim, a directive. However, use of the word intent could introduce confusion. A directive will require certain actions to accomplish a specific purpose or to solve a specific problem. Thus, the intent of a directive has two components to the intent; the first is the specific actions to be taken and the second is the underlying reason for those actions. The recipient will obviously be privy to the former, but perhaps not the latter. To remove any ambiguity as to whether intent means the actions or the issue to be solved by such actions, the word should be removed. ERCOT believes there is little risk that an auditor will issue a violation if a repeated directive is not verbatim, but reflects the actions to be taken pursuant to the directive. Further, ERCOT ISO recommends working closely with the Operating Personnel Communication Protocol SDT to address all-calls as exceptions. It is practically unreasonable to require multiple recipients on the same communication to repeat the directive back. In fact, it is counterproductive because the time it takes to do that would delay the recipients from taking the needed reliability action(s). ERCOT recommends the following language to address “all-calls”: (COM-003) R2. Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive shall repeat the Reliability Directive back to the issuer of the Reliability Directive. An exception is allowed for Reliability Directives that are issued via “All-Call” communications. For All-Calls, the entity issuing the directive shall require recipients to acknowledge receipt of message.

Organization	Yes or No	Question 5 Comment
		R3: ERCOT ISO recommends that R3 be combined with R2. Regardless of whether it is combined with R2, the identification precondition should be removed such that the requirement reads as follows: R3. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a Reliability Directive shall acknowledge the response from the recipient of the Reliability Directive in R2 as correct or reissue the Reliability Directive to resolve any misunderstandings. <i>[Violation Risk Factor: High][Time Horizon: Real-Time]</i> The identification pre-condition is unnecessary – again, the defined term is self-executing in terms of situational application. Imposition of this superfluous language merely creates the potential for confusion. M1: ERCOT ISO recommends removing “required actions to be taken” language for the same reason this pre-condition does not make sense in the requirement, as described above. M3: ERCOT ISO recommends that “Directive” be replaced with “Reliability Directive” because Directive is not the full defined term.
Response: The RCSDT thanks you for your comment. R1: The RCSDT believes that the requirement, as written is clear and disagrees that it introduces subjectivity. COM-002 does not provide guidance on when to issue a Reliability Directive, only that, when they issue Reliability Directives, they comply with the requirements of COM-002. We feel that adding the phrase “When applicable” adds subjectivity to the requirement. R2: Without the words “the intent”, the requirement could be interpreted to mean a verbatim repeat of the Reliability Directive. The RCSDT does not intend for this to be the case and believes that the requirement, as written, is clear and provides sufficient flexibility to meet the requirement. The requirements of COM-002 do not preclude non-verbal (e.g. “all calls”) issuance of directives regardless of the medium. It is incumbent on the entity to ensure compliance with the requirements. The RCSDT feels that the concept of a Reliability Directive is an important tool for RC, BA and TOP to maintain reliability and that the revisions are consistent with parts of the directives in FERC Order 693. The work of the RCSDT along with the OPCSDT, as currently recognized, will cover the original intent of COM-002 and still provide a “defense in depth strategy” as suggested by the NERC comment. R3: The RCSDT believes that the steps in R2 and R3 are separate and distinct actions that require separate requirements. Otherwise, we would have compound requirements. We concur with your suggested edit to R3. M1: We did not make the revision to R1 and therefore M1 is sufficient as written. M3: We have revised M3 as suggested and to conform to revised R3.		

- 6 Do you agree with the use of the defined term “Reliability Directive” in revisions to the Requirements in IRO-001-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Summary Consideration: The comments regarding question six ranged from small entities being excluded to if regulatory or statutory requirements covers NERC standards. The SDT addressed these by noting registration is not in the SDT scope and NERC’s general council should be contacted for regulatory issues.

A few commenter’s expressed concern with the VSL for R2 and one suggested the words "per Requirement 2," should be added. The SDT believes the phrase “per Requirement 2” is not necessary as a VSL is only applied AFTER a compliance violation is determined.

Value added comments such as a concern of the use of the word “threat” as it can be defined as cyber-related and suggested replacing “Operating Personnel” with “System Operator” were also made. The SDT concurred and removed the word “threat” and replaced it with “condition” and also made the revision to System Operator.

There were numerous comments regarding the definition of Reliability Directive with multiple wording suggestions. While slightly out of scope for question six, the SDT expected and viewed these as attempting to reach middle ground.

Some commenter’s expressed concern over clarify that the RC has three separate actions. The RC can act, direct others to act, or issue Reliability Directives. The SDT modified R1 to read: " Each Reliability Coordinator shall take actions or direct actions, which could include issuing Reliability Directives, of Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts."

Note: Based on discussions with FERC staff, the SDT agreed to make the following changes:

IRO-001-2 Requirements R4, R5 and associated Measures and VSLs are moved to IRO-005-4

IRO-001-2 Requirements R6, R7 and associated Measures and VSLs are moved to IRO-002-2

Organization	Yes or No	Question 6 Comment
Calpine Corporation		

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

Organization	Yes or No	Question 6 Comment
Public Service Enterprise Group Companies		
Operating Personnel Communications Protocols SDT		No Comment
FirstEnergy	No	Although we agree that a clear definition of Reliability Directive should be included in IRO-001-2, the definition should be revised per our comments in Question #8.
Response: The RCSDT thanks you for your comment. Please see response to question 8.		
North Carolina Municipal Power Agency #1	No	For IRO-001-2, the VSL for R2 should retain the words "per Requirement 2," because the requirement itself provides for exceptions to when it is permissible for a directive not to be followed. Requirement 3 then addresses the required action an entity must take in a case where these exceptions apply. Without these words, it appears that a VSL of "Severe" may be assigned if a directive isn't followed under any circumstances.
Response: The RCSDT thanks you for your comment. The phrase "per Requirement 2" is not necessary as a VSL is only applied AFTER a compliance violation is determined. The requirement provides the exceptions and compliance will be judged based on this.		
NERC	No	In principle, NERC staff disagrees with the necessity of defining a term "Reliability Directive." However, the principle involved in the standard is valid. The standard needs to ensure that if the Reliability Coordinator directs an entity to take action that results in an adverse reliability impact, that entity has a chance to raise valid objection to that action. Additional clarification is needed to determine if regulatory or statutory requirements covers NERC standards. One possible solution would be to modify R3 from "its inability to perform" to "its inability or concern to perform." Furthermore, in R4 and R5 the RC is expected to identify "threats" and notify all impacted parties. We have concerns that "threat" can be defined as cyber-related. Was the standard intended to cover all anticipated threats, or just transmission/operating issues? R6 Since Operating Personnel is not a NERC defined term, we suggest replacing "Operating Personnel" with "System Operator."
Response: The RCSDT thanks you for your comment.		

Organization	Yes or No	Question 6 Comment
“Concern”: We believe that your concern is covered by the “unless such actions would violate safety, equipment, or regulatory or statutory requirements” statement in R2. Regulatory: The RCSDT suggests that NERC staff seek input from NERC’s General Counsel in regards to this issue. R4 and R5: The word threat was not intended to be cyber related. The CIP standards cover cyber “threats”. To that end, we have removed the word “threat” and replaced it with “condition”. R4, R5 and associated Measures and VSLs are moved to IRO-005-4. R6: We concur and have made this revision.		
OC Standards Review Group	No	In R1, we suggest adding “direct” in the sentence to read: “Each Reliability Coordinator shall act, “direct” or issue Reliability Directives....” During adverse reliability impact events, system operators should not be bound by a cumbersome three part communications regime that could prevent prompt responses to the event. The suggested change would allow for non reliability directives to be issued to correct adverse reliability impacts.
Response: The RCSDT thanks you for your comment. The RCSDT agrees in principle with adding “direct” to the requirement. In addition, the requirements of COM-002 should be complied with, especially in such situations. We have revised R1 to state: Each Reliability Coordinator shall take actions or direct actions, which could include issuing Reliability Directives, of Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. To address comments received on R1, we have also revised the Purpose Statement to: To establish the capability and authority of Reliability Coordinators to direct other entities to prevent Adverse Reliability Impacts to the Bulk Electric System Conforming revisions to M1 and the VSLs for R1 were also made.		
Southern Company Services	No	Including the requirement of issuing directives every time an action is required by an entity assumes that entities cannot work in a spirit of cooperation to maintain the reliability of the Bulk Electric System.
Response: The RCSDT thanks you for your comment. To address your concern, we have revised R1 to state: “Each Reliability Coordinator shall take actions or direct actions, which could include issuing Reliability Directives, of Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. To address comments received on R1, we have also revised the Purpose Statement to: To establish the capability and authority of Reliability Coordinators to direct other entities to prevent Adverse Reliability Impacts to the Bulk Electric System		

Organization	Yes or No	Question 6 Comment
We Energies	No	IRO-001-2 R1 opens the door for determining if the RC should have issued a Reliability Directive to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts which goes beyond the intention of Emergency. The RC should have any and all options to achieve the required actions, one of which is a Reliability Directive. Agreed if the RC issues a Reliability Directive it needs to be followed or notified why it can't be followed. In IRO-009"the Reliability Coordinator shall have one or more Operating Processes, Procedures, or Plans that identify actions it shall take or actions it shall direct others to take (up to and including load shedding) to mitigate the magnitude and duration of" Recommend "Each Reliability Coordinator, in it's sole discretion, shall take action independently or by others or issue Reliability Directives for actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts. "In addition the measures assume the RC only works through others, and others only act under Directive from the RC and do not allow for operational data to be used to show action was taken like SCADA logs, or system parameter records for any entity. The Data Retention is excessive, RC, BA, TOP are on a 3 yr audit cycle, others on a 6yr cycle this is way too long, recommend one full calendar year plus the current year.
Response: The RCSDT thanks you for your comment. To address your concern, we have revised R1 to state: Each Reliability Coordinator shall take actions or direct actions, which could include issuing Reliability Directives, of Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. To address comments received on R1, we have also revised the Purpose Statement to: To establish the capability and authority of Reliability Coordinators to direct other entities to prevent Adverse Reliability Impacts to the Bulk Electric System - o We have revised the data retention section to: The Reliability Coordinator shall retain its evidence for 90 days for Requirements R1 and Measures M1. - o The Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider, Transmission Service Provider, Purchasing-Selling Entity or Load Serving Entity shall retain its evidence for 90 days for Requirements R2 and R3, Measures M2 and M3.		

Organization	Yes or No	Question 6 Comment
American Electric Power	No	Please refer to our response to question #4.
Hydro-Québec TransEnergie (HQT)	No	Please see our proposed wording change under Q4.
Independent Electricity System Operator	No	Please see our proposed wording change under Q4.
IRC Standards Review Committee	No	Please see our proposed wording change under Q4.
Northeast Power Coordinating Council	No	Please see our proposed wording change under Question 4.
Response: The RCSDT thanks you for your comment. Please see response to Question 4.		
E.ON U.S.	No	See comments to question 4 and question 8.
Response: The RCSDT thanks you for your comment. Please see response to Question 4 and Question 8.		
Ameren	No	See response to #4.
Electric Market Policy	No	See response to Q4
Response: The RCSDT thanks you for your comment. Please see response to Question 4.		
PNGC Power (15 member utilities)	No	Small non 24/7 entities in WECC should be excluded from these requirements. Not doing so will create a financial burden for little discernable effect.
Response: The RCSDT thanks you for your comment. It is beyond the scope of the RCSDT to determine registration or compliance issues.		
Manitoba Hydro	No	The use of this definition in this requirement appears appropriate at this time, but the definition of Reliability Directive issue remain the same as identified on Question 4 of this document.

Organization	Yes or No	Question 6 Comment
Response: The RCSDT thanks you for your comment. Please see response to question 4.		
Central Lincoln	No	These requirements should be waived in the WECC region, where the RC has stated they will not be interacting with most of the registered entities. http://www.bpa.gov/corporate/business/reliability/Docs/2007/PNSC_RE_Data_Letter_2_070723.pdf
Response: The RCSDT thanks you for your comment. It is beyond the scope of the RCSDT to determine registration or compliance issues.		
US Bureau of Reclamation	No	This change is problematic in that any automatic protective element operation that trips a BES element could be construed to be an Adverse Reliability Impact. The modification eliminated the phrase “that affects a widespread area of the Interconnection” which clarified the scope of “uncontrolled separation”. We would need the definition to be adjusted to delete “uncontrolled separation” as it is included in the definition of Cascading.
Response: The RCSDT thanks you for your comment. We concur with your comment and have removed “uncontrolled separation” from the proposed definition revision.		
ISO New England Inc	No	We believe that the Reliability Directive definition should be: “A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where action by the recipient is necessary to address an actual or expected emergency and the RC, TOP or BA operator clearly identifies in the communication that this is a Reliability Directive.”
Response: The RCSDT thanks you for your comment. The RCSDT believes that your suggested revision would impose a requirement within the definition.		
Western Electricity Coordinating Council	No	We do not agree with the definition (see above question 4) but it does clear up when a directive is required.
Response: The RCSDT thanks you for your comment. Please see response to question 4.		
Midwest ISO Standards Collaborators	No	We largely agree with the use of the Reliability Directive term but have some suggested some refinements in the previous questions to the definition and requirements.
NERC Standards Review Subcommittee	No	We largely agree with the use of the Reliability Directive term but have some suggested some refinements in the previous questions to the definition and requirements.

Organization	Yes or No	Question 6 Comment
Response: The RCSDT thanks you for your comment. Please see responses to questions 4 and 5.		
Duke Energy	No	We propose a revised definition of the term “Reliability Directive” in our Comment #4 above. Requirement R1 should be reworded to clarify that the RC has three separate actions. The RC can act, direct others to act, or issue Reliability Directives. Requirements R2 and R3 should be revised to include the fact that the listed entities must comply with RC directions as well as Reliability Directives, or inform the RC of their inability to comply. Measures and VSLs should also be revised accordingly.
Response: The RCSDT thanks you for your comment. Definition: Please see response to question 4 with respect to the definition. R1: To address your comment as well as the comments of other stakeholders, we have revised R1 to state: Each Reliability Coordinator shall take actions or direct actions, which could include issuing Reliability Directives, of Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts.. We have also revised the Purpose Statement to: To establish the capability and authority of Reliability Coordinators to direct other entities to prevent Adverse Reliability Impacts to the Bulk Electric System Conforming revisions to M1 and the VSLs for R1 were also made. R2 and R3: The RCSDT believes that revised R2 and R3 now satisfy your requested revision.		
American Transmission Company	Yes	
Bonneville Power Administration	Yes	
CECD	Yes	
Exelon	Yes	
Florida Municipal Power Agency	Yes	

Organization	Yes or No	Question 6 Comment
and Some Members		
Northeast Utilities	Yes	
PacifiCorp	Yes	
PPL	Yes	
Puget Sound Energy	Yes	
South Carolina Electric and Gas	Yes	
Southwest Power Pool	Yes	
Western Area Power Administration	Yes	
Xcel Energy	Yes	
ITC Holdings	Yes	None
Pepco Holdings, Inc	Yes	Requirement R1 should recognize the RC's option to "direct others to act"
Response: The RCSDT thanks you for your comment. R1: To address your comment as well as the comments of other stakeholders, we have revised R1 to state: Each Reliability Coordinator shall take actions or direct actions, which could include issuing Reliability Directives, of Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. We have also revised the Purpose Statement to: To establish the capability and authority of Reliability Coordinators to direct other entities to prevent Adverse Reliability Impacts to the Bulk Electric System Conforming revisions to M1 and the VSLs for R1 were also made.		
ERCOT ISO	No	As an initial matter, ERCOT ISO disagrees with the definition of Reliability Directive - See response to Question 4.

Organization	Yes or No	Question 6 Comment
		With respect to the use of Reliability Directive in IRO-001-2, ERCOT ISO does not necessarily take issue with using the term in this context. However, by doing so, the Drafting Team should consider whether doing so effectively defines Emergency in terms of the specific conditions that define Adverse Reliability Impact (i.e. instability, uncontrolled separation or cascading), because Reliability Directives, by definition, are only issued during emergencies, and pursuant to R1 of IRO-001-2, the relevant entities issue a Reliability Directive for instances that result in Adverse Reliability Impacts. Accordingly, use of Reliability Directive in this Standard may effectively revise the definition of Emergency (although it is arguable that the relevant specific conditions are clearly Emergency conditions), and ERCOT ISO questions whether this is appropriate. It may be advisable to not use the term here or to revise the definition to explicitly include these conditions. In addition, ERCOT ISO recommends the following non-substantive revisions to R1, R2 and R3. <u>R1</u> SDT PROPOSED LANGUAGE R1. Each Reliability Coordinator shall act or issue Reliability Directives for actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations and Same Day Operations]</i> ERCOT PROPOSED LANGUAGE R1. Each Reliability Coordinator shall act to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts. RC actions pursuant to this requirement may include the issuance of Reliability Directives to Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations and Same Day Operations]</i> <u>R2</u> SDT PROPOSED LANGUAGE R2. Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity shall comply with its Reliability Coordinator's Reliability Directives unless such actions would violate safety, equipment, or regulatory or statutory requirements. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations]</i>

Organization	Yes or No	Question 6 Comment
		ERCOT PROPOSED LANGUAGE R2. Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity shall comply with Reliability Directives issued pursuant to R1 unless such actions would violate safety, equipment, or regulatory or statutory requirements. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations]</i> <u>R3</u> SDT PROPOSED LANGUAGE R3. Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity shall inform its Reliability Coordinator upon recognition of its inability to perform an issued Reliability Directive. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations]</i> ERCOT PROPOSED LANGUAGE R3. Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity shall inform its Reliability Coordinator if it cannot perform a Reliability Directive because it would violate safety, equipment, or regulatory or statutory requirements. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations and Same Day Operations]</i>
Response: The RCSDT thanks you for your comment. Please see responses to your comments on questions 4 and 5. Definitions: An Emergency is a system condition or event. Adverse Reliability Impact is the result of an Emergency or some other condition or event. To address your comment as well as the comments of other stakeholders, we have revised R1 to state: Each Reliability Coordinator shall take actions or direct actions, which could include issuing Reliability Directives, of Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. We have also revised the Purpose Statement to: To establish the capability and authority of Reliability Coordinators to direct other entities to prevent Adverse Reliability Impacts to the Bulk Electric System Conforming revisions to M1 and the VSLs for R1 were also made. R1, R2, R3: The RCSDT thanks you for your suggested revisions to R1, R2 and R3. Revised wording best reflects stakeholder consensus. The RCSDT developed wording of the requirements provides clear direction for actions of applicable entities and to provide clarity regarding compliance.		

Do you agree with the revisions to the Requirements in IRO-014-2 as shown in the posted Standard and Implementation Plan? If not, please explain in the comment area.

Summary Consideration: Several commenters made suggestions regarding R2. The original requirement was designed to accomplish in one requirement what is proposed by the commenters as three procedural requirements. R2 is worded to focus on defining what a “compliant plan” is. In the current requirement a “proposed plan” is not the same as a “compliant plan”.

The SDT viewed what the commenters are suggesting as follows:

- **The initiating RC would submit its “proposed plan” to the other RCs**
- **The receiving RCs would provide the initiating RC with their responses indicating whether or not they agree with the proposed roles/ actions offered by the initiating RC**
- **If one or more RCs do not agree with the roles/ actions, then the initiating RC would be required to offer an alternative proposal (and go back to the first bullet)**
- **When all RCs acknowledge that the proposed roles/ actions in the revised “proposed plan” are acceptable, then and only then would the “proposed plan” become a “compliant plan”**

A closer reading of the current R2 would show the current R2 accomplishes the exact same result but does so without interjecting the need for documenting the intervening processes. The SDT does not see the need to document why each proposal was or was not accepted; nor does the SDT see the need to document the negotiations that are involved in getting to “an agreed to plan”. For example the comments’ subrequirement to show the RC submitted its plan would require a paper trail for the request; followed by a paper trail for the responses, followed by more paperwork if the RCs are not in agreement. In the end, the only action that matters (in both the SDT version and in the commenters alternative version) is a plan that works, and a plan that if others are involved must have their concurrence that those others will participate.

R2 does not impose a requirement to get agreements; what R2 does is to require that a “compliant plan” be developed. A proposed plan does not solve problems. That proposed plan is NOT compliant with R2 if it only assumes that other RC will effect the actions in the proposal; neither is it compliant if the proposed actions are not acceptable to the other RCs who are required to act. To be compliant the initiating RC must either have the concurrence (i.e. agreement) of the other RCs for their respective part(s) in the proposed plans OR the plan must not include those RCs.

R2 says to be compliant the other RC must agree with the “proposed plan” before that “proposed plan” is acceptable as a “compliant plan”. Having a plan that requires someone else to do an action, but that other entity will not effect that action, will not resolve the problem at hand. Further having documentation that someone refuses to participate in the proposed plan does nothing to solve the problem at hand.

Organization	Yes or No	Question 7 Comment
Ameren		
American Transmission Company		
Calpine Corporation		
CECD		
E.ON U.S.		
Exelon		
North Carolina Municipal Power Agency #1		
Northeast Utilities		
Public Service Enterprise Group Companies		
Puget Sound Energy	Yes	
We Energies		
Operating Personnel Communications Protocols SDT		No Comment
PacifiCorp		No comment
Manitoba Hydro	No	

Organization	Yes or No	Question 7 Comment
Hydro-Québec TransEnergie (HQT)	No	R2 appropriately requires the RC experiencing the Adverse Reliability Impact to distribute its Operating Procedure, Process or Plan to other RCs required to take action. However, Subrequirement R2.1 places a burden to the initiating RC for actions over which it may not have any control, viz. agreeing to the procedures, process or plan by the receiving RCs that are required to take actions. We believe there should be requirements for: a. The initiating RC to seek agreements by the other RCs that are required to take actions; b. The receiving RCs to indicate agreement, or otherwise with a reason; and; c. The initiating RC to revise the procedures, process or plan. These requirements would place the needed responsibilities to the appropriate entities. If the SDT agrees with revising R2 as suggested, then other requirements that may be affected by this change may need to be revised accordingly. (ii) There is an extra “or” in the R8 clause: “unless such actions would violate safety, equipment, or regulatory or statutory requirements”.
IRC Standards Review Committee	No	(i) R2 appropriately requires the RC experiencing the Adverse Reliability Impact to distribute its Operating Procedure, Process or Plan to other RCs required to take action. However, Subrequirements R2.1 places a burden to the initiating RC for actions over which it may not have any control, viz. agreeing to the procedures, process or plan by the receiving RCs that are required to take actions. We believe there should be requirements for: a. The initiating RC to seek agreements by the other RCs that are required to take actions; b. The receiving RCs to indicate agreement, or otherwise with a reason; and; c. The initiating RC to revise the procedures, process or plan. These requirements would place the needed responsibilities to the appropriate entities. If the SDT agrees with revising R2 as suggested, then other requirements that may be affected by this change may need to be revised accordingly. (ii) There is an extra “or” in the R8 clause: “unless such actions would violate safety, equipment, or regulatory or statutory requirements”.
Northeast Power Coordinating Council	No	(i) R2 appropriately requires the RC experiencing the Adverse Reliability Impact to distribute its Operating Procedure, Process or Plan to other RCs required to take action. However, Subrequirement R2.1 places a burden on the initiating RC for actions over which it may not have any control, namely agreeing to the procedures, processes or plans by the receiving RCs that are required to take actions. There should be requirements for: a. The initiating RC to seek agreements by the other RCs that are required to take actions; b. The receiving RCs to indicate agreement, or otherwise with a reason; and; c. The initiating RC to revise the procedures, processes or plans. These requirements would place the needed responsibilities on the appropriate entities. If the SDT agrees with revising R2 as suggested, then other requirements may be affected by this change, and may need to be revised accordingly. (ii) There is an extra “or” in the R8 clause preceding “regulatory”: “unless such actions would violate safety, equipment, or regulatory or statutory requirements”.

Organization	Yes or No	Question 7 Comment
ISO New England Inc	No	R2 appropriately requires the RC experiencing the Adverse Reliability Impact to distribute its Operating Procedure, Process or Plan to other RCs required to take action. However, Subrequirements R2.1 places a burden to the initiating RC for actions over which it may not have any control, viz. agreeing to the procedures, process or plan by the receiving RCs that are required to take actions. We believe there should be requirements for: a. The initiating RC to seek agreements by the other RCs that are required to take actions; b. The receiving RCs to indicate agreement, or otherwise with a reason; and c. The initiating RC to revise the procedures, process or plan These requirements would place the needed responsibilities to the appropriate entities. If the SDT agrees with revising R2 as suggested, then other requirements that may be affected by this change may need to be revised accordingly. Response: The RCSdT thanks you for your comment. The original requirement was designed to accomplish in one requirement what is proposed by the commenters as three procedural requirements. R2 is worded to focus on defining what a “compliant plan” is. In the current requirement a “proposed plan” is not the same as a “compliant plan”. The SDT viewed what the commenters are suggesting as follows: • The initiating RC would submit its “proposed plan” to the other RCs • The receiving RCs would provide the initiating RC with their responses indicating whether or not they agree with the proposed roles/actions offered by the initiating RC • If one or more RCs do not agree with the roles/actions, then the initiating RC would be required to offer an alternative proposal (and go back to the first bullet) • When all RCs acknowledge that the proposed roles/actions in the revised “proposed plan” are acceptable, then and only then would the “proposed plan” become a “compliant plan” A closer reading of the current R2 would show the current R2 accomplishes the exact same result but does so without interjecting the need for documenting the intervening processes. The SDT does not see the need to document why each proposal was or was not accepted; nor does the SDT see the need for document the negotiations that are involved in getting to “an agreed to plan”. For example the comments’ subrequirement to show the RC submitted its plan would require a paper trail for the request; followed by a paper trail for the responses, followed by more paperwork if the RCs are not in agreement. In the end, the only action that matters (in both the SDT version and in the commenters alternative version) is a plan that works, and a plan that if others are involved must have their concurrence that those others will participate. R2 does not impose a requirement to get agreements; what R2 does is to require that a “compliant plan” be developed. A proposed plan does not solve problems. That proposed plan is NOT compliant with R2 if it only assumes that other RC will effect the actions in the proposal; neither is it compliant if the proposed actions are not acceptable to the other RCs who are required to act. To be compliant the initiating RC must either have the concurrence (i.e. agreement) of the other RCs for their respective part(s) in the proposed plans OR the plan must not include those RCs. R2 says to be compliant the other RC must agree with the “proposed plan” before that “proposed plan” is acceptable as a “compliant plan”. Having a plan that requires someone else to do an action, but that other entity will not effect that action, will not resolve the problem at hand. Further having

Organization	Yes or No	Question 7 Comment
documentation that someone refuses to participate in the proposed plan does nothing to solve the problem at hand.		
Midwest ISO Standards Collaborators	No	R2 appropriately requires the RC experiencing the Adverse Reliability Impact to distribute its Operating Procedure, Process or Plan to other RCs required to take action. However, it inappropriately places the burden on the same RC to obtain the agreement of impacted RCs. No RC can be forced to agree. Rather R2 should remove the bullet to require agreement from the impacted RC and a new requirement should be written to require the impacted RC to acknowledge the Operating Procedure, Process or Plan with agreement or disagreement. In the event of disagreement, a reliability or legal reason or failure to implement comparable actions should be given as the reason for not agreeing with the Operating Process, Procedure or Plan. This contributes to reliability by forcing the impacted RC to take action if the action is reasonable. There is an extra “or” in the R8 clause: “unless such actions would violate safety, equipment, or regulatory or statutory requirements”. IRO-014-2 R2 VSLs differentiate violations based on whether the plans, processes, and procedures were distributed or agreed to. How can another RC agree to them if it has not received them? Because it is unlikely that an RC will make notifications without exchanging reliability information or vice versa for IRO-014-2 R3, we suggest a more appropriate delineation for the VSLs would be based on the number of other impacted RCs that were not informed. IRO-014-2 R4 VSLs should be defined based upon the number of conference calls the RC does not participate in. R4 requires each RC to participate in “agreed upon conference calls”. Because the statement “conference calls” is plural, VSLs need to be set based on the aggregate of calls not participated in. Failure to assign VSLs in this way is equivalent to setting the requirement to “agreed upon conference call” and causes the VSLs to be in violation guideline 3 that the Commission established in their June 2008 Order on VSLs. Guideline 3 states that the VSL must be consistent with the requirement and cannot “redefine or undermine the requirement”. Clearly, these VSLs do. R5’s Severe VSL is redundant with the Moderate VSL. Failure to notify one RC meets both VSLs since Severe uses the word any. Based on the SDT’s response to our comment from the last time, we believe instead of any they mean “no impacted”. Unfortunately, “any impacted” could be one or two or higher. If it is one, it matches the Moderate VSL. The VSL for R8 needs to include the “unless such actions would violate safety, equipment, regulatory or statutory requirement” clause. In R1, should “Operating Procedures, Processes, or Plans” be “Operating Procedures, Operating Processes, or Operating Plans” to comport with the definitions in the NERC Glossary of Terms. We believe “Operating” is implied on “Processes” and “Plans” but believe it is more appropriate to make the meaning explicit with this modification since we are dealing with formal definitions.

Organization	Yes or No	Question 7 Comment
NERC Standards Review Subcommittee	No	R2 appropriately requires the RC experiencing the Adverse Reliability Impact to distribute its Operating Procedure, Process or Plan to other RCs required to take action. However, it inappropriately places the burden on the same RC to obtain the agreement of impacted RCs. No RC can be forced to agree. Rather R2 should remove the bullet to require agreement from the impacted RC and a new requirement should be written to require the impacted RC to acknowledge the Operating Procedure, Process or Plan with agreement or disagreement. In the event of disagreement, a reliability or legal reason or failure to implement comparable actions should be given as the reason for not agreeing with the Operating Process, Procedure or Plan. This contributes to reliability by forcing the impacted RC to take action if the action is reasonable. There is an extra “or” in the R8 clause: “unless such actions would violate safety, equipment, or regulatory or statutory requirements”. IRO-014-2 R2 VSLs differentiate violations based on whether the plans, processes, and procedures were distributed or agreed to. How can another RC agree to them if it has not received them? Because it is unlikely that an RC will make notifications without exchanging reliability information or vice versa for IRO-014-2 R3, we suggest a more appropriate delineation for the VSLs would be based on the number of other impacted RCs that were not informed. IRO-014-2 R4 VSLs should be defined based upon the number of conference calls the RC does not participate in. R4 requires each RC to participate in “agreed upon conference calls”. Because the statement “conference calls” is plural, VSLs need to be set based on the aggregate of calls not participated in. Failure to assign VSLs in this way is equivalent to setting the requirement to “agreed upon conference call” and causes the VSLs to be in violation guideline 3 that the Commission established in their June 2008 Order on VSLs. Guideline 3 states that the VSL must be consistent with the requirement and cannot “redefine or undermine the requirement”. Clearly, these VSLs do. R5’s Severe VSL is redundant with the Moderate VSL. Failure to notify one RC meets both VSLs since Severe uses the word any. Based on the SDT’s response to our comment from the last time, we believe instead of any they mean “no impacted”. Unfortunately, “any impacted” could be one or two or higher. If it is one, it matches the Moderate VSL. The VSL for R8 needs to include the “unless such actions would violate safety, equipment, regulatory or statutory requirement” clause.
Independent Electricity System Operator	No	R2 appropriately requires the RC experiencing the Adverse Reliability Impact to distribute its Operating Procedure, Process or Plan to other RCs required to take action. However, Subrequirements R2.1 places a burden to the initiating RC for actions over which it may not have any control, viz. agreeing to the procedures, process or plan by the receiving RCs that are required to take actions. We believe there should be requirements for: a. The initiating RC to seek agreements by the other RCs that are required to take actions; b. The receiving RCs to indicate agreement, or otherwise with a reason; and c. The initiating RC to revise the procedures, process or plan. These requirements would place the needed responsibilities to the appropriate entities. If the SDT agrees with revising R2 as suggested, then other requirements that may be affected by this change may need to be revised accordingly. There is an extra “or” in the R8 clause: “unless such

Organization	Yes or No	Question 7 Comment
		actions would violate safety, equipment, or regulatory or statutory requirements”. IRO-014-2 R2 VSLs differentiate violations based on whether the plans, processes, and procedures were distributed or agreed to. If an intended RC never received the plans, processes and procedures, it would not be aware of the need to agree to them. Hence, if the plans, etc. were not distributed, then the initiating RC will be assigned a Moderate VSL but never any higher VSLs even if no agreements were received (since no other RCs had received the plans to begin with). We suggest the SDT to consider rearranging the VSLs and in accordance with any changes to R2 reflecting our suggested changes summarized under Q7. Because it is unlikely that an RC will make notifications without exchanging reliability information or vice versa for IRO-014-2 R3, we suggest a more appropriate delineation for the VSLs would be based on the number of other impacted RCs that were not informed. IRO-014-2 R4 VSLs should be defined based upon the number of conference calls the RC does not participate in. R4 requires each RC to participate in “agreed upon conference calls”. Because the statement “conference calls” is plural, VSLs need to be set based on the aggregate of calls not participated in. Failure to assign VSLs in this way is equivalent to setting the requirement to “agreed upon conference call” and causes the VSLs to be in violation guideline 3 that the Commission established in their June 2008 Order on VSLs. Guideline 3 states that the VSL must be consistent with the requirement and cannot “redefine or undermine the requirement”. Clearly, these VSLs do. The VSL for R8 needs to include the “unless such actions would violate safety, equipment, regulatory or statutory requirement” clause.
Response: The RCSDT thanks you for your comment. The original requirement was designed to accomplish in one requirement what is proposed by the commenters as three procedural requirements. R2 is worded to focus on defining what a “compliant plan” is. In the current requirement a “proposed plan” is not the same as a “compliant plan”. The SDT viewed what the commenters are suggesting as follows: • The initiating RC would submit its “proposed plan” to the other RCs • The receiving RCs would provide the initiating RC with their responses indicating whether or not they agree with the proposed roles/actions offered by the initiating RC • If one or more RCs do not agree with the roles/actions, then the initiating RC would be required to offer an alternative proposal (and go back to the first bullet) • When all RCs acknowledge that the proposed roles/actions in the revised “proposed plan” are acceptable, then and only then would the “proposed plan” become a “compliant plan” A closer reading of the current R2 would show the the current R2 accomplish the exact same result but does so without interjecting the need for		

Organization	Yes or No	Question 7 Comment
documenting the intervening processes. The SDT does not see the need to document why each proposal was or was not accepted; nor does the SDT see the need for document the negotiations that are involved in getting to “an agreed to plan”. For example the comments’ subrequirement to show the RC submitted its plan would require a paper trail for the request; followed by a paper trail for the responses, followed by more paperwork if the RCs are not in agreement. In the end, the only action that matters (in both the SDT version and in the commenters alternative version) is a plan that works, and a plan that if others are involved must have their concurrence that those others will participate. R2 does not impose a requirement to get agreements; what R2 does is to require that a “compliant plan” be developed. A proposed plan does not solve problems. That proposed plan is NOT compliant with R2 if it only assumes that other RC will effect the actions in the proposal; neither is it compliant if the proposed actions are not acceptable to the other RCs who are required to act. To be compliant the initiating RC must either have the concurrence (i.e. agreement) of the other RCs for their respective part(s) in the proposed plans OR the plan must not include those RCs. R2 says to be compliant the other RC must agree with the “proposed plan” before that “proposed plan” is acceptable as a “compliant plan”. Having a plan that requires someone else to do an action, but that other entity will not effect that action, will not resolve the problem at hand. Further having documentation that someone refuses to participate in the proposed plan does nothing to solve the problem at hand. IRO-014 VSLs: R2: The VSLs are differentiated as you suggest. R3: The RCSDT does not believe that is the correct delineation of the requirement which requires notification of each impacted RC. What if there is only one and there was no notification? R4: The RCSDT contends that the requirement specifies participation in all agreed upon calls. If the RC misses an agreed upon call, it has failed to meet the requirement. R5: The RCSDT disagrees. If there is only one impacted RC and no notification is made, it should be a Severe violation. R8: The phrase does not need to be in the VSL. If a plan was not implemented due to safety reasons, then the requirement was not violated and the VSL would not be considered. R1: We have revised the requirement per your suggestion to R1, R2 and R3.		
Electric Market Policy	No	Agree with most. However, the language proposed for use in IRO-014-2 @ R5 and R6 needs clarity. There needs to be a way to determine who is required to do what depending upon whether the party is a) Reliability Coordinator who has the identified Adverse Reliability Impact) An impacted affected Reliability Coordinator. Suggest revising so that these read similar to R7 and R8.
Response: The RCSDT thanks you for your comment. The RCSDT does not understand your comment. We believe that the requirements are clear as written as to what each entity must do.		

Consideration of Comments on Draft Standards for Reliability Coordination — Project 2006-06

Organization	Yes or No	Question 7 Comment
Western Area Power Administration	No	Comments: In R1 & R2, the first sentence is redundant. The phrase which was added “For conditions or activities that impact other RC Areas...” should be removed.
Response: The RCSDT thanks you for your comment. The SDT agrees and has made the suggested revision.		
OC Standards Review Group	No	In R1.6, we suggest adding “BES” before “conditions” such that the sentence reads: “Authority to act to prevent and mitigate “BES” conditions.....”
Response: The RCSDT thanks you for your comment. The SDT disagrees. Adverse Reliability Impact is defined as follows: <i>The impact of an event that results in frequency-related instability; unplanned tripping of load or generation; or uncontrolled separation or cascading outages that affects a widespread area of the Interconnection.</i> If a condition will cause interconnection “cascading, instability, ...” the RC should be mandated to act whether or not the initiating condition is part of the BES.		
Florida Municipal Power Agency and Some Members	No	In requirements R7 and R8, the term mitigation plan is used. Since mitigation plan has another specific meaning (e.g., a mitigation plan for non-compliance with a standard), FMPA suggests using a different term with the same meaning, e.g., ameliorative plan, alleviation plan, abatement plan, to help avoid confusion.
Response: The RCSDT thanks you for your comment. The SDT disagrees. Lower case “mitigation” is a proper English word		
NERC	No	NERC staff believes that the original language in IRO-016-1 was clearer than the proposed requirements R5 through R8. Additionally, we believe that this standard is already covered in the certification process. We recommend that this standard, with the exception of R4, be retired and the certification process be revisited to ensure that IRO-016-1 R1 is covered. Furthermore, operating guidelines should be developed to address the content of R5 through R8.
Response: The RCSDT thanks you for your comment. The RCSDT is not clear how requirements to make notifications, develop and implement mitigations plans belong in the certification process. We are also unclear what constitutes an operating guideline. Based on this, we will retain the requirements in IRO-014 as supported through the stakeholder process. Requirements R5 through R8 were brought into IRO-014 from IRO-016 as you state. These requirements were revised to eliminate compound requirements. The RCSDT feels that requirements are clear as written and stakeholder comments indicate consensus has been achieved.		
Duke Energy	No	R1.6 - We believe that the word “system” should be added before the word “conditions” to provide additional

Organization	Yes or No	Question 7 Comment
		clarity.
Response: The RCSDT thanks you for your comment. We agree and have made the suggested edit.		
US Bureau of Reclamation	No	We would suggest that the language should indicate the plans need to address “neighboring RC areas” to limit the scope of the plans for “other RC areas” and not try to cover the whole NERC footprint.
Response: The RCSDT thanks you for your comment. The requirements deal with those RC that are seen to have an impact on a problem. To the extent that one RC expects another RC to be part of a solution, the requirement allows the initiating RC to “propose” a plan of actions and to seek help. If the other RC disagrees with the proposal, the latter RC would not give agreement.		
Bonneville Power Administration	Yes	
Central Lincoln	Yes	
FirstEnergy	Yes	
Pepco Holdings, Inc	Yes	
PNGC Power (15 member utilities)	Yes	
PPL	Yes	
South Carolina Electric and Gas	Yes	
Southern Company Services	Yes	
Southwest Power Pool	Yes	
Western Electricity Coordinating Council	Yes	
Xcel Energy	Yes	

Organization	Yes or No	Question 7 Comment
ITC Holdings	Yes	None
American Electric Power	Yes	The use of “. . . act and/or issue . . .” may be more descriptive in Requirement 1 rather than “. . . act or issue . . .”
Response: The RCSDT thanks you for your comment.		
ERCOT ISO	No	ERCOT ISO would like to add clarification to the Purpose statement and the following requirements (1-4) to alleviate potential interpretation issues. The remaining requirements in IRO-014 are adequately addressed with respect to “within the Interconnection” if the Adverse Reliability Impact term is modified as identified above in response to Question All the recommendations tie together. Purpose: To ensure that each Reliability Coordinator’s operations are coordinated such that they will not have an Adverse Reliability Impact on other Reliability Coordinator Areas “<u>within its Interconnection</u>” and to preserve the reliability benefits of interconnected operations. R1. For conditions or activities that impact other Reliability Coordinator Areas “<u>within its Interconnection</u>”, each Reliability Coordinator shall have Operating Procedures, Processes, or Plans for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following: R2. Each Reliability Coordinator’s Operating Procedure, Process, or Plan that requires one or more other Reliability Coordinators “<u>within its Interconnection</u>” to take action (e.g., make notifications, exchange information, or coordinate actions) shall be: R3. For conditions or activities that impact other Reliability Coordinator Areas “<u>within its Interconnection</u>”, each Reliability Coordinator shall make notifications and exchange reliability-related information with impacted Reliability Coordinators using its predefined Operating Procedures, Processes, or Plans for conditions that may impact other Reliability Coordinator Areas or other means to accomplish the notifications and exchange of reliability-related information. R4. Each Reliability Coordinator shall participate in agreed upon conference calls, at least weekly, and other communication forums with impacted Reliability Coordinators “<u>within its Interconnection</u>”. Additionally, ERCOT ISO recommends that the weekly minimum be eliminated and such meeting should be pursuant to an “agreed upon schedule” at the discretion of the Reliability Coordinators. The language notes “impacted” Reliability Coordinators. The “impacted” implies that it is relative to a discrete incident or time period, which is consistent with the purpose of the standard. Accordingly, it is unclear on the need for and

Organization	Yes or No	Question 7 Comment
		unbounded ongoing meeting obligation. ERCOT ISO also suggests changing the R4 VSL to allow lower VSL for missing an occasional meeting. The VSL can be elevated based on the number of missed calls or meetings. Severe would seem to be more appropriate if the entity refused to participate or calls were not initiated at all. Furthermore, with respect to R4, It is not clear what value this requirement adds generally. The requirement is related to “impacted” RCs. This implies that the meetings are relative to discrete incidents/time periods, which is consistent with the purpose of the standard. Accordingly, given the apparent temporary, incident specific nature of an “impacted” entity, it doesn’t make sense to impose an unbounded ongoing meeting obligation. Furthermore, the establishment of the general procedures governs the objective actions impacted RCs will take for all situations. If there is an incident where an RC is “impacted”, it will manage the situation by application of the established objective procedures – that is the intent of having those procedures in place under the standard. Accordingly, it is questionable whether the weekly meeting obligation is necessary or serves any purpose. At a minimum, the weekly meeting obligation should be eliminated and such meeting should be pursuant to an “agreed upon schedule” to give discretion to the RCs. Finally, with respect to R1 – 1.6, in order to provide certainty to the regulated community, ERCOT ISO does not support the change to the condition precedent for action under the requirement from actual to potential Adverse Reliability Impacts. Defining an obligation in terms of “potential” situations is vague and ambiguous. This should generally be avoided because it creates ambiguity and uncertainty for both the regulated entity and regulator.
Response: The RCSDT thanks you for your comment. R1-R3: The SDT disagrees. If an RC does not have any other impacted RCs, then no operating processes, procedures or plans would be necessary. This would mean the R1-R3 would not apply to that RC. R4 and VSL- The RCSDT has revised R4 to add the words “within the same Interconnection” to the end of R4. We have revised the VSL accordingly. The RCSDT contends that the requirement specifies participation in all agreed upon calls. If the RC misses an agreed upon call, it has failed to meet the requirement. R1.6 – This refers to studying various system conditions and developing operating processes, plans or procedures to address them. If an entity has run a study and determined that there is an impact on another RC, then a process/plan/procedure should be developed and agree to in order to address the issue.		

7 Do you have any other comment, not expressed in questions above, for the RC SDT?

Summary Consideration: The RC SDT thanks all commenters for their review of these proposed revisions and has incorporated many of the comments in the next revision of these requirements. In general, the RC SDT feels that the concept of a Reliability Directive is an important tool for RC, BA and TOP to maintain reliability and that the revisions are consistent with the applicable parts of the directives in FERC Order 693. The work of the RC SDT along with the OCPD SDT and the RTO SDT, as currently recognized, will cover the original intent of COM-002 and still provide a “defense in depth strategy” as suggested by commenters. Consensus appears to have been achieved with respect to the definition of Reliability Directive and the requirements that the RC SDT have developed for COM-002. This will further the efforts of the OCPD SDT in achieving stakeholder consensus for their proposed requirements in COM-003. The intent of this DT is to preserve a method for RCs, BAs and TOPs to make the determination of “what actions are required” and clearly communicate the importance to the receiver at a heightened method to normal day-to-day operational communications. The trigger of “Reliability Directive” by the issuer highlights these actions as needed to maintain BES reliability and shall be carried out as directed (unless such actions would violate safety, equipment, regulatory or statutory requirement per the language of the requirement) and all parties to the conversation need to be very cognizant of the system conditions that are requiring actions. The DT has attempted to craft clear and specific language that support BES reliability and hopes that this work can support and enhance the development of the OCPD SDT. The DT has also attempted to eliminate redundancy and ambiguity while not creating any reliability gaps. Several comments were received on the RC’s ability to “act”. The RC must “act” (ie. do something, “to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts”. This may include analysis, coordination of cooperative actions or the issuance of “Reliability Directives”. “Act” does not imply solely the manipulation of BES elements.

Several comments on VSL language were received. We have attempted to clarify intent and have revised some in response to comments.

Several comments were received that reference a “performance based initiative” endorsed by the NERC BOT. The DT appreciates this new initiative, and to the extent possible, requirements proposed by this DT reflect that desire. [We have had no official instruction nor direction regarding this initiative in relation to this project.]

RC control of “analysis tools” is critical to maintaining the wide area view. Control by the RC over the tools is imperative and beyond administrative, since it is intended to prevent planned reliability tool outages without the consent or knowledge of operating personnel. Although the DT agrees with the premise that many other requirements may be violated by ineffective communications, the intent of the requirement is to ensure there are effective communications methods in place for communicating BES activity across entities. Effective communication are a cornerstone of BES reliability and the intent of the requirement is to prevent the violation of other more significant performance type standard requirements due to ineffective communications before they

impact the BES. Failure of the RC to control outages of analysis tools was mentioned as a contributing factor in the 2003 blackout.

Overall, it is the intent of the DT to make the requirements flexible and adaptive to new technologies and methods as directed in order 693 and ensure that no matter how many forms of interpersonal communications are available. An entity can select a functional alternative to meet the intent of the requirement. The 60 minute timeframe appears reasonable based on industry comments. The term Interconnection is appropriate as it is.

Effective communications rely on an effective hierarchy. It is crucial for a host TOP or BA to have effective communications with GOs attached to their systems so that BES operations can be coordinated. Much like RCs must be able to communicate effectively with the systems within its footprint, effective communications allows BAs/TOPs to disseminate Interconnection information to DPs/GOPs that are impacted by system conditions outside of their operating visibility. The RCS DT has relied on the authority hierarchy (RC/ BA/ TOP / DP) to ensure accountability with the current performance type requirements, while not over-burdening the standards with prescriptive administrative-type requirements.

Organization	Question 8 Comment
American Transmission Company	
ISO New England Inc	
North Carolina Municipal Power Agency #1	
Pepco Holdings, Inc	
Puget Sound Energy	None additional.
South Carolina Electric and Gas	
US Bureau of Reclamation	
We Energies	

Organization	Question 8 Comment
Western Area Power Administration	
Western Electricity Coordinating Council	
CECD	(1). The 60 minute timeframe should be lengthened if normal interpersonal communication paths are in service. Furthermore, the requirement to take corrective action or identify an alternative interpersonal communication method within 60 minutes should only apply if the registered entity only has a single alternative interpersonal communication method in place. (2). For COM-001 Requirement 4: The use of the term "Interconnection" seems inappropriate when describing communications between the DP/GOP and its BA/TOP and should be deleted. The NERC glossary of terms defines this as any one of the three major electric system networks in North America: Eastern, Western, and ERCOT. The requirement to be able to exchange operating information should be subject to the limitation as requested by the BA or TOP.
Response: The RCSDT thanks you for your comment. 1) It is the intent of the DT to make the requirement flexible and adaptive to new technologies and methods as directed in order 693 and ensure that no matter how many forms of interpersonal communications are available. An entity can select a functional alternative to meet the intent of the requirement. The timeframe has been revised to 2 hours. 2) We concur and have removed "Interconnection" from the requirement.	
Hydro-Québec TransEnergie (HQT)	(i) For IRO-001-2 R1, "act" should be removed. The RC can't act but can only issue Reliability Directives per the functional model. (ii) The NERC BOT recently approved pursuing the Results/Performance Based standards development activity. Based on this recent decision, the BOT has signaled their intent to remove administrative types of requirements from all standards. The IRO-001-2 R6 for the RC to have the authority to veto outages of their analysis tools and the COM-001-2 R3 requirement to use the English language are clearly not results or performance based, but rather administrative. If an operator used non-English, where it has not been agreed to or subject to law, to issue a Reliability Directive they will not be able to satisfy three-part communications in COM-002-3 in addition to many other standards and requirements they could not comply with. Even if an RC has veto authority over analysis tools, failure to exercise it would render the authority meaningless. Furthermore, the RC would not be able to meet other requirements and standards such as operating within IROL because they would not be able to assess the system appropriately.
Response: The RCSDT thanks you for your comments. a. The RC must "act" (ie. do something "to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts". This may include analysis, coordinate cooperative actions or issue "Reliability Directives".	

Organization	Question 8 Comment
b.	R6 is beyond administrative; it is intended to prevent planned reliability tool outages with the consent or knowledge of operating personnel. Although the DT agrees with the premise that many other requirements may be violated by ineffective communications, the intent of the requirement is to ensure there are effective communications methods in place for communicating BES activity across entities. Effective communication is a cornerstone of BES reliability and the intent of the requirement is to prevent the violation of other more significant performance type standard requirements due to ineffective communications before they impact the BES.
Midwest ISO Standards Collaborators	1) For IRO-001-2 R1, “act” should be removed. The RC can’t act but can only issue Reliability Directives per the functional model. 2) IRO-001-2 R4 and R5 Severe VSLs need to have “any or” removed. The VSL should only apply for three or more and “any or” conflicts with this.COM-001-2 R2 Severe VSL conflicts with other VSLs. Specifically, the use of the word “any” in the Severe VSL is problematic. Notifying one entity at 65 minutes fits both the Lower VSL and Severe VSL as well. We suggest deleting the first portion of the Severe VSL that reads, “The responsible entity failed to notify any impacted entities of the failure of its normal Interpersonal Communications capabilities within 60 minutes.” 3) The NERC BOT recently approved the pursuing the Results/Performance Based standards development activity. Based on this recent decision, we believe the BOT has signaled their intent to remove administrative types of requirements from all standards. The IRO-001-2 R6 for the RC to have the authority to veto outages of their analysis tools and the COM-001-2 R3 requirement to use the English language are clearly not result or performance based but rather administrative. If an operator used Portuguese to issue a Reliability Directive they will not be able to satisfy three-part communications in COM-002-3 in addition to many other standards and requirements they could not comply with. Even if an RC has veto authority over analysis tools, failure to exercise it would render the authority meaningless. Furthermore, the RC would not be able to meet a host of other requirements and standards such as operating within IROL because they would not be able to assess the system appropriately.
Response: The RCSDT thanks you for your comments. 1) The RC must “act” (ie. do something “to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts”. This may include analysis, coordinate cooperative actions or issue “Reliability Directives”. 2) The VSL language is intended to accommodate scenarios where only one entity is impacted or several entities are impacted. “The Reliability Coordinator failed to notify any or more than three impacted Transmission Operators, Balancing Authorities...” and provide the same measurability level. 3) R6 is beyond administrative; it is intended to prevent planned reliability tool outages without the consent or knowledge of operating personnel. Although the DT agrees with the premise that many other requirements may be violated by ineffective communications, the intent of the requirement is to ensure there are effective communications methods in place for communicating BES activity across entities. Effective communication is a cornerstone of BES reliability and the intent of the requirement is to prevent the violation of other more significant performance type standard	

Organization	Question 8 Comment
requirements due to ineffective communications before they impact the BES.	
Northeast Power Coordinating Council	(i) For IRO-001-2 R1, “act” should be removed. The RC can’t act but can only issue Reliability Directives as per the functional model. (ii) The NERC BOT recently approved pursuing the Results/Performance Based standards development activity. Based on this recent decision, the BOT has signaled their intent to remove administrative types of requirements from all standards. The IRO-001-2 R6 requirement for the RC to have the authority to veto outages of their analysis tools and the COM-001-2 R3 requirement to use the English language are clearly not results or performance based, but rather administrative. If an operator used non-English to issue a Reliability Directive they will not be able to satisfy three-part communications in COM-002-3, in addition to many other standards and requirements they could not comply with. Even if an RC has veto authority over analysis tools, failure to exercise it would render the authority meaningless. Furthermore, the RC would not be able to meet other requirements and standards such as operating within an IROL because they would not be able to assess the system appropriately.
Response: The RCS DT thanks you for your comments. I) The RC must “act” (ie. do something “to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts”. This may include analysis, coordinate cooperative actions or issue “Reliability Directives”. II) R6 is beyond administrative; it is intended to prevent planned reliability tool outages without the consent or knowledge of operating personnel. Although the DT agrees with the premise that many other requirements may be violated by ineffective communications, the intent of the requirement is to ensure there are effective communications methods in place for communicating BES activity. Effective communication is a cornerstone of BES reliability and the intent of the requirement is to prevent the violation of other more significant performance type standard requirements due to ineffective communications before they impact the BES.	
Independent Electricity System Operator	(i) For IRO-001-2 R1, “act” should be removed. The RC can’t act but can only issue Reliability Directives per the functional model. (ii) The NERC BOT recently approved pursuing the Results/Performance Based standards development activity. Based on this recent decision, the BOT has signaled their intent to remove administrative types of requirements from all standards. The IRO-001-2 R6 for the RC to have the authority to veto outages of their analysis tools and the COM-001-2 R3 requirement to use the English language are clearly not results or performance based, but rather administrative. If an operator used non-English to issue a Reliability Directive they will not be able to satisfy three-part communications in COM-002-3 in addition to many other standards and requirements they could not comply with. Even if an RC has veto authority over analysis tools, failure to exercise it would render the authority meaningless. Furthermore, the RC would not be able to meet other requirements and standards such as operating within IROL because they would not be able to assess the system appropriately.

Organization	Question 8 Comment
	(iii) COM-001-2 R2 Severe VSL conflicts with other VSLs. Specifically, the condition of failing to notify any impacted entities within 60 minutes means that no entities received a notification within 60 minutes. But how about they all received this in 65 minutes? Would this be the same condition as the Low VSL? And if they all received this in 75 minutes, the condition would be the same as the Moderate VSL. We suggest the SDT to review and revise these VSLs to eliminate the duplication/ambiguity.
Response: The RCSDT thanks you for your comments. I) The RC must “act” (ie. do something “to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts”. This may include analysis, coordinate cooperative actions or issue “Reliability Directives”. II) R6 is beyond administrative; it is intended to prevent planned reliability tool outages without the consent or knowledge of operating personnel. Although the DT agrees with the premise that many other requirements may be violated by ineffective communications, the intent of the requirement is to ensure there are effective communications methods in place for communicating BES activity. Effective communication is a cornerstone of BES reliability and the intent of the requirement is to prevent the violation of other more significant performance type standard requirements due to ineffective communications before they impact the BES. III) The DT did not consider R1 and R2 to be parallel requirements, and consequently did not attempt to force parallelism between the VSLs for R1 and R2. The only failure that is severe in this context is the failure to test the Alternative Interpersonal Communications capability on at least a quarterly basis.	
IRC Standards Review Committee	(i) IRO-001-2 R4 and R5 Severe VSLs need to have “any or” removed. The VSL should only apply for three or more and “any or” conflicts with this. (ii) For IRO-001-2 R1, “act” should be removed. The RC can’t act but can only issue Reliability Directives per the functional model. (iii) COM-001-2 R2 Severe VSL conflicts with other VSLs. Specifically, the condition of failing to notify any impacted entities within 60 minutes means that no entities received a notification within 60 minutes. But how about they all received this in 65 minutes? Would this be the same condition as the Low VSL? And if they all received this in 75 minutes, the condition would be the same as the Moderate VSL. We suggest the SDT to review and revise these VSLs to eliminate the duplication/ambiguity. (iv) The NERC BOT recently approved the pursuing the Results/Performance Based standards development activity. Based on this recent decision, we believe the BOT has signaled their intent to remove administrative types of requirements from all standards. The IRO-001-2 R6 for the RC to have the authority to veto outages of their analysis tools and the COM-001-2 R3 requirement to use the English language are clearly not result or performance based but rather administrative. If an operator used Portuguese to issue a Reliability Directive they will not be able to satisfy three-part communications in COM-002-3 in addition to many other standards and requirements they could not comply with. Even if an RC has veto authority over analysis tools, failure to exercise it would render the authority meaningless. Furthermore, the RC would not

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	be able to meet a host of other requirements and standards such as operating within IROL because they would not be able to assess the system appropriately. (v) The VSLs for COM-002-3 R3 appear to have some redundancy. The Severe VSL and the second condition in the High VSL appear to be similar or the same. (vi) Measurement of compliance to COM-002-3 R1 could be challenging. As the VSL is written, it would appear the compliance auditor could judge if a Reliability Directive should have been issued. The VSL language that is problematic is “The responsible entity that required actions to be executed”. Please remove: “required actions to be executed as...”. Who determines that actions were required? One could argue that failure to identify a communication as a Reliability Directive means that actions weren’t required but it is doubtful the compliance authorities would take this approach. Thus, there would appear to be great judgment left to the compliance auditor in determining if a Reliability Directive should have been issued. (vii) IRO-014-2 R2 VSLs differentiate violations based on whether the plans, processes, and procedures were distributed or agreed to. If an intended RC never received the plans, processes and procedures, it would be aware of the need to agree to them. Hence, if the plans, etc. were not distributed, then the initiating RC will be assigned a Moderate VSL but never any higher VSLs even if no agreements were received (since no other RCs had received the plans to begin with). We suggest the SDT to consider rearranging the VSLs and in accordance with any changes to R2 reflecting our suggested changes summarized under Q7. (viii) Because it is unlikely that an RC will make notifications without exchanging reliability information or vice versa for IRO-014-2 R3, we suggest a more appropriate delineation for the VSLs would be based on the number of other impacted RCs that were not informed. (ix) IRO-014-2 R4 VSLs should be defined based upon the number of conference calls the RC does not participate in. R4 requires each RC to participate in “agreed upon conference calls”. Because the statement “conference calls” is plural, VSLs need to be set based on the aggregate of calls not participated in. Failure to assign VSLs in this way is equivalent to setting the requirement to “agreed upon conference call” and causes the VSLs to be in violation guideline 3 that the Commission established in their June 2008 Order on VSLs. Guideline 3 states that the VSL must be consistent with the requirement and cannot “redefine or undermine the requirement”. Clearly, these VSLs do. (x) IRO-014-2 R5’s Severe VSL is redundant with the Moderate VSL. Failure to notify one RC meets both VSLs since Severe uses the word any. Based on the SDT’s response to our comment from the last time, we believe instead of any they mean “no impacted”. Unfortunately, “any impacted” could be one or two or higher. If it is one, it matches the Moderate VSL. (xi) The VSL for IRO-014-2 R8 needs to include the “unless such actions would violate safety, equipment, regulatory or statutory requirement” clause.

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	Response: The RCSDT thanks you for your comments. I) The VSL language is intended to accommodate scenarios where only one entity is impacted or several entities are impacted. “The Reliability Coordinator failed to notify any or more than three impacted Transmission Operators, Balancing Authorities...” and provide the same measurability level. II) The RC must “act” (ie. do something “to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts”. This may include analysis, coordinate cooperative actions or issue “Reliability Directives”. III) The DT does not agree. The Severe VSL has “any impacted entities”, meaning that no entity was notified within 60 minutes. This is intentional. The Lower, Moderate and High VSLs address individual entities that may not have met the standard of 60 minutes. IV) R6 is beyond administrative, it is intended to prevent planned reliability tool outages without the consent or knowledge of operating personnel. Although the DT agrees with the premise that many other requirements may be violated by ineffective communications, the intent of the requirement is to ensure there are effective communications methods in place for communicating BES activity across entities. Effective communication are a cornerstone of BES reliability and the intent of the requirement is to prevent the violation of other more significant performance type standard requirements due to ineffective communications before they impact the BES. V) The VSLs were set to be flexible in measuring cases where an 1) acknowledgement is not made at all to a correctly repeated directive and 2) an acknowledgement is not made at all AND a directive repeated incorrectly was not corrected. VI) The intent of the DT is to allow the issuing entity to make the determination of “what actions are required” to clearly communicate the importance to the receiver. The word “required actions to be executed” are integral to the requirement and cannot be removed to meet the intent. In other words, the trigger of “Reliability Directive” by the issuer highlights these actions as needed to maintain BES reliability and should be carried out as directed (unless such actions would violate safety, equipment, regulatory or statutory requirement etc) and all parties to the conversation need to be very cognizant of the system conditions that are requiring actions. The DT has attempted to craft clear and specific language that support BES reliability and cannot pre-judge the behaviors of compliance auditors. VII) The DT agrees and will make clarifying changes. VIII) The DT agrees and will make clarifying changes. IX) The DT feels this is a core RC responsibility and therefore treated this requirement as binary. RCs must be responsive to other RCs that need to discuss BES reliability. However, we agree to change “calls” to “call(s)” in R4, to read as follows: R4. Each Reliability Coordinator shall participate in agreed upon conference calls, at least weekly (per Requirement 1, Part 1.7) with other Reliability Coordinators within the same Interconnection. <i>[Violation Risk Factor: Lower][Time Horizon: Real-time Operations]</i> X) The DT disagrees. “Failure to notify any” means that none were notified. If there is only a total of one impacted RC, then the VSL would be Severe. XI) If the action plan could not be implemented for such instances, then there would be no violation of the requirement and the VSL would not apply.
OC Standards Review Group	“The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Standards Review group only and should not be construed as the position of SERC Reliability Corporation, its board or

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	its officers.”
Response: The RCSDT thanks you for your comments.	
FirstEnergy	1. We believe that this standard should be either handed to the OPCPSDT (Project 2007-02) or the OPCPSDT should hand over the COM-003-1 standard to this RCSDT (Project 2006-06); and then COM-002 and COM-003 should be merged. Per our comments in Draft 1 of COM-003-1 (OPCPSDT Project 2007-02) we believe that the Reliability Directive definition should be broadened to include communications associated with BES related information (similar to the proposed definition of Interoperability Communication from the OPCPSDT). The following are specifics: a. For better project coordination, since the plan of the OPCPSDT (2007-02) is to eventually incorporate the COM-002-3 requirements into the new COM-003-1 standard, we believe this should be done now by one SDT. b. The definition of Reliability Directive should be broadened to include any actions that affect the BES reliability. We suggest the following change to the term Reliability Directive: "A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where the recipient is directed to change the state or report the status of an Element or Facility of the Bulk Electric System." c. Per our suggestion to broaden the definition of Reliability Directive in "b" above, the proposed definition of Interoperability Communication proposed by the OPCPSDT can be eliminated. d. With respect to the proposed R2 and R3 of COM-002-3 and requirement R5 of COM-003-1 which all which essentially discuss three-part communication, could be combined and covered by COM-002-3. e. R1 of COM-003-1 that requires communication protocols procedures can be covered in COM-002-3.2. Implementation Plan - The proposed timeline for implementing these standards changes is the 1st day of the 1st quarter after applicable regulatory approvals. We believe that since there are numerous changes to and retirement of requirements, this will place a significant compliance burden on industry and warrants more time to adjust compliance evidence and tracking. Furthermore, standard COM-001-2 is adding the Distribution Provider and Generator Operator as applicable entities which will cause these entities to show compliance with a requirement they previously were not responsible for. Therefore, we believe that a minimum of two calendar quarters for implementing these changes is appropriate.
Response: The RC SDT thanks you for your comment. The RC SDT feels that the Reliability Directive is an important tool for RC, BA and TOP to maintain reliability and that the revisions are consistent with parts of the directives in FERC Order 693. The work of the RC SDT along with the OPCP SDT, as currently recognized, will cover the original intent of COM-002 and still provide a “defense in depth strategy” as suggested by the NERC comment. Consensus appears to have been achieved with respect to the definition of Reliability Directive and the requirements that the RC SDT have developed for COM-002. This will further the efforts of the OCPC SDT in achieving stakeholder consensus for their proposed requirements in COM-003. The intent of the DT is to preserve a method for RCs, BAs and TOP to make the determination of “what actions are required” and clearly communicate the importance to the receiver above normal day-to-day operational communications. The trigger of “Reliability Directive” by the issuer highlights these actions as needed to maintain BES reliability and should be carried out as directed (unless such actions would violate safety, equipment, regulatory or statutory requirement per the language of the requirement) and all parties to the conversation need to be very cognizant of the system conditions that are requiring actions. The DT has attempted to craft clear and specific language that support BES reliability and hopes that this work can support and enhance the development of the OPCP SDT.	

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Ameren	1.In COM-001 R2, this “impacted entities’ language is unworkable. Some entities might be impacted because they get information from the RC, i.e indirectly from the entity with the loss. Team should address direct relationships somehow.2.In COM-001,R4, does the team consider the need for this for the AIC?3.The team should note that there is no requirement to even have AIC. Thus R1 would only apply if you have one.
Response: The RCSDT thanks you for your comment. The DT feels that impacted adds clarity to the requirement by limiting the obligation appropriately. Industry consensus appears to support that “impacted” is a reasonable clarification.	
NERC	As stated in the response to Question 1, the scope of COM-001-2 is unclear as to whether it applies to both verbal and data communication. We believe that it should.
Response: The RCSDT thanks you for your comment. The RCSDT believes that data communication is covered under IRO-010, R3 which states: Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner <i>shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. (Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations)</i>	
Central Lincoln	COM-001 M3, M4, COM-002 M2, and IRO-001 M1, and M2 all require evidence of DPs and/or LSEs “which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation. ”While we appreciate the inclusion of “equivalent documentation”, we are unsure what might qualify and who determines what qualifies as equivalent. We still believe COM-001 should not apply to DPs and LSEs, since these entities do not own or operate BES assets. Please consider this stakeholder input as well. While CIP-001 M4 can show that documented communication proves capability for R4, an entity has no way of proving capability if such communications did not take place during the audit period. We are unsure if the SDT realizes that not all of the entities subject to these standards maintain 24/7 dispatch desks. Much effort will go into complying with standards dealing with afterhour’s directives that will never come, because the issuing entity will realize any action requested will not be timely enough and plan accordingly.
Response: The RCSDT thanks you for your comment. DP and LSE were included in this standard per FERC Order 693 Directive. “Equivalent” documentation is included to provide potential alternatives for entities to provide to prove compliance with the requirement. Compliance audit personnel will review all documentation to determine compliance with a requirement.	
Exelon	COM-001-2 R2. Please consider in place of “impacted entities”, substitute “all applicable entities”.
Response: The RCSDT thanks you for your comment. The proposed substitute language has the same net effect as the current language and	

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therefore no change was made.	
ITC Holdings	Comments: IRO-001-2 R4 has an errant comma after the first occurrence of the word “Impacts”. IRO-014-2 R8 should have the first occurrence of the word “or” removed. Also, a new R9 (and associated M9) should be added requiring the RC who cannot agree on the mitigation plan due to safety, equipment, regulatory, or statutory requirements to notify the RC experiencing the Adverse Reliability Impact of the reason for the inability to implement the mitigation plan.
Response: The RCSDT thanks you for your comment. The comma in IRO-001-2 R4 has been removed. The first “or” in IRO-014-2 R8 has been removed. The suggested R9/M9 are unnecessary. Any RC that claims that a mitigation plan would violate safety, equipment, regulatory or statutory requirements would have to document that as part of complying with R8.	
Northeast Utilities	For IRO-001-2, the VSL language for R1, R4, and R5 is not clear. Specifically, for the R1 VSL the text appears to be reversed between High and Severe; and for R4 and R5, please clarify what is meant by “any or more than three”.
Response: The RCSDT thanks you for your comment. The High VSL and Severe VSL language is not reversed. The failure to act to mitigate existing Adverse Reliability Impacts is more negatively-impactful to BES reliability than the failure to prevent future Adverse Reliability Impacts. “Any or more than three” means that if no TOPs or BAs were notified or, in the case of an RC having four or more TOPs and BAs in its area, more than 3 of them were not notified.	
Bonneville Power Administration	In most proposed NERC standards, it seems the tried and true method of writing a requirement is to list the entities required to implement the action, list the required action, and then list any exceptions to the required action. In proposed standard COM-001-2, Requirement R3, the SDT lists the exceptions before the rule. In proposed standard COM-001-2, Measure M1, when it is discussing quarterly testing, it uses the term, “alternative Interpersonal Communications.” The word “alternative” should be capitalized. (Please see our comment on question #2 regarding the overall use of the term ‘Alternative Interpersonal Communications.’) we agree and made the change In proposed standard COM-001-2, Measure M1, after the word, “substitute,” the word “Alternative” should be added in order to use similar language in both Requirement R1 and in Measure M1. (Again, please see my comment on question #2 regarding the overall use of the term ‘Alternative Interpersonal Communications.’) we agree and made the change In proposed standard COM-001-2, Measure M2, it uses the wording “normal communications capabilities.” If our comment on question #1 is acceptable in its entirety, and the SDT decides not to use the term, ‘Interpersonal Communication,’ then the wording of Measure M2 is also acceptable. However, if the SDT decides to continue with their use of that term, then this phrase should be replaced with “normal Interpersonal Communications capabilities” in order to use similar language in both

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	Requirement R2 and in Measure M2. we agree and made the change In proposed standard COM-001-2, VSL for R2, the Lower VSL uses the word “failed” to describe notifying the impacted entities within the tight bounds of a time frame, in this case, “more than 60 minutes but less than or equal to 70 minutes”. According to the given wording, every entity that is fully compliant with this standard would have “failed” to notify the impacted entities within the narrow bounds of the Lower VSL’s time constraint! A similar comment could be made for the Moderate, High and Severe VSL descriptions also. The wording “failed to notify” needs to be taken out and replaced with “notified.” Related to this, in the Moderate VSL, the description of a responsible entity notifying at least one, but not all impacted entities within 60-minutes would tend to negate the Lower VSL. If the SDT were trying to force a responsible entity into making at least one phone call of notification to one of the impacted entities within 60-minutes, the Severe VSL’s description accomplishes this feat all by itself. However, if the SDT were insistent on all impacted entities being notified within 60-minutes or a Moderate VSL will result, then that action makes the Lower VSL rather useless. VSLs are only applied when there is a violation. The time bounds are appropriate for a violation of the requirement In proposed standard COM-002-3, Measure M3, it uses the term “Directive” by itself. It seems appropriate for what is being discussed that the term “Reliability Directive” should have been used. We added Reliability In proposed standard COM-002-3, VSL for R3, the High VSL describes the responsible entity failing to respond appropriately, either by acknowledging the recipient when they repeated the intent correctly or by failing to reissue when the recipient did not repeat the intent correctly. This would seem to take care of the options...either the recipient was correct or they were incorrect, but not both. However, the Severe VSL, by using the word “AND” connects the two thoughts and provides for the recipient to be both correct and incorrect at the same time. Therefore, the Severe VSL seems to contradict itself, while the spirit of the VSL seems to be handled quite nicely by the High VSL by itself. It is therefore suggested that the SDT consider replacing the Severe VSL with the High VSL. The rcsdt believes that the VSLs are appropriate as written In proposed standard IRO-001-2, Measure M3, on the second to the last line, the measure repeats the wording “that it,” making it redundant. We have made the edit In proposed standard IRO-001-2, Data Retention (Part D, Section 1.3), on the first bullet, the word “operator” (following “Generator”) should be capitalized. We have made the edit In proposed standard IRO-001-2, High and Severe VSLs for Requirement R1, we don’t really see the utility of separating the parts of failing to prevent Adverse Reliability Impacts and failing to mitigate the magnitude or duration of such impacts. Maybe the SDT could give some examples, because we would be just as fine combining the two into one VSL and therefore simplifying the VSL part of the standard. VSL drafting guidelines indicate that multiple VSLs should be written for a requirement when feasible. It is feasible for this requirement. In proposed standard IRO-001-2, Severe VSL for Requirement R2, the VSL should include wording to indicate that an

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	exception can be granted to the responsible entity failing to comply with the given Reliability Directive due to safety, equipment, or regulatory or statutory requirements. Otherwise, the responsible entity will be given a Severe VSL every time one of these exceptions comes up. If an entity did not comply with a directive for a safety issue, then the entity did not violate the requirement. The VSL only applies when a requirement is violated. In proposed standard IRO-001-2, Severe VSL for Requirement R4, we are not entirely sure what the SDT was trying to say, but the spirit of the VSL would seem to be captured if the SDT removed the wording “any or” and left the VSL to say in part, “...failed to issue an alert to more than three...”In a related way, for the Severe VSL for Requirement R5, the spirit of the VSL would seem to be captured if the SDT removed the wording “any or” and left the VSL to say in part “...failed to notify more than three...” The intent of the wording is to allow multiple VSLs for the requirement. The word “any” indicates that there were no notifications made when there were less than three notifications to be made.
Response: The RCSDT thanks you for your comment. See responses above.	
Florida Municipal Power Agency and Some Members	IRO-001-2, R5 refers to only transmission problems being mitigated and not to other types of issues that could result in a threat of an Adverse Reliability Impacts, such as a large supply / demand imbalance (capacity or energy Emergency). IRO-001-2, R6 FMPA does not quite understand the requirement, is the intent to allow Operating Personnel the authority to veto planned outages "in" its own analysis tools, rather than "to"?
Response: The RCSDT thanks you for your comment. We have removed the word “transmission” from the requirement. R5: Each Reliability Coordinator that identifies an expected or actual threat with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when the problem has been mitigated. <i>[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i> Regarding IRO-001-2, R6, the planned outages mentioned are actual outages of the analysis tools themselves, not planned outages of transmission elements. No changes made.	
PPL	No additional comments.
Operating Personnel Communications Protocols SDT	No Comment

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PacifiCorp	No comment.
American Electric Power	Nothing additional at this time.
PNGC Power (15 member utilities)	PNGC (15 members) would like to associate itself with Steve Alexanderson's (Central Lincoln PUD) comments re 2006-06:"COM-001 M3, M4, COM-002 M2, and IRO-001 M1, and M2 all require evidence of DPs and/or LSEs "which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation. "While we appreciate the inclusion of "equivalent documentation", we are unsure what might qualify and who determines what qualifies as equivalent. We still believe COM-001 should not apply to DPs and LSEs, since these entities do not own or operate BES assets. Please consider this stakeholder input as well. While CIP-001 M4 can show that documented communication proves capability for R4, an entity has no way of proving capability if such communications did not take place during the audit period. We are unsure if the SDT realizes that not all of the entities subject to these standards maintain 24/7 dispatch desks. Much effort will go into complying with standards dealing with afterhour's directives that will never come, because the issuing entity will realize any action requested will not be timely enough and plan accordingly."
Response: The RCSDT thanks you for your comment. The DT included DPs and LSEs per FERC Order 693. The DT believes your comment regarding "CIP-001 M4" is actually in reference to COM-001-2 M4". While the DT is concerned that any proposed requirements must be clear and reasonably simple for which to document compliance, in this instance, a simple test phone call at a regular interval would prove capability (assuming it were recorded.)	
Manitoba Hydro	R2 2.1 If these actions are required as real time action, "Agreed to" should be opened up to "Acknowledged by". "Agreed to" in this requirement would be acceptable when there is time for impacted RC to study the other RC plans to determine impact on their system. To further justify this suggestion, R3 says "make notifications . . . with impacted RC". This statement indicates no commitment to the notifications and therefore presumes "acknowledgement".R7. Move this requirement to R2 and label as R2.3. R2 is "Agreed to" and R7 is "Not Agreed to". R8 covers the action required when "Not agreed to"R8. The only suggested addition to this is "When an RC with the identified Adverse Reliability Impact has created and implemented a plan with other affected RC", there should be an R8.1 stating "No RC shall place a burden on other RC's" and or/and an R8.2 stating, that "Reliability will override economics". The addition of these two sub requirements would also enhance R7 by removing all other reasoning that an impacted RC may dwell on to "not agree to".
Response: The RCSDT thanks you for your comment. We assume that this comment is in reference to IRO-014-2. The RCSDT does not agree with your proposed revision. The intent of the requirements is to have the parties agree to the course of action required to maintain reliability.	
Calpine Corporation	Regarding COM-001-2 R4. Many PURPA Qualifying Facilities and tolled Facilities communicate only with a scheduling

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	coordinator or similar entity, not necessarily directly with the Transmission Operator and/or Host Balancing Authority. The standard should be rewritten to clarify that direct communications between these Generator Operators and their Transmission Operator and/or Host Balancing Authority is either not required or that communications through their established paths of communication meets the requirement.
Response: The RCSDT thanks you for your comments. Effective communications rely on an effective hierarchy. It is crucial for a host TOP or BA to have effective communications with GOs attached to their systems so that BES operations can be coordinated, much like RCs must be able to communicate effectively with the system within its footprint. PURPA qualifying facilities can impact BES reliability, and, as such, are included here.	
Duke Energy	Requirement R6 of IRO-001-2 contains the capitalized term “Operating Personnel”. This is not a NERC-defined term and should not be capitalized. As a general comment on new and revised NERC-defined terms, we believe that when such terms are introduced in a project with multiple standards, the terms should be included in the “Definitions of Terms Used in Standard” section of each standard. For example, in this project the term “Adverse Reliability Impact” is revised in IRO-001-2, but while it is also used in IRO-014-2, it no longer appears in the “Definitions of Terms Used in Standard” section of IRO-014-2.
Response: The RCSDT thanks you for your comment and has changed “Operating Personnel” to “System Operator”.	
Southwest Power Pool	SPP has also worked collaboratively with the IRC SRC on the comments submitted by that group on this standard and we fully support those. However, SPP found additional concerns at the last minute which could not be included in the SRC set due to the submittal deadline and has chosen to submit these separately. There are 10 other standards where the word “Directive” is used. Will the term Reliability Directive replace them, or will we get a different definition for Directive, or will both terms be the same?
The RC SDT believes that “directive” is lowercase in the other instances in NERC standards. The RTO SDT, OCP SDT and RC SDT have attempted to move toward “Reliability Directive” in concert so as to remove the remaining ambiguity from NERC standards. The intent of the DT is to preserve a method for RCs, BAs and TOP to make the determination of “what actions are required” and clearly communicate the importance to the receiver above normal day-to-day operational communications. The trigger of “Reliability Directive” by the issuer highlights these actions as needed to maintain BES reliability and should be carried out as directed (unless such actions would violate safety, equipment, regulatory or statutory requirement per the language of the requirement) and all parties to the conversation need to be very cognizant of the system conditions that are requiring actions. The DT has attempted to craft clear and specific language that support BES reliability and hopes that this work can support and enhance the development of the OCP SDT and subsequent expansion of the term “Reliability Directive”.	
E.ON U.S.	The definition of Reliability Directive should be incorporated into COM-003-1 with an associated single requirement that requires the use of Three-part Communication during the communication of a Reliability Directive.

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Response: The RCSDT thanks you for your comment. The DT has attempted to craft clear and specific language that support BES reliability and hopes that this work can support and enhance the development of the OPCSDT and subsequent expansion of the term “Reliability Directive”.COM-003 is outside the scope of the RCSDT project.	
Public Service Enterprise Group Companies	The PSEG Companies are generally in agreement with the proposal.
Response: The RCSDT thanks you for your comment.	
Southern Company Services	These standards are more restrictive and prescriptive each time that a revision is issued for comments. It appears that the SDT does not believe that entities operating the Bulk Electric System cannot operate the system in a reliable manner using cooperation between parties.
Response: The RCSDT thanks you for your comment. The DT feels that these standard requirements have been improved to benefit reliability and act as a “backstop” to prevent the breakdown of cooperation between parties and incent effective communications between operators of the BES.	
NERC Standards Review Subcommittee	1) This standard could be boiled down to one requirement and that is to maintain the continuous ability to communicate with other appropriate registered entities regardless of the need for a backup system. 2) For IRO-001-2 R1, “act” should be removed. The RC can’t act but can only issue Reliability Directives per the functional model. 3) IRO-001-2 R4 and R5 Severe VSLs need to have “any or” removed. The VSL should only apply for three or more and “any or” conflicts with this.COM-001-2 R2 Severe VSL conflicts with other VSLs. Specifically, the use of the word “any” in the Severe VSL is problematic. Notifying one entity at 65 minutes fits both the Lower VSL and Severe VSL as well. We suggest deleting the first portion of the Severe VSL that reads, “The responsible entity failed to notify any impacted entities of the failure of its normal Interpersonal Communications capabilities within 60 minutes.” 4) COM-001-2 R2 needs to be coordinated with EOP-008-1 since EOP-008-1 R1.5 is requiring 2 hours. COM-001-2 R1 should be clarified to remove 60 minutes. Perhaps the specific time frame is too administrative and too dependent on the circumstances and doesn’t purport to directly impact reliability of the backup functionality. If a time frame is desired perhaps the registered entity which knows their backup functionality capabilities and their plan to actuate these capabilities could be the best entity to define a reasonable immediate time frame. 5) The NERC BOT recently approved the pursuing the Results/Performance Based standards development activity. Based on this recent decision, we believe the BOT has signaled their intent to remove administrative types of requirements from all standards. The IRO-001-2 R6 for the RC to have the authority to veto outages of their analysis tools and the COM-001-2 R3 requirement to use the English language are clearly not result or performance based but

Organization	Question 8 Comment
	rather administrative. If an operator used Portuguese to issue a Reliability Directive they will not be able to satisfy three-part communications in COM-002-3 in addition to many other standards and requirements they could not comply with. Even if an RC has veto authority over analysis tools, failure to exercise it would render the authority meaningless. Furthermore, the RC would not be able to meet a host of other requirements and standards such as operating within IROL because they would not be able to assess the system appropriately.
Response: The RCSDT thanks you for your comments. - The DT has attempted to eliminate redundancy and ambiguity while not creating any reliability gaps. As written, the requirements are geared to incent folks to have effective communications in-place at all times while flexible enough to accommodate technology changes and process improvements by the industry. - The RC must “act” (ie. do something “to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts”. This may include analysis, coordinate cooperative actions or issue “Reliability Directives”. “Act” does not imply solely the manipulation of BES elements. - The VSL language is intended to accommodate scenarios where only one entity is impacted or several entities are impacted. “The Reliability Coordinator failed to notify any or more than three impacted Transmission Operators, Balancing Authorities...” and provide the same measurability level. - The RCSDT notes that EOP-008-1 is a proposed standard that has not been approved for enforcement. Also, EOP-008-1 deals with an entire control center where COM-001 deals with Interpersonal Communications capability with another entity. We will retain the original 60 minute timeframe. - R6 is beyond administrative, it is intended to prevent planned reliability tool outages without the consent or knowledge of operating personnel. Although the DT agrees with the premise that many other requirements may be violated by ineffective communications, the intent of the requirement is to ensure there are effective communications methods in place for communicating BES activity across entities. Effective communication are a cornerstone of BES reliability and the intent of the requirement is to prevent the violation of other more significant performance type standard requirements due to ineffective communications before they impact the BES.	
Xcel Energy	We would like to restate our belief that the Standard should explicitly state the requirement for RCs, TOPs and BAs to have both primary and alternate means of communication. To “imply” a required element within a Standard is inconsistent with the NERC Reliability Standards Development Procedure, which states “All mandatory requirements of a reliability standard shall be within an element of the standard.” We would suggest a requirement language that simply states “Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall maintain a means for both primary Interpersonal Communication as well as Alternative Interpersonal Communication used to communication real-time operating information.”
Response: The RCSDT thanks you for your comment. The RCSDT has crafted the latest versions (as supported by stakeholder comments) to support reliable communications by better describing how industry communicates and providing flexibility for the adoption of alternative communication media. The RCSDT also tried to minimize over-prescriptive requirements that result in no value to reliability and impose an	

Organization	Question 8 Comment
administrative burden.	
Electric Market Policy	We would like to thank, AND highly commend this SDT for their effort. This is the type of effort that every SDT should strive for. Elimination of requirements that are either redundant or unnecessary, and therefore distract entities, is every bit as important to the standards process as is the creation of new standards where reliability gaps are found. The proliferation of new and revised standards is becoming a concern for many in this industry and many of us feel the effort going into the review and compliance documentation is reducing the focus on monitoring and otherwise insuring that reliable operations can be maintained.
Response: The RCSDT thanks you for your comments and agrees reducing redundancy and ambiguity in the standards improves industry focus and therefore reliability of the BES.	
ERCOT ISO	ERCOT ISO offers the following additional comments: <u>COM-001-2</u> 1) The SDT should consider coordinating their efforts with the OPCP drafting team efforts (COM-003) to ensure consistency across the standards. 2) For R4 – ERCOT ISO recommends considering adding Load-Serving Entity to the applicability due to their role in capacity and energy emergencies. 3) With respect to the Measures, “alternative” needs to be capitalized in M1. Also, if the intent is to include items such as regular phones or data links that are daily use items then Measures should reflect this. 4) ERCOT ISO suggests the following change to the terms Adverse Reliability Impact and Emergency. We think these simple changes will tie all the terms together.
Response: The RC SDT thanks you for your comments. 1) The RC SDT feels that the concept of a Reliability Directive is an important tool for RC, BA and TOP to maintain reliability and that the revisions are consistent with parts of the directives in FERC Order 693. The work of the RC SDT along with the OPCP SDT, as currently recognized, will cover the original intent of COM-002 and still provide a “defense in depth strategy” as suggested by the NERC comment. Stakeholder requests and consensus appears to have been achieved with respect to the definition of Reliability Directive and the requirements that the RC SDT have developed for COM-002. This will further the efforts of the OCPD SDT in achieving stakeholder consensus for their proposed requirements in COM-003. 2) The RCSDT has relied on the authority hierarchy (RC/ BA/ TOP / DP) to ensure accountability with the current FM, while not over-prescribing requirements. The RC SDT notes that, per the Functional Model, a DP may “direct” an LSE to communicate <i>requests</i> for voluntary load curtailment and not reliability situations: Item 9 on page 47 of version 5 of the Functional Model: “Directs Load-Serving Entities to communicate requests for voluntary load curtailment.”	

Organization	Question 8 Comment
	The RCSDT will forward this comment to the FMWG for their consideration in revising the language. 3) & 4) Please see previous responses to your comments assuming those are the referenced comments.

Standard Authorization Request Form

Title of Proposed Standard:	Supplemental SAR for Project 2006-06 IRO-003-2, Reliability Coordination — Wide-Area View
Request Date:	May 10, 2010
SC Approval Date:	July 14, 2010

SAR Requester Information	SAR Type (Check a box for each one that applies.)	
Name: Stephen Crutchfield	☐	New Standard
Primary Contact: Stephen Crutchfield	☒	Revision to existing Standard IRO-003-2 Reliability Coordination — Wide-Area View
Telephone: 609-651-9455	☐	Withdrawal of existing Standard
E-mail: Stephen.crutchfield@nerc.net	☐	Urgent Action

Purpose (Describe what the standard action will achieve in support of bulk power system reliability.)

The purpose of this request to expand the scope of work for Project 2006-06 Reliability Coordination to address specific directives from FERC Order 693 related to reliability standard IRO-003-2 — Reliability Coordination — Wide-Area View which have not been assigned to any other project.

Industry Need (Provide a justification for the development or revision of the standard, including an assessment of the reliability and market interface impacts of implementing or not implementing the standard action.)

The industry need for this request is to ensure that the requirements applicable to the Reliability Coordinator in reliability standard IRO-003-2 — Reliability Coordination — Wide-Area View are clear, measurable, unique and enforceable; and to ensure that this set of requirements is sufficient to maintain reliability of the Bulk Electric System.

Brief Description (Provide a paragraph that describes the scope of this standard action.)

The FERC directives from Order 693 associated with reliability standard IRO-003-2 — Reliability Coordination — Wide-Area View are in summary:

1. Add measures for each requirement
2. Create criteria to define the term “critical facilities” in a reliability coordinator’s area and its adjacent systems and consider the suggestions of APPA, Entergy, and Xcel when doing so.

Detailed Description (Provide a description of the proposed project with sufficient details for

the standard drafting team to execute the SAR.)

The purpose of this request to expand the scope of work for Project 2006-06 Reliability Coordination to address specific directives from FERC Order 693 related to reliability standard IRO-003-2 — Reliability Coordination — Wide-Area View which have not been assigned to any other project. The directives in FERC Order 693 to be addressed by the standard drafting team for Project 2006-06 Reliability Coordination are detailed in the following paragraphs from the Order:

Paragraph 909. The purpose of IRO-003-2 is for a reliability coordinator to have a wide-area view of its own and adjacent areas to maintain situational awareness. Wide-area view also facilitates a reliability coordinator's ability to calculate SOL and IROL as well as determine potential violations in its own area.

Paragraph 910. In the NOPR, the Commission proposed to approve the Reliability Standard as mandatory and enforceable. In addition, pursuant to section 215(d)(5) of the FPA and § 39.5(f) of our regulations, the Commission proposed to direct NERC to submit a modification that includes: (1) Measures and Levels of Non-Compliance and (2) criteria to define the term "critical facilities" in a reliability coordinator's area and its adjacent systems.

i. Comments

Paragraph 911. APPA agrees that IRO-003-2 is sufficient for approval as a mandatory and enforceable Reliability Standard. However, APPA suggests that, instead of merely including criteria to define critical facilities as proposed, NERC and each Regional Entity should establish, document, use and make transparent the methodology, data and procedures they use to determine "critical facilities."

Paragraph 912. Entergy agrees with the need for the criteria, but cautions that it must be flexible enough to allow for changing conditions experienced in real-time operations. Xcel notes that the term "critical facilities" is not defined and suggests that the Reliability Standard not be approved until the term is defined.

ii. Commission Determination

Paragraph 913. For the reasons stated in the NOPR the Commission approves proposed Reliability Standard IRO-003-2 as mandatory and enforceable. NERC's November 2006 revision to the Reliability Standard satisfies the proposal to include Measures and Levels of Non-Compliance.

Paragraph 914. Further, pursuant to section 215(d)(5) of the FPA and § 39.5(f) of our regulations, we adopt in the Final Rule the proposal to direct that the ERO develop a modification to the Reliability Standard through the Reliability Standards development process to create criteria to define the term "critical facilities" in a reliability coordinator's area and its adjacent systems. In developing the required modification, the ERO should consider the suggestions of APPA, Entergy and Xcel.

Reliability Functions

The Standard will Apply to the Following Functions <i>(Check box for each one that applies.)</i>		
☐	Reliability Assurer	Monitors and evaluates the activities related to planning and operations, and coordinates activities of Responsible Entities to secure the reliability of the bulk power system within a Reliability Assurer Area and adjacent areas.
☒	Reliability Coordinator	Responsible for the real-time operating reliability of its Reliability Coordinator Area in coordination with its neighboring Reliability Coordinator's wide area view.
☐	Balancing Authority	Integrates resource plans ahead of time, and maintains load-interchange-resource balance within a Balancing Authority Area and supports Interconnection frequency in real time.
☐	Interchange Authority	Ensures communication of interchange transactions for reliability evaluation purposes and coordinates implementation of valid and balanced interchange schedules between Balancing Authority Areas.
☐	Planning Coordinator	Assesses the longer-term reliability of its Planning Coordinator Area.
☐	Resource Planner	Develops a >one year plan for the resource adequacy of its specific loads within its portion of the Planning Coordinator's Area.
☐	Transmission Owner	Owns and maintains transmission facilities.
☐	Transmission Operator	Ensures the real-time operating reliability of the transmission assets within a Transmission Operator Area.
☐	Transmission Planner	Develops a >one year plan for the reliability of the interconnected Bulk Electric System within the Transmission Planner Area.
☐	Transmission Service Provider	Administers the transmission tariff and provides transmission services under applicable transmission service agreements (e.g., the pro forma tariff).
☐	Distribution Provider	Delivers electrical energy to the End-use customer.
☐	Generator Owner	Owns and maintains generation facilities.
☐	Generator Operator	Operates generation unit(s) to provide real and reactive power.
☐	Purchasing-Selling Entity	Purchases or sells energy, capacity, and necessary reliability-related services as required.
☐	Load-Serving Entity	Secures energy and transmission service (and reliability-related services) to serve the End-use Customer.

Reliability and Market Interface Principles

Applicable Reliability Principles (Check box for all that apply.)	
☒	1. Interconnected bulk power systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Standards.
☐	2. The frequency and voltage of interconnected bulk power systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand.
☐	3. Information necessary for the planning and operation of interconnected bulk power systems shall be made available to those entities responsible for planning and operating the systems reliably.
☐	4. Plans for emergency operation and system restoration of interconnected bulk power systems shall be developed, coordinated, maintained and implemented.
☐	5. Facilities for communication, monitoring and control shall be provided, used and maintained for the reliability of interconnected bulk power systems.
☐	6. Personnel responsible for planning and operating interconnected bulk power systems shall be trained, qualified, and have the responsibility and authority to implement actions.
☒	7. The security of the interconnected bulk power systems shall be assessed, monitored and maintained on a wide area basis.
☐	8. Bulk power systems shall be protected from malicious physical or cyber attacks.
Does the proposed Standard comply with all of the following Market Interface Principles? (Select 'yes' or 'no' from the drop-down box.)	
1. A reliability standard shall not give any market participant an unfair competitive advantage. Yes	
2. A reliability standard shall neither mandate nor prohibit any specific market structure. Yes	
3. A reliability standard shall not preclude market solutions to achieving compliance with that standard. Yes	
4. A reliability standard shall not require the public disclosure of commercially sensitive information. All market participants shall have equal opportunity to access commercially non-sensitive information that is required for compliance with reliability standards. Yes	

Related Standards

Standard No.	Explanation

Related SARs

SAR ID	Explanation

Regional Variances

Region	Explanation
ERCOT	
FRCC	
MRO	
NPCC	
SERC	
RFC	
SPP	
WECC	

Unofficial Comment Form for Project 2006-06 — Reliability Coordination

Please **DO NOT** use this form to submit comments. Please use the [electronic form](#) at the link below to submit comments on the proposed supplemental SAR to address specific directives from FERC Order 693 related to reliability standard IRO-003-2 — Reliability Coordination — Wide-Area View which have not been assigned to any other project. Comments must be submitted by **September 3, 2010**. If you have questions please contact Stephen Crutchfield by email at Stephen.crutchfield@nerc.net or by telephone at 609-651-9455.

http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html

Background:

The purpose of this SAR is to expand the scope of work for Project 2006-06 Reliability Coordination to address specific directives from FERC Order 693 related to reliability standard IRO-003-2 (Reliability Coordination — Wide-Area View) which have not been assigned to any other project. The directives in FERC Order 693 to be addressed by the standard drafting team for Project 2006-06 Reliability Coordination are detailed in the following paragraphs from the Order:

Paragraph 909. The purpose of IRO-003-2 is for a reliability coordinator to have a wide-area view of its own and adjacent areas to maintain situational awareness. Wide-area view also facilitates a reliability coordinator's ability to calculate SOL and IROL as well as determine potential violations in its own area.

Paragraph 910. In the NOPR, the Commission proposed to approve the Reliability Standard as mandatory and enforceable. In addition, pursuant to section 215(d)(5) of the FPA and § 39.5(f) of our regulations, the Commission proposed to direct NERC to submit a modification that includes: (1) Measures and Levels of Non-Compliance and (2) criteria to define the term "critical facilities" in a reliability coordinator's area and its adjacent systems.

i. Comments

Paragraph 911. APPA agrees that IRO-003-2 is sufficient for approval as a mandatory and enforceable Reliability Standard. However, APPA suggests that, instead of merely including criteria to define critical facilities as proposed, NERC and each Regional Entity should establish, document, use and make transparent the methodology, data and procedures they use to determine "critical facilities."

Paragraph 912. Entergy agrees with the need for the criteria, but cautions that it must be flexible enough to allow for changing conditions experienced in real-time operations. Xcel notes that the term "critical facilities" is not defined and suggests that the Reliability Standard not be approved until the term is defined.

ii. Commission Determination

Paragraph 913. For the reasons stated in the NOPR the Commission approves proposed Reliability Standard IRO-003-2 as mandatory and enforceable. NERC's November 2006 revision to the Reliability Standard satisfies the proposal to include Measures and Levels of Non-Compliance.

Paragraph 914. Further, pursuant to section 215(d)(5) of the FPA and § 39.5(f) of our regulations, we adopt in the Final Rule the proposal to direct that the ERO

develop a modification to the Reliability Standard through the Reliability Standards development process to create criteria to define the term “critical facilities” in a reliability coordinator’s area and its adjacent systems. In developing the required modification, the ERO should consider the suggestions of APPA, Entergy and Xcel.

The SC authorized posting the SAR to expand the scope of the project to address two directives from Order 693 related to IRO-003; authorized adding missing measures to IRO-003, and directed the RC SDT to solicit stakeholder feedback on what ‘critical facilities’ should be monitored in adjacent Reliability Coordinator Areas before drafting a requirement to address this directive.

1. The scope of this SAR is to address FERC directives from Order 693 associated with reliability standard IRO-003-2 — Reliability Coordination — Wide-Area View as follows:
 - Add measures for each requirement
 - Create criteria to define the term “critical facilities” in a reliability coordinator’s area and its adjacent systems and consider the suggestions of APPA, Entergy, and Xcel when doing so.

Do you agree with the proposed scope of the SAR? If not, please explain in the comment area.

☐ Yes

☐ No

Comments:

2. In Paragraph 911 above, “*APPA suggests that, instead of merely including criteria to define critical facilities as proposed, NERC and each Regional Entity should establish, document, use and make transparent the methodology, data and procedures they use to determine “critical facilities.”*” Do you agree with the suggestion by APPA? If not, please explain in the comment area.

☐ Yes

☐ No

Comments:

3. In Paragraph 912 above, “*Entergy agrees with the need for the criteria, but cautions that it must be flexible enough to allow for changing conditions experienced in real-time operations.*” Do you agree with the suggestion by Entergy? If not, please explain in the comment area.

☐ Yes

☐ No

Comments:

4. In Paragraph 912 above, “Xcel notes that the term “critical facilities” is not defined” and suggests that a definition is necessary. Do you agree with the suggestion by Xcel? If not, please explain in the comment area.

☐ Yes

☐ No

Comments:

5. The NERC SC has directed the RC SDT to solicit stakeholder feedback on what 'critical facilities' (relating to R2) should be monitored in adjacent Reliability Coordinator Areas. Please provide your input on this issue in the comment area.

R2. Each Reliability Coordinator shall know the current status of all critical facilities whose failure, degradation or disconnection could result in an SOL or IROL violation. Reliability Coordinators shall also know the status of any facilities that may be required to assist area restoration objectives.

Comments:

6. If you have any other comments on the SAR that you haven't already provided in response to the previous questions, please provide them here.

Comments:



NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

Standards Announcement

Formal Comment Period Open

August 4–September 3, 2010

Now available at:

http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html

Project 2006-06: Reliability Coordination

The Reliability Coordination Standard Drafting Team is seeking comments on a Supplemental SAR to expand the scope of work under its project to address some directives from Order 693 that are associated with IRO-003-2 — Reliability Coordination — Wide Area View **until 8 p.m. EDT on September 3, 2010.**

Instructions

Please use this [electronic form](#) to submit comments. If you experience any difficulties in using the electronic form, please contact Courtney.camburn@nerc.net. An off-line, unofficial copy of the comment form is posted on the project page: http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html

Next Steps

The drafting team will post responses to comments received during this period and if stakeholders support the expansion of this project, will use the comments received to propose specific revisions to IRO-003-2.

Project Background

The Reliability Coordination Standards Drafting Team was tasked with 1) ensuring that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique, and enforceable; 2) ensuring that this set of requirements is sufficient to maintain reliability of the Bulk Electric System; and 3) revising the group of standards based on FERC Order 693. During the course of this project, the Reliability Coordination Standards Drafting Team incorporated changes due to the work of the IROL Standards Drafting Team, and two standards from the original Standards Authorization Request (PER-004 and PRC-001) were moved to other projects due to scope overlap. The expansion of this project to include revisions to IRO-003-2 would address directives from Order 693 that have not been assigned to any active drafting team.

Applicability in IRO-003-2

Reliability Coordinator

Standards Development Process

The [Reliability Standards Development Procedure](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate.

For more information or assistance, please contact Courtney Camburn at Courtney.Camburn@nerc.net

Individual or group. (18 Responses)
Name (9 Responses)
Organization (9 Responses)
Group Name (9 Responses)
Lead Contact (9 Responses)
Question 1 (18 Responses)
Question 1 Comments (18 Responses)
Question 2 (18 Responses)
Question 2 Comments (18 Responses)
Question 3 (18 Responses)
Question 3 Comments (18 Responses)
Question 4 (18 Responses)
Question 4 Comments (18 Responses)
Question 5 (0 Responses)
Question 5 Comments (18 Responses)
Question 6 (0 Responses)
Question 6 Comments (18 Responses)

Group
SERC OC Standards Review Group
Jim Case
Yes
No
We do not believe that it is possible to develop a "one size fits all" methodology.
Yes
No
We think that "critical facilities" are self evident within Requirement R2. The word "critical" is unnecessary in this context since the facilities in question are fully described in the parenthetical statement following the word "facilities". Any further definition seems likely to inadvertently limit the set of facilities intended to be covered by this requirement. It is our view that the SDT did not intend this requirement to connect with similar requirements in the Critical Infrastructure Protection standards and that 'critical facilities' is not intended to be the equivalent of Critical Assets. We request that the SDT validate our view.
Each Reliability Coordinator (RC) should know the status of facilities in adjacent RC areas that impact its RC area.
"The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Standards Review group only and should not be construed as the position of SERC Reliability Corporation, its board or its officers."
Individual
Kirit Shah
Ameren
Yes
Making sure correct facilities are included in wide area view is important. Would suggest that we not use "critical" but reserve that term for only those facilities that are likely or lead to cascade, wide-area voltage collapse, interconnection instability, et al. What the SAR should describe is Operationally Significant facilities, of which "Critical facilities" would be a subset.
No
APPA's suggestion implies that there is always some analytic way to identify these facilities. As Entergy describes below, operators may need to identify facilities outside of an established rigorous study process. It would be less reliable to limit the number/scope to be covered simply because it didn't fit a rigorous methodology, data, and procedure.

Yes
Yes
Would suggest that we not use "critical" but reserve that term for only those facilities that are likely or lead to cascade, wide-area voltage collapse, interconnection instability, et al. What the SAR should describe is Operationally Significant facilities, of which "Critical facilities" would be a subset.
Would suggest that we not use "critical" but reserve that term for only those facilities that are likely or lead to cascade, wide-area voltage collapse, interconnection instability, et al. What the SAR should describe is Operationally Significant facilities, of which "Critical facilities" would be a subset.
Group
Northeast Power Coordinating Council
Guy Zito
No
There is a need to develop measures for each requirement, but do not agree with defining the term "Critical Facilities". We do not disagree with the intent; however, we disagree with the need to develop a definition. In general, definitions are applicable and valid within the context of the framework or document to which it applies. For example, a facility if removed from service may be critical for SOL, but not critical for IROL; a facility may be critical for SOL and IROL, but not critical for balancing control; a facility may be critical for SOL and IROL, but not for failing to have its faults cleared properly; a facility may be critical if its cyber access is invaded, but not for SOL or IROL, etc. There are at least several classes of facilities to which we can assign the term "critical", but they are applicable under different conditions: a. A facility is critical for protection system design if a fault not cleared properly can result in adverse impact on the interconnected system; b. A facility is critical for transmission system operation if its removal from service affects SOL and or IROL (requiring a reduction in the SOL or IROL); c. A facility is critical for balancing control if its unavailability or malfunction results in an inability to correct ACE or frequency excursion; d. A facility/device/component is critical if its unavailability or malfunction can result in a protection relay system not able to clear a fault, or initiate the intended corrective actions; e. A facility or asset is critical if cyber invasions or malicious acts can result in major interruptions to interconnected system control or reliability; To define the term "critical facilities" for SOL/IROL, even assuming it is doable for both limits, may not address the other situations listed above. Hence, there will likely need to be a series of defined terms for "critical facilities" for different applications, which is confusing and defeats the purpose of having a definition. Suggest the SAR proponent and/or the SAR DT to consider adopting an alternative approach to address the directive by putting the appropriate words in the affected standard requirements to stipulate the situational awareness requirements without defining the term, thereby addressing FERC's Directive to provide meaning to the term "critical facilities".
No
We do not agree with APPA's proposals, and agree with the need for a set of consistent continent-wide criteria as suggested by Entergy.
Yes
No
Refer to our comments submitted to Question 1.
The use of the phrase "could result in an SOL or IROL violation" is inappropriate. A facility that may be critical to a system's SOL/IROL when taken out of service may require a reduction in the SOL/IROL, but may not cause or result in the concerned system "violating" the SOL/IROL. There is an increasing trend to use the word "exceedance", since within the context of the IRO standards IROL may be temporarily exceeded, but there is no violation unless the magnitude of the exceedance is not corrected within Tv. With respect to what "critical facilities" (relating to R2) should be monitored in adjacent Reliability Coordinator Areas, we suggest the facilities whose status affect an RC area's IROL (or a TOP area's SOL) be put on the monitored list. This is the current approach in NPCC, and provides the triggering mechanism that an assessment be conducted to address the adverse impact of the facility's status on the IROL with adjustments applied as necessary. This list is also used in coordination of facility outage plans and schedules.

Individual
Jonathan Appelbaum
The United Illuminating Company
No
UI Agrees with adding measures. UI Disagree with the need to define the term critical facilities and suggests the scope include removing the word "critical" from the requirement.
No
The word "critical" is not needed for this requirement. The RC should monitor all facilities whose failure, degradation, or disconnection can result in an IROL violation.
No
The word "critical" is not needed for this requirement. The RC should monitor all facilities whose failure, degradation, or disconnection can result in an IROL violation.
No
The word "critical" is not needed for this requirement. The RC should monitor all facilities whose failure, degradation, or disconnection can result in an IROL violation.
Those facilities whose failure, degradation or disconnection could result in an IROL violation.
Individual
RoLynda Shumpert
South Carolina Electric and Gas
Yes
Yes
Yes
Yes
The SDT needs to be clear when defining the term Critical Facilities, so no confusion will arise between what constitutes Critical Facilities versus what constitutes Critical Assets. The delineation should be that: a) Critical Assets require additional security, so that they will be available/functional whenever needed to operate the BES b) Critical Facilities require additional monitoring, so that their availability will be known in case they are needed to mitigate an SOL/IROL violation. Critical Facilities should be defined to include only those assets whose failure could cause or contribute to SOL or IROL violation as stated in the current IRO-003-2 standard. This list of facilities should be considered dynamic as it will change based on the given system configuration. For example, if a generator ramping up generation is the only operating procedure available to mitigate an IROL, then that generator should be considered a Critical Facility.
Facilities that are specified in an operating procedure that acts as the sole procedure available to mitigate an IROL violation should be monitored in adjacent RC Areas.
Individual
Dan Rochester
Independent Electricity System Operator
No
We agree with the need to develop measures for each requirement, but do not agree with defining the term "Critical Facilities" despite the FERC directive. The IESO is a member of the NPCC Region. The Region has long established a Critical Facility List for facilities which, if removed from service, may affect an adjacent system. In essence, NPCC has a list and the criteria and procedures in place to meet the intent of the FERC directive to enhance awareness not just local to a system but also on a wide-area perspective. We do not disagree with the intent; however, we disagree with the need to develop a definition. In general, definitions are applicable and valid within the context of the

framework or document to which it applies. For example, a facility if removed from service may be critical for SOL but not critical for IROL; a facility may be critical for SOL and IROL but not critical for balancing control; a facility may be critical for SOL and IROL but not for failing to have its faults cleared properly; a facility may be critical if its cyber access is invaded but not for SOL or IROL, etc. There are at least several classes of facilities to which we can assign the term “critical” but they are applicable under different conditions: a. A facility is critical for protection system design if a fault not cleared properly can result in adverse impact on the interconnected system; b. A facility is critical for transmission system operation if its removal from service affects SOL and or IROL (requiring a reduction in the SOL or IROL); c. A facility is critical for balancing control if its unavailability or malfunction results in the inability to correct ACE or frequency excursion; d. A facility/device/component is critical if its unavailability or malfunction can result in the protection relay system not able to clear a fault or initiate the intended corrective actions; e. A facility or asset is critical if cyber invasions or malicious acts can result in major interruptions to interconnected system control or reliability; To define the term Critical Facilities for SOL/IROL, even assuming it is doable for both limits, may not address the other situations listed above. Hence, there will likely need to be a series of defined terms for Critical Facilities for different applications, which is confusing and defeats the purpose of having a definition. We suggest the SAR proponent and/or the SAR DT to consider adopting an alternative approach to address the directive by putting the appropriate words in the affected standards to stipulate the situation awareness requirements without defining the term. For example, we suggest that the SDT consider including in the scope of the SAR revising Requirement R2 of IRO-003-2 to obviate the need for a definition of “critical facilities”. In essence, the definition of “critical facilities” is already localized in the requirement as evidenced by the clause “whose failure, degradation or disconnection could result in an SOL or IROL violation.” We offer two possible revisions to R2 are as follows: Each Reliability Coordinator shall know the current status of all BES facilities whose failure, degradation or disconnection could result in an SOL or IROL violation. Reliability Coordinators shall also know the status of any facilities that may be required to assist area restoration objectives. OR Each Reliability Coordinator shall know the current status of all facilities it deems critical to BES reliability whose failure, degradation or disconnection could result in an SOL or IROL violation. Reliability Coordinators shall also know the status of any facilities that may be required to assist area restoration objectives.

No

Notwithstanding our comment on the need to have a defined term, we do not agree with APPA's proposal. Within the context of SOL/IROL, since the intent of the directive is to enhance awareness to cover an area wider than a PC or RC or TOP area, chances are the wide-area view may span over more than one Regional Entity's footprint. Facilities that may be critical to system operation (SOL/IROL in this case) know no artificial regional boundary; their status and/or operation can affect systems in other REs' footprint. The industry is moving toward developing continent-wide reliability standards and SOL and IROL are terms used in NERC standards and applicable to all responsible entities across the continent. This together with FERC's intent to (a) eliminate fill-in-the-blank standards and (b) define BPS to remove the different approaches taken by individual REs in defining BES, we do not see the merit of adopting a regional approach to determining critical facilities.

Yes

Again, notwithstanding our comment on the need to develop a definition, facilities that can be critical to SOL/IROL may change depending on the system condition. In Ontario, the IESO develops a list of facilities that are critical for different operating areas. Facilities that are not included in the list are deemed non-critical. However, when a non-critical facility together with another facility, critical or otherwise, is out of service, the non-critical facility may become critical. There are other conditions under which a non-critical facility may become critical. The requirements to address this directive need to have the flexibility to address these situations.

No

Please see our comments under Q1 for the reason of our disagreement.

First of all, we want to point out that “could result in an SOL or IROL violation” is inappropriate. A facility that may be critical to a system's SOL/IROL when taken out of service may require a reduction in the SOL/IROL, but may not cause or result in the concerned system “violating” the SOL/IROL. Further, there is an increasing trend to use the word “exceedance” since within the context of the IRO standards, IROL may be temporarily exceeded but there is no violation unless the magnitude of the exceedance is not corrected within Tv. With respect to what ‘critical facilities’ (relating to R2) should

be monitored in adjacent Reliability Coordinator Areas, we suggest the facilities whose status affect an RC area's IROL (or a TOP area's SOL) be put on the monitored list. This is the current approach adopted in IESO (and NPCC in general), and provides the triggering mechanism that an assessment be conducted to address the adverse impact of the facility's status on the IROL with adjustments applied as necessary. This list is also used in coordination of facility outage plans and schedules.
Individual
Greg
Rowland
Yes
No
We believe that the reliability standard should define the criteria, and the Reliability Coordinator should apply the criteria to determine "critical facilities".
Yes
Yes
With regards to what facilities should be monitored in adjacent RC Areas, strike the word "critical" in R2, because it's not needed and could cause confusion. Also need to strike SOL, and limit the requirement to facilities that could result in an IROL violation. If the RC is required to monitor everything in adjacent areas that "could result in an SOL violation", then the RC would be overwhelmed with far too much information. Each RC and TOP is monitoring its own SOLs, which is sufficient.
The phrase "critical facilities" creates potential confusion with the phrase "Critical Assets" which is used in the CIP standards. Monitoring for situational awareness is different from cyber protection; and we suggest using another term or phrase than "critical facilities".
Individual
Thad Ness
American Electric Power (AEP)
Yes
There should be consideration made to other references to "critical facilities" (i.e. PRC-023 and EOP-008). Should this SAR also consider those in scope? Will the definitions and criteria be the same or different?
No
AEP supports the idea of a widely available and transparent methodology, but we contend that this methodology is better developed at the Reliability Coordinators rather than NERC and the Regional Entities.
Yes
While we agree with the problem statement that conditions change necessitating updates to the list of critical facilities, we do caution that the list of "critical facilities" cannot be overly dynamic without any bounds.
Yes
Please see our comments to item number one above.
It may not be practical for each RC to monitor all adjacent "critical facility", but at a minimum they should be aware of and potentially monitor "critical facilities" at or near the border that could have an impact to IROL facilities.
Group
Southern Company
Andy Tillery
Yes

No
We do not believe that it is possible to develop a “one size fits all” methodology.
Yes
No
We think that “critical facilities” are self evident within Requirement R2. The word “critical” is unnecessary in this context since the facilities in question are fully described in the parenthetical statement following the word “facilities”. Any further definition seems likely to inadvertently limit the set of facilities intended to be covered by this requirement. It is our view that the SDT did not intend this requirement to connect with similar requirements in the Critical Infrastructure Protection standards and that ‘critical facilities’ is not intended to be the equivalent of Critical Asset We request that the SDT validate our view.
Each Reliability Coordinator (RC) should know the status of facilities in adjacent RC areas that impact its RC area.
Individual
Richard Kafka
Pepco Holdings, Inc.
Yes
Yes
It is appropriate for the SDT to consider this suggestion, but it seems more appropriate for PCs or RCs to determine critical facilities.
No
This is unnecessary. Any facility could become “critical” given enough real-time contingencies or outages.
Yes
It is reasonable to consider developing a definition. We suggest ALR be used for guidance.
RCs already are required to coordinate with each other.
Group
MRO's NERC Standards Review Subcommittee
Carol Gerou
No
As stated in the Reliability Standards Development Procedure, “Measures are used to assess performance and outcomes for the purpose of determining compliance with the requirements “. Measures should give a Responsible Entity what types of proof of compliance that can be used, not the only types of proof of compliance that an entity can have as compliance proof. Please take this into consideration when adding measures. Do not agree with the suggestion of defining “critical asset”, per se at the NERC level. As noted and stated in FERC Order 693, paragraph 914, FERC directs a criteria to define “critical facilities” and the best way is to define a “methodology” for the responsible entity to follow in determining critical facilities. Recommend that any definition for critical facilities not be included in CIP-002 through CIP-009. The methodology would only be used within this project only. The use of the word “critical” is confusing recommend replacing the word with “important”, “vital”, “crucial” or “essential” facility.
No
Do not agree with each Region establishing a methodology for defining what a “critical facility” is. There are too many MRRE's (Multiple Region Registered Entities) that would have to comply with up to 8 different Regions. The SDT should address this issue on behalf of NERC only. Through the NERC delegation agreements, Regions are to enforce NERC Standards through consistent enforcement, meaning each Region shall come to the same conclusion as the other, upon review of compliance

evidence. If there are 8 different methodologies, this will never be achieved.
No
System conditions should not play any part of what a “critical facility” is. Changing system conditions are related to section 215 of the Federal Power Act of 2005, where FERC defined the term “reliable operation” means operating the elements of the bulk-power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cybersecurity incident, or unanticipated failure of system elements. FERC Order 693, paragraph 914 states in the last sentence that “the ERO should consider the suggestion of APPA, Entergy and Xcel”. The NSRS believes the best way is for NERC to publish a methodology requirement within this Standard.
No
Entities should be allowed to determine what facilities are deemed to be critical to their system. As stated by the NERC President, “everything cannot be a priority” and by casting a wide net, a definition of critical facility may bring too many items that are not truthfully, critical to the reliability of the BES. Recommend that the SDT provide a methodology.
Please consider this rewrite. Each Reliability Coordinator shall know the current status of all critical facilities whose failure, degradation or disconnection could result in an SOL or IROL violation. Reliability Coordinators shall provide adjacent RC Areas with information that could lead to an IROL.
Group
Dominion
Louis Slade, Jr.
Yes
Dominion agrees with the need to define “critical facilities;” however, we urge the SDT to consider words that convey the intent without being easily confused with “Critical Assets” as used in the CIP Standards.
No
Dominion does not believe that it is possible to develop a ‘one size fits all’ methodology and is more aligned with Entergy’s position.
Yes
No
Dominion believes that “critical facilities” are self evident within Requirement R2. The word “critical” is unnecessary in this context since the facilities in question are fully described in the parenthetical statement following the word “facilities”. Any further definition seems likely to inadvertently limit the set of facilities intended to be covered by this requirement. It is our view that the SDT did not intend this requirement to connect with similar requirements in the Critical Infrastructure Protection standards and that ‘critical facilities’ is not intended to be the equivalent of Critical Asset We request that the SDT validate our view.
Each Reliability Coordinator (RC) should know the status of facilities in adjacent RC areas that impact its RC area.
Group
Midwest ISO Standards Collaborators
Jason L. Marshall
No
While we agree that the FERC directives need to be addressed, we are concerned that this SAR has the potential to go too far and that the directives may not even be fully understood given context of the entire order. For instance, FERC is very clear in paragraph 616 (included below) that adding measures are up to the discretion of NERC. Furthermore, within the SAR paragraph 913 from Order 693 clearly states that NERC has already met the directive for adding measures. “In response to APPA’s concern that NERC did not provide a Measure for each Requirement, we reiterate that it is in the ERO’s discretion whether each Requirement requires a corresponding Measure. The ERO should

consider this issue through the Reliability Standards development process." We also disagree with the need to create criteria for critical facilities. Rather than create criteria, we believe the drafting team should focus their efforts on the need for a definition. Establishing criteria will result in a prescriptive definition of critical facilities that does not allow flexibility for differences in the characteristics of various RC footprints. Furthermore, it is contrary to the results-based standards development efforts that have been approved by the NERC BOT.

No

We do not agree with APPA's suggestion. Each RC footprint is unique and a one-size all approach is not appropriate. Furthermore, APPA's proposal deviates from NERC's results-based standards efforts as it focuses on how to meet the goal of a requirement and not what needs to be accomplished. APPA's proposal also could create security risks to the Bulk Electric System. Critical facilities should be classified as CEII information and should not be publicly available in general. Thus, it would be questionable to establish a methodology that is too transparent such that the general public could then ascertain what is critical and what is not. This could inadvertently play right into the hands of those wishing to harm our nation.

No

We agree with Entergy regarding the need for flexibility but disagree with the need for a criteria identified in the standard. Including the criteria focuses the standard on how to accomplish reliability goals and moves the standard away from defining what the reliability goal is. Defining universal criteria is diametrically opposed with the need for flexibility.

No

We are not convinced that a definition is needed but do agree that the drafting team should explore the need for a definition. However, the drafting team needs to carefully consider the impact of the definition on other standards. For instance, EOP-008-0 R1.3 includes the term critical facilities and that standard may need to be modified to capitalize the term so that it references that definition. Then again, it may not need to be referenced. The bottom line is that the drafting team simply needs to consider these types of impacts and make appropriate adjustments in other standards as necessary.

Any facilities that could impact the IROL or SOL should be monitored. This would include facilities outside of the RC footprint. However, we caution the drafting team in allowing a RC to define critical facilities in another RC's footprint. Doing this could result in conflicting critical facilities lists. For example, RC A may identify a facility in the RC B footprint that impacts one of its IROLs and call it critical. That same facility in RC B's footprint may not impact any IROLs and SOLs within its own footprint. Thus, RC B deems it not critical. This situation should be avoided.

Group

IRC Standards Review Committee

Ben Li

Yes

We agree with the general scope of the SAR to address the FERC directives, and to consider the specific industry comments mentioned in the Order. However, we are concerned that this SAR has the potential to go too far and that the directives may not be fully understood given context of the entire order. For instance, FERC is very clear in paragraph 616 (included below) that adding measures are up to the discretion of NERC. Furthermore, within the SAR paragraph 913 from Order 693 clearly states that NERC has already met the directive for adding measures. "In response to APPA's concern that NERC did not provide a Measure for each Requirement, we reiterate that it is in the ERO's discretion whether each Requirement requires a corresponding Measure. The ERO should consider this issue through the Reliability Standards development process." We also disagree with the need to create criteria to define the term "critical facilities", and the preconceived notion that this terms needs to be defined to address the FERC directives. Establishing criteria may result in a prescriptive definition of critical facilities that does not allow flexibility for differences in the characteristics of various RC footprints. Furthermore, it is contrary to the results-based standards development efforts that have been approved by the NERC BOT.

No

We do not agree with APPA's suggestion. Each RC footprint is unique and a one-size all approach is

not appropriate. Furthermore, APPA's proposal deviates from NERC's results-based standards concept as the proposal focuses on how to meet the goal of a requirement and not what needs to be accomplished. Further, the industry is moving toward developing continent-wide reliability standards, and SOL and IROL are terms used in NERC standards and are applicable to all responsible entities across the continent. This together with FERC's intent to (a) eliminate fill-in-the-blank standards and (b) define BPS to remove the different approaches taken by individual REs in defining BES, we do not see the merit of adopting a regional approach to determining critical facilities.

No

We agree with Entergy regarding the need for flexibility but disagree with the need for identifying criteria in the standard. Including the criteria focuses the standard on how to accomplish reliability goals and moves the standard away from defining what the reliability goal is. Defining universal criteria is diametrically opposed with the need for flexibility.

No

We disagree with the need to develop a definition. In general, definitions are applicable and valid within the context of the framework or document to which it applies. For example, a facility if removed from service may be critical for SOL but not critical for IROL; a facility may be critical for SOL and IROL but not critical for balancing control; a facility may be critical for SOL and IROL but not for failing to have its faults cleared properly; a facility may be critical if its cyber access is invaded but not for SOL or IROL, etc. There are at least several classes of facilities to which we can assign the term "critical" but they are applicable under different conditions: a. A facility is critical for protection system design if a fault not cleared properly can result in adverse impact on the interconnected system; b. A facility is critical for transmission system operation if its removal from service affects SOL and or IROL (requiring a reduction in the SOL or IROL); c. A facility is critical for balancing control if its unavailability or malfunction results in the inability to correct ACE or frequency excursion; d. A facility/device/component is critical if its unavailability or malfunction can result in the protection relay system not able to clear a fault or initiate the intended corrective actions; e. A facility or asset is critical if cyber invasions or malicious acts can result in major interruptions to interconnected system control or reliability; To define the term Critical Facilities for SOL/IROL, even assuming it is doable for both limits, may not address the other situations listed above. Hence, there will likely need to be a series of defined terms for Critical Facilities for different applications, which is confusing and defeats the purpose of having a definition. We suggest the SAR proponent and/or the SAR DT to consider adopting an alternative approach to address the directive by putting the appropriate words in the affected standards to stipulate the situation awareness requirements without defining the term.

First of all, we want to point out that "could result in an SOL or IROL violation" may be inappropriate. A facility that may be critical to a system's SOL/IROL when taken out of service may require a reduction in the SOL/IROL, but may not cause or result in the concerned system "violating" the SOL/IROL. Further, there is an increasing trend to use the word "exceedance" since within the context of the IRO standards, IROL may be temporarily exceeded but there is no violation unless the magnitude of the exceedance is not corrected within Tv. We agree that facilities in adjacent RC areas which can impact IROLs and/or SOLs in another RC area should be monitored. However, we suggest cautions be exercised in developing standard language that would allow an RC to specify critical facilities in another RC's footprint. Doing this can result in conflicting critical facilities lists. For example, RC A may identify a facility in the RC B footprint that impacts one of its IROLs and call it critical. That same facility in RC B's footprint may not impact any IROLs and SOLs within its own footprint. Thus, RC B deems it not critical. This situation should be avoided. Caution should also be exercised to not overly expand the footprint of an RC. An RC should be able to see the portion of a neighboring RC footprint that has the potential to impact its footprint, although restricting it to only SOL/IROL exceedances/violations may not be sufficient. Likewise an RC needs to be able to see, including analyze, a portion of a neighboring RC footprint to ensure that what it does in its footprint doesn't adversely impact the neighboring RC footprint.

Individual

Jason Shaver

American Transmission Company

No

While we agree that the FERC directives need to be addressed, we are concerned that this SAR has

the potential to go too far and that the directives may not even be fully understood given context of the entire order. For instance, FERC is very clear in paragraph 616 (included below) that adding measures are up to the discretion of NERC. Furthermore, within the SAR paragraph 913 from Order 693 clearly states that NERC has already met the directive for adding measures. "In response to APPA's concern that NERC did not provide a Measure for each Requirement, we reiterate that it is in the ERO's discretion whether each Requirement requires a corresponding Measure. The ERO should consider this issue through the Reliability Standards development process." We also disagree with the need to create criteria for critical facilities. Rather than create criteria, we believe the drafting team should focus their efforts on the need for a definition. Establishing criteria will result in a prescriptive definition of critical facilities that does not allow flexibility for differences in the characteristics of various RC footprints. Furthermore, it is contrary to the results-based standards development efforts that have been approved by the NERC BOT.
No
We do not agree with APPA's suggestion. Each RC footprint is unique and a one-size all approach is not appropriate. Furthermore, APPA's proposal deviates from NERC's results-based standards efforts as it focuses on how to meet the goal of a requirement and not what needs to be accomplished. APPA's proposal also could create security risks to the Bulk Electric System. Critical facilities should be classified as CEII information and should not be publicly available in general. Thus, it would be questionable to establish a methodology that is too transparent such that the general public could then ascertain what is critical and what is not. This could inadvertently play right into the hands of those wishing to harm our nation.
No
We agree with Entergy regarding the need for flexibility but disagree with the need for a criteria identified in the standard. Including the criteria focuses the standard on how to accomplish reliability goals and moves the standard away from defining what the reliability goal is. Defining universal criteria is diametrically opposed with the need for flexibility.
No
We are not convinced that a definition is needed. The drafting team needs to carefully consider the impact of the definition on other standards. For instance, EOP-008-0 R1.3 includes the term critical facilities and that standard may need to be modified to capitalize the term so that it references that definition. ATC has some additional concerns with the delay on the existing work. We believe that the SDT should not address this issue but focus on its original purpose and goal.
ATC believes that this is an impossible situation to demonstrate compliance. We believe that this effort should be dropped and that the team should focus on its original SAR. No entity should be expected to show on a facility by facility bases (external to its footprint) why it has or has not been included in their model. An entity could be prevented from doing anything if because they will have to show why they included some facilities but also why other facilities were not included. In addition, in a compliance audit if the auditor disagreed with the justification they could still be potentially found non-compliant over a disagreement of the exclusion of a facility. Lastly, even if a entity could do this one time the constant addition or changes in system configuration would make continual justification of facility inclusion could be costly.
ATC believes that this SAR should not be given to this team because it will delay the work of the team.
Individual
L Zotter, C Hasha, S Jue, M Morais, S Myers
ERCOT ISO
Yes
ERCOT ISO supports comments submitted by the IRC/SRC.
No
ERCOT ISO supports comments submitted by the IRC/SRC.
No
ERCOT ISO supports comments submitted by the IRC/SRC.
No
ERCOT ISO supports comments submitted by the IRC/SRC.

ERCOT ISO supports comments submitted by the IRC/SRC and asserts a minor addition to the response to Question 5 in paragraph 3 by inserting the phrase 'especially beyond the boundaries of an Interconnection'. Therefore, ERCOT ISO submits: "First of all, we want to point out that "could result in an SOL or IROL violation" may be inappropriate. A facility that may be critical to a system's SOL/IROL when taken out of service may require a reduction in the SOL/IROL, but may not cause or result in the concerned system "violating" the SOL/IROL. Further, there is an increasing trend to use the word "exceedance" since within the context of the IRO standards, IROL may be temporarily exceeded but there is no violation unless the magnitude of the exceedance is not corrected within Tv. We agree that facilities in adjacent RC areas which can impact IROLs and/or SOLs in another RC area should be monitored. However, we suggest cautions be exercised in developing standard language that would allow an RC to specify critical facilities in another RC's footprint. Doing this can result in conflicting critical facilities lists. For example, RC A may identify a facility in the RC B footprint that impacts one of its IROLs and call it critical. That same facility in RC B's footprint may not impact any IROLs and SOLs within its own footprint. Thus, RC B deems it not critical. This situation should be avoided. Caution should also be exercised to not overly expand the footprint of an RC, especially beyond the boundaries of an Interconnection. An RC should be able to see the portion of a neighboring RC footprint that has the potential to impact its footprint, although restricting it to only SOL/IROL exceedances/violations may not be sufficient. Likewise an RC needs to be able to see, including analyze, a portion of a neighboring RC footprint to ensure that what it does in its footprint doesn't adversely impact the neighboring RC footprint."

Group

Western Electricity Coordinating Council

Linda Perez

Yes

We agree that measures should be associated with requirements. The criteria should be flexible but be comprehensive enough to include any facilities that have the potential to impact the BES. Further we suggest that the criteria need to be well defined and consider the likely adverse impact to the BES.

Yes

Our understanding of APPA's comment is that NERC and the RE will make transparent their methodology, make available the data types they used and make available the procedure each registered entity would use to determine their critical facilities. However if APPA's comment means that NERC and the RE will create the critical facilities list, we do not agree.

Yes

We understand and agree that as system conditions change a given facility may become critical and elevated to the critical facility list, but this would be difficult to manage and communicate in real time.

Yes

This is dependent on your ties with the adjacent RC. For example, the Western Interconnection only has DC ties with other RC's.

This may be related to the work that the CSO 706 SDT CIP 002-4 has done on creating a list of criteria for critical assets.

Group

Kansas City Power & Light

Jim Useldinger

Yes

Recommend not using the term "critical facilities" as that may cause confusion with the CIP Standards and "critical assets" and the FAC-003 Standard and "facilities deemed as critical" in the applicability section of FAC-003. Do not want to any designation here to reflect on the facilities identified by other Standards for their specific purposes.

Yes

No

Although it is true that changing operating conditions can result in increasing the importance for transmission facilities, it is not necessary to attempt to classify facilities as critical on a dynamic basis. Alarm processing, processes for establishing flowgates, and contingency analysis applications are sufficient in alerting System Operators to operating conditions that are unfavorable and require mitigating Operator action.

Yes

No other comments.

Standard Development Roadmap

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed:

1. Draft SAR Version 1 posted January 15, 2007
2. Draft SAR Version 1 Comment Period ended February 14, 2007
3. Draft SAR Version 2 and comment responses on SAR version 1 posted March 19, 2007
4. Draft Version 2 SAR comment period ended April 17, 2007
5. SAR version 2 and comment responses for SAR version 2 accepted by SC and SDT appointed in June 2007.
6. First posting of revised standards on August 5, 2008 with comment period closed on September 16, 2008.
7. Draft Version 2 of standards and response to comments September 16, 2008–May 26, 2009.
8. Second posting of revised standards on July 10, 2009 with comment period closed on August 9, 2009.
9. RCSDT coordinated with OPCP SDT and RTO SDT on definitions relating to directives and three part communication and Draft Version 3 of standards and response to comments August 9–November 20, 2009.
10. Third posting of revised standards on January 4, 2010 with comment period closed on February 3, 2010.

Proposed Action Plan and Description of Current Draft:

The SDT began working on revisions to the standards in August 2007. The current posting contains revisions based on stakeholder comments on the second draft. The team is posting for a 30 day pre-ballot review.

Future Development Plan:

Anticipated Actions	Anticipated Date
1. Respond to comments on third posting	March 2010
2. Post Standards for pre-ballot period.	January 2011
3. Standards posted for initial and recirculation ballots.	February 2011
4. Standards sent to BOT for approval.	April 2011
5. Standards filed with regulatory authorities.	June 2011

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

The RC SDT proposes modifying the following approved definition:

Adverse Reliability Impact: The impact of an event that results in Bulk Electric System instability or Cascading.

Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an Emergency.

This defined term is contained in draft COM-002-2 and IRO-001-2.

As a reference, we have included the existing definition of Emergency:

Emergency: Any abnormal system condition that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System.

A. Introduction

1. **Title:** **Reliability Coordination – Responsibilities and Authorities**
2. **Number:** IRO-001-2
3. **Purpose:** To establish the capability and authority of Reliability Coordinators to direct other entities to prevent Adverse Reliability Impacts to the Bulk Electric System.
4. **Applicability**
 - 4.1. Reliability Coordinators.
 - 4.2. Transmission Operators.
 - 4.3. Balancing Authorities.
 - 4.4. Generator Operators.
 - 4.5. Interchange Coordinators.
 - 4.6. Distribution Providers.
 - 4.7. Electric Reliability Organization.
5. **Effective Date:** In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees approval.

B. Requirements

- ~~R1.~~ The Electric Reliability Organization ~~Each Regional Reliability Organization, subregion, or interregional coordinating group shall establish~~ certify **at least** one or more Reliability Coordinators to continuously assess transmission reliability and coordinate emergency operations among the operating entities within each region and across the regional boundaries. *[Violation Risk Factor: High][Time Horizon: Operations Assessment]*
- R2. Each Reliability Coordinator shall take actions or direct actions, which could include issuing Reliability Directives, of Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. *[Violation Risk Factor: High][Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*
- R3. Each Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator and Distribution Provider shall comply with its Reliability Coordinator's direction per Requirement R2 unless the direction per Requirement R2 can not be implemented or such actions would violate safety, equipment, regulatory or statutory requirements. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*
- R4. Each Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator and Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to perform as directed per Requirement R3. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*
- ~~R5.~~ ~~Each Reliability Coordinator that identifies an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area shall notify all impacted~~

~~Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]~~

- R6.** ~~Each Reliability Coordinator that identifies an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when the problem has been mitigated. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]~~
- R7.** ~~Each Reliability Coordinator shall provide its System Operators with the authority to approve, deny or cancel planned outages of its own analysis tools. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]~~
- R8.** ~~Each Reliability Coordinator shall have procedures in place to mitigate the effects of analysis tool outages. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]~~

Comment [SC1]: These two requirements and associated measures and VSLs are moved to IRO-005-4

Comment [SC2]: These requirements and associated measures and VSLs are moved to IRO-002-2

C. Measures

- M1.** The Electric reliability Organization shall have and provide evidence which may include, but is not limited to, dated documentation indicating that it certified [at least](#) one or more Reliability Coordinators to continuously assess transmission reliability and coordinate emergency operations among the operating entities within the region and across the regional boundaries.
- M2.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to dated operator logs, dated records, dated and time stamped voice recordings or dated transcripts of voice recordings, or equivalent documentation, that will be used to determine that it has taken action or directed action, which could have included issuing Reliability Directive(s), to prevent identified events or mitigate the magnitude or duration of actual events that caused Adverse Reliability Impacts within its Reliability Coordinator Area. (R1)
- M3.** Each Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator and Distribution Provider shall have and provide evidence which may include, but is not limited to dated operator logs, dated records, dated and time stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it complied with its Reliability Coordinator's direction(s) per Requirement R1 unless the direction per Requirement R1 could not be implemented or such actions would have violated safety, equipment, regulatory or statutory requirements. In such cases, the Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator or Distribution Provider shall have and provide copies of the safety, equipment, regulatory or statutory requirements as evidence for not complying with the Reliability Coordinator's direction. (R2)
- M4.** Each Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator and Distribution Provider shall have and provide evidence which may include, but is not limited to dated operator logs, dated records, dated and time stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it informed the Reliability Coordinator of its inability to perform as directed per Requirement R1. (R3)
- M5.** ~~Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it notified~~

~~all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when it identified a real or potential condition with Adverse Reliability Impacts, within its Reliability Coordinator Area. (R4)~~

~~M6. Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it notified all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when a real or potential condition with Adverse Reliability Impacts within its Reliability Coordinator Area had been mitigated. (R5)~~

~~M7. Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a documented procedure or equivalent evidence that will be used to confirm that the Reliability Coordinator has provided its System Operator with the authority to approve, deny or cancel planned outages of its own analysis tools. (R6)~~

~~M8. Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a documented procedure or equivalent evidence that will be used to confirm that the Reliability Coordinator has procedures in place to mitigate the effects of analysis tool outages. (R7)~~

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

Regional Entity

1.2. Compliance Monitoring and Enforcement Processes:

Compliance Audits

Self-Certifications

Spot Checking

Compliance Violation Investigations

Self-Reporting

Complaints

1.3. Data Retention

The Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider, or Interchange Coordinator shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- The Electric reliability Organization shall retain its evidence for 5 years for Requirement R1 and Measure M1.
- The Reliability Coordinator shall retain its evidence for the most recent 90 days for voice recordings or 12 months for documentation for Requirement R2 and Measure M2.
- The Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider or Interchange Coordinator shall retain its evidence for the

most recent 90 days for voice recordings or 12 months for documentation for Requirements R3 and R4, Measures M3 and M4.

- ~~o The Reliability Coordinator shall retain its current, in force document and any documents in force for the current year and previous calendar year for Requirements R6 and R7 and Measures M6 and M7.~~
- o If a Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider or Interchange Coordinator is found non-compliant, it shall keep information related to the non-compliance until found compliant.
- o The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

1.4. Additional Compliance Information

None.

2. Violation Severity Levels

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	N/A	N/A	N/A	The Regional Entity failed to ensure that at least one Reliability Coordinator was certified in its region.
R2	N/A	N/A	N/A	The Reliability Coordinator failed to take action or direct actions, which could have included issuing Reliability Directive(s), for actions to be taken to prevent identified events that resulted in Adverse Reliability Impacts. OR The Reliability Coordinator failed to take action or direct actions, which could have included issuing Reliability Directive(s), for actions to be taken to mitigate the magnitude or duration of actual events that resulted in Adverse Reliability Impacts.
R3	N/A	N/A	N/A	The responsible entity did not comply with the Reliability Coordinator's direction per Requirement R1.
R4	N/A	N/A	N/A	The responsible entity failed to inform its Reliability Coordinator upon recognition of the inability to perform as directed per Requirement R1.

E. Regional Variances

None identified.

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
1	April 4, 2007	Approved by FERC — Effective Date	New
2	TBD	Revised per SAR for project 2006-6, reliability Coordination; added VRFs and VSLs as approved from VRF and VSL projects	Revised

Standard Development Roadmap

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed:

1. Draft SAR Version 1 posted January 15, 2007
2. Draft SAR Version 1 Comment Period ended February 14, 2007
3. Draft SAR Version 2 and comment responses on SAR version 1 posted March 19, 2007
4. Draft Version 2 SAR comment period ended April 17, 2007
5. SAR version 2 and comment responses for SAR version 2 accepted by SC and SDT appointed in June 2007.
6. First posting of revised standards on August 5, 2008 with comment period closed on September 16, 2008.
7. Draft Version 2 of standards and response to comments September 16, 2008–May 26, 2009.
8. Second posting of revised standards on July 10, 2009 with comment period closed on August 9, 2009.
9. RCS DT coordinated with OPCP SDT and RTO SDT on definitions relating to directives and three part communication and Draft Version 3 of standards and response to comments August 9–November 20, 2009.

10. Third posting of revised standards on January 4, 2010 with comment period closed on February 3, 2010.

Proposed Action Plan and Description of Current Draft:

The SDT began working on revisions to the standards in August 2007. The current posting contains revisions based on stakeholder comments on the second draft. The team is ~~seeking comments on the revised standards~~ posting for a 30 day pre-ballot review.

Future Development Plan:

Anticipated Actions	Anticipated Date
1. Respond to comments on third posting	March 2010
2. Post Standards for pre-ballot period.	~~April 2010~~ <u>January 2011</u>
3. Standards posted for initial and recirculation ballots.	~~May 2010~~ <u>February 2011</u>
4. Standards sent to BOT for approval.	~~July 2010~~ <u>April 2011</u>
5. Standards filed with regulatory authorities.	~~September 2010~~ <u>June 2011</u>

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

The RC SDT proposes modifying the following approved definition:

Adverse Reliability Impact: The impact of an event that results in Bulk Electric System instability; ~~uncontrolled separation~~ or Cascading.

Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an ~~actual or expected~~ Emergency.

This defined term is contained in draft COM-002-2 and IRO-001-2.

As a reference, we have included the existing definition of Emergency:

Emergency: Any abnormal system condition that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System.

A. Introduction

1. **Title:** Reliability Coordination – Responsibilities and Authorities
2. **Number:** IRO-001-2
3. **Purpose:** To establish ~~requirements for issuance~~ the capability and authority of ~~and compliance with Reliability Coordinator~~ Coordinators to direct other entities to prevent Adverse Reliability ~~Directives or notification within the Reliability Coordinator Area~~ Impacts to the Bulk Electric System.
4. **Applicability**
 - 4.1. Reliability Coordinators.
 - 4.2. Transmission Operators.
 - 4.3. Balancing Authorities.
 - 4.4. Generator Operators.
 - ~~4.5. Transmission Service Providers.~~
 - ~~4.6. Load Serving Entities.~~
 - ~~4.5. Interchange Coordinators.~~
 - ~~4.7.4.6. Distribution Providers.~~
 - ~~4.8. Purchasing Selling Entities.~~
 - ~~4.7. Electric Reliability Organization.~~
5. **Effective Date:** In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees approval.

B. Requirements

- ~~R1.~~ The Electric Reliability Organization ~~Each Regional Reliability Organization, subregion, or interregional coordinating group~~ shall ~~establish~~ certify at least one or more Reliability Coordinators to continuously assess transmission reliability and coordinate emergency operations among the operating entities within each region and across the regional boundaries. *[Violation Risk Factor: High][Time Horizon: Operations Assessment]*
- ~~R1.~~R2. Each Reliability Coordinator shall ~~act or issue~~ take actions or direct actions, which could include issuing Reliability Directives ~~for actions to be taken by~~ of Transmission Operators, Balancing Authorities, Generator Operators, ~~Transmission Service Providers, Load Serving Entities, Interchange Coordinators and~~ Distribution Providers ~~and Purchasing Selling Entities~~ within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. *[Violation Risk Factor: High][Time Horizon: Real-time Operations ~~and~~ Same Day Operations and Operations Planning]*
- ~~R2.~~R3. Each Transmission Operator, Balancing Authority, Generator Operator, ~~Transmission Service Provider, Load Serving Entity, Interchange Coordinator and~~ Distribution Provider, ~~and Purchasing Selling Entity~~ shall comply with its Reliability Coordinator's Reliability Directives direction per Requirement R2 unless the direction per Requirement R2 can not be implemented or such actions would violate safety, equipment, ~~or~~ regulatory or

statutory requirements. [Violation Risk Factor: High] [Time Horizon: Real-time Operations ~~and, Same Day Operations~~ and Operations Planning]

~~R3,R4.~~ Each Transmission Operator, Balancing Authority, Generator Operator, ~~Transmission Service Provider, Load-Serving Entity, Interchange Coordinator and~~ Distribution Provider, ~~and Purchasing-Selling Entity~~ shall inform its Reliability Coordinator upon recognition of its inability to perform ~~an issued Reliability Directive as directed per Requirement R3.~~ [Violation Risk Factor: High] [Time Horizon: Real-time Operations ~~and, Same Day Operations~~ and Operations Planning]

~~R4,R5.~~ Each Reliability Coordinator that identifies an expected or actual ~~threat condition~~ with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations ~~and Operations Planning~~]

~~R5,R6.~~ Each Reliability Coordinator that identifies an expected or actual ~~threat condition~~ with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when the ~~transmission~~ problem has been mitigated. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations ~~and Operations Planning~~]

~~R6,R7.~~ Each Reliability Coordinator shall provide its ~~Operating Personnel System Operators~~ with the authority to ~~veto, approve, deny or cancel~~ planned outages ~~to of~~ its own analysis tools. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations ~~and Operations Planning~~]

~~R8.~~ Each Reliability Coordinator shall have procedures in place to mitigate the effects of analysis tool outages. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations ~~and Operations Planning~~]

Comment [SC1]: These two requirements and associated measures and VSLs are moved to IRO-005-4

Comment [SC2]: These requirements and associated measures and VSLs are moved to IRO-002-2

C. Measures

~~M1.~~ The Electric reliability Organization shall have and provide evidence which may include, but is not limited to, dated documentation indicating that it certified at least one or more Reliability Coordinators to continuously assess transmission reliability and coordinate emergency operations among the operating entities within the region and across the regional boundaries.

~~M1,M2.~~ Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to ~~dated~~ operator logs, ~~dated records, dated and time stamped~~ voice recordings or ~~dated~~ transcripts of voice recordings, ~~electronic communications~~, or equivalent documentation, that will be used to determine that it has ~~acted, or issued~~ taken action or directed action, which could have included issuing Reliability Directive(s), to prevent identified events or mitigate the magnitude or duration of actual events that caused Adverse Reliability Impacts within its Reliability Coordinator Area. (R1)

~~M2,M3.~~ Each Transmission Operator, Balancing Authority, Generator Operator, ~~Transmission Service Provider, Load-Serving Entity, Interchange Coordinator and~~ Distribution Provider ~~and Purchasing-Selling Entity~~ shall have and provide evidence which may include, but is not limited to ~~dated~~ operator logs, ~~dated records, dated and time stamped~~ voice recordings or ~~dated~~ transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it complied with its Reliability Coordinator's ~~Reliability Directive direction(s) per Requirement R1 unless the direction per Requirement R1 could not be implemented or~~ such actions would have violated safety,

equipment, ~~or~~ regulatory or statutory requirements. In such cases, the Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator or Distribution Provider shall have and provide copies of the safety, equipment, regulatory or statutory requirements as evidence for not complying with the Reliability Coordinator's direction. (R2)

~~M3.~~ M4. Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load Serving Entity, Interchange Coordinator and Distribution Provider ~~or Purchasing-Selling Entity~~ shall have and provide evidence which may include, but is not limited to dated operator logs, dated records, dated and time stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it ~~that it~~ informed the Reliability Coordinator of its inability to comply with its Reliability Coordinator's issued Reliability Directive(s) perform as directed per Requirement R1. (R3)

~~M4.~~ M5. Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it notified all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when it identified a real or potential ~~threat~~ condition with Adverse Reliability Impacts, within its Reliability Coordinator Area. (R4)

~~M5.~~ M6. Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it notified all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when a real or potential ~~threat~~ condition with Adverse Reliability Impacts within its Reliability Coordinator Area had been mitigated. (R5)

~~M6.~~ M7. Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a documented procedure or equivalent evidence that will be used to confirm that the Reliability Coordinator has provided its Operating Personnel ~~System Operator~~ with the authority to ~~veto~~ approve, deny or cancel planned outages of its own analysis tools. (R6)

M8. Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a documented procedure or equivalent evidence that will be used to confirm that that the Reliability Coordinator has procedures in place to mitigate the effects of analysis tool outages. (R7)

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

Regional Entity

1.2. Compliance Monitoring and Enforcement Processes:

Compliance Audits

Self-Certifications

Spot Checking

Compliance Violation Investigations

Self-Reporting

Complaints

1.3. Data Retention

The Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider, ~~Transmission Service Provider, Purchasing-Selling Entity or Load-Serving Entity~~ or Interchange Coordinator shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- o ~~The Electric reliability Organization shall retain its evidence for 5 years for Requirement R1 and Measure M1.~~
- o ~~The Reliability Coordinator shall retain its evidence for the most recent 90 days for voice recordings or 12 months for documentation for Requirement R2 and Measure M2.~~
- o ~~The Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider, Transmission Service Provider, Purchasing-Selling Entity or Load-Serving Entity or Interchange Coordinator shall retain its evidence for the most recent 90 days for voice recordings or 12 months for documentation for Requirements R3 and R4, Measures M3 and M4.~~
- o ~~The Reliability Coordinator shall retain its current, in force document and any documents in force since for the last compliance audit for applicable current year and previous calendar year for Requirements R6 and R7 and Measures M6 and M7.~~
- o If a Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider, ~~Transmission Service Provider, Purchasing-Selling Entity or Load-Serving Entity or Interchange Coordinator~~ is found non-compliant, it shall keep information related to the non-compliance until found compliant.
- o The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

1.4. Additional Compliance Information

None.

2. Violation Severity Levels

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	N/A	N/A	~~The Reliability Coordinator failed to act or issue Reliability Directive(s) for actions to be taken to prevent Adverse Reliability Impacts.~~ <u>N/A</u>	~~The Regional Entity failed to ensure that at least one Reliability Coordinator failed to act or issue Reliability Directive(s) for actions to be taken to mitigate the magnitude or duration of Adverse Reliability Impacts.~~ <u>was certified in its region.</u>
R2	N/A	N/A	N/A	~~The responsible entity did not follow the Reliability Coordinator's Reliability Directive.~~
R3	N/A	N/A	N/A	~~The responsible entity failed to inform its Reliability Coordinator upon recognition of the inability to perform the issued Reliability Directive.~~
R4	~~The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to one, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.~~ <u>N/A</u>	~~The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to two, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.~~ <u>N/A</u>	~~The Reliability Coordinator who identified an expected or actual threat with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to three, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.~~ <u>N/A</u>	~~The Reliability Coordinator who failed to take action or direct actions, which could have included issuing Reliability Directive(s), for actions to be taken to prevent identified an expected or actual threat with events that resulted in Adverse Reliability Impacts within its.~~ <u>OR</u> ~~The Reliability Coordinator Area failed to issue an alert to any or more than three impacted Transmission Operators and~~

Standard IRO-001-2 Reliability Coordination — Responsibilities and Authorities

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
				~~Balancing Authorities in its Reliability Coordinator Area failed to take action or direct actions, which could have included issuing Reliability Directive(s), for actions to be taken to mitigate the magnitude or duration of actual events that resulted in Adverse Reliability Impacts.~~
~~R5~~ <u>R3</u>	~~The Reliability Coordinator failed to notify one, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.~~ <u>N/A</u>	~~The Reliability Coordinator failed to notify two, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.~~ <u>N/A</u>	~~The Reliability Coordinator failed to notify three, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.~~ <u>N/A</u>	~~The Reliability Coordinator failed to notify any or more than three impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.~~ <u>The responsible entity did not comply with the Reliability Coordinator's direction per Requirement R1.</u>
~~R6~~ <u>R4</u>	N/A	N/A	N/A	~~The responsible entity failed to inform its Reliability Coordinator failed to provide its Operating Personnel with upon recognition of the authority inability to veto planned outages of its own analysis tools perform as directed per Requirement R1.~~

regional
reliability
plan is a
“how”
document
that shows

Standard IRO-001-2 Reliability Coordination — Responsibilities and Authorities

E. Regional Variances

None identified.

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
1	April 4, 2007	Approved by FERC — Effective Date	New
2	TBD	Revised per SAR for project 2006-6, reliability Coordination; added VRFs and VSLs as approved from VRF and VSL projects	Revised

Implementation Plan for IRO-001-2 - Reliability Coordination — Responsibilities and Authorities

Revisions to Defined Terms in the NERC Glossary

The RC SDT proposes modifying the following approved definition:

Adverse Reliability Impact — The impact of an event that results in Bulk Electric System instability or Cascading-

The RC SDT proposes the following new definition:

Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an Emergency.

Prerequisite Approvals

- None

Conforming Changes to Requirements in Already Approved Standards

Revision Summary

- The RC SDT revised the standard and is proposing retiring several requirements (R2, R4, R5, R6, R7 and R10). Changes were made to eliminate redundancies between standards (existing and proposed), to align with NERCs Rules of Procedure and to address issues in FERC Order 693.

Revisions or Retirements to Already Approved Standards

The following tables identify the sections of approved standards that shall be retired or revised when this standard is implemented. If the drafting team is recommending the retirement or revision of a requirement, that text is blue.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R1. Each Regional Reliability Organization, subregion, or interregional coordinating group shall establish one or more Reliability Coordinators to continuously assess transmission reliability and coordinate emergency operations among the operating entities within the region and across the regional boundaries. <i>[Violation Risk Factor: High]</i>	R1. The Electric Reliability Organization shall certify at least one or more Reliability Coordinators to continuously assess transmission reliability and coordinate emergency operations among the operating entities within each region and across the regional boundaries. [Violation Risk Factor: High][Time Horizon: Operations Assessment]
Notes: After discussion with NERC legal staff, the above requirement was proposed as a revision to existing R1.	

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R2. The Reliability Coordinator shall comply with a regional reliability plan approved by the NERC Operating Committee. <i>[Violation Risk Factor: High]</i> R5. The Reliability Coordinator shall list within its reliability plan all entities to which the Reliability Coordinator has delegated required tasks. <i>[Violation Risk Factor: Lower]</i>	None – The RC SDT proposes retiring these requirements.
Notes: The RC SDT proposes retiring R2 and R5 as the regional reliability plan is a “how” document that shows how an RC will comply with all other NERC Standards, making this requirement redundant.	

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R3. The Reliability Coordinator shall have clear decision-making authority to act and direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities and Purchasing-Selling Entities within its Reliability Coordinator Area to preserve the integrity and reliability of the Bulk Electric System. These actions shall be taken without delay, but no longer than 30 minutes. <i>[Violation Risk Factor: High]</i>	IRO-001-2 R2. Each Reliability Coordinator shall take actions or direct actions , which could include issuing Reliability Directives, of Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations and Same Day Operations]</i>
Notes: • The RC SDT is proposing to remove the blue text in the first sentence. • The RC SDT is proposing that the last sentence of R3 be retired. The timing of RC response to events varies based on system conditions. The specific timing criteria for responses to IROLs are contained in other standards (e.g., TOP-007, R2). ▪ The Distribution Provider was added as an applicable entity per FERC Order 693.	

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R4. Reliability Coordinators that delegate tasks to other entities shall have formal operating agreements with each entity to which tasks are delegated. The Reliability Coordinator shall verify that all delegated tasks are understood, communicated, and addressed within its Reliability Coordinator Area. All responsibilities for complying with NERC and regional standards applicable to Reliability Coordinators shall remain with the Reliability Coordinator. <i>[Violation Risk Factor: Medium]</i>	None – retire the requirement RC SDT proposes that original IRO-001-1, R4 is redundant with NERC Rules of Procedure, section 500 and should be retired from the standard. Section 501 states: “The purpose of the compliance registry will be to clearly identify those entities that are responsible for compliance with reliability standards. Organizations listed on the registry will be responsible for knowing the content of and for complying with the NERC reliability standards.” Also, section 507, item 2 addresses written agreements; Joint registration pursuant to written agreement. “Where a JRO and any of its members or related entities agree, in writing, upon a division of compliance responsibility among them for one or more reliability standard(s) applicable to a particular function, and/or for one or more requirements within particular reliability standard(s), both the JRO and such member(s) or related entit(ies) shall register as an organization responsible for that function. The JRO and its member(s) or related entit(ies) must have a written agreement that clearly specifies their respective responsibilities, which shall be submitted as part of the joint registration. Neither NERC nor the regional entity shall be parties to any such agreement between a JRO and its member or related entit(ies), nor shall NERC or the regional entity have responsibility for reviewing or approving any such agreement, other than to verify that the agreement provides for an allocation or assignment of responsibilities consistent with the joint registration.”
Notes: The RC SDT recommends the retirement of IRO-001-1 R4.	

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R6. The Reliability Coordinator shall verify that all delegated tasks are carried out by NERC-certified Reliability Coordinator operating personnel. <i>[Violation Risk Factor: Medium]</i>	None – retire requirement because it is redundant with: PER-003-0 R1. Each Transmission Operator, Balancing Authority, and Reliability Coordinator shall staff all operating positions that meet both of the following criteria with personnel that are NERC certified for the applicable functions: R1.1. Positions that have the primary responsibility, either directly or through communications with others, for the real-time operation of the interconnected Bulk Electric System. R1.2. Positions directly responsible for complying with NERC standards.
Notes: The RC SDT recommends retiring IRO-001-1 R6 as it is redundant with PER-003-0 R1.	

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R7. The Reliability Coordinator shall have clear, comprehensive coordination agreements with adjacent Reliability Coordinators to ensure that System Operating Limit (SOL) or Interconnection Reliability Operating Limit (IROL) violation mitigation requiring actions in adjacent Reliability Coordinator Areas are coordinated. <i>[Violation Risk Factor: High]</i>	None – requirement should be retired because it is redundant with: IRO-014-1 R1. For conditions or activities that impact other Reliability Coordinator Areas, each Reliability Coordinator shall have Operating Procedures, Processes, or Plans for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following: .
Notes: The RC SDT recommends the retirement of IRO-001-1 R7 as this is redundant with IRO-014-1 R1.	

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R8: Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities shall comply with Reliability Coordinator directives unless such actions would violate safety, equipment, or regulatory or statutory requirements. Under these circumstances, the Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, or Purchasing-Selling Entity shall immediately inform the Reliability Coordinator of the inability to perform the directive so that the Reliability Coordinator may implement alternate remedial actions. <i>[Violation Risk Factor: High]</i>	IRO-001-2 R3. Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity shall comply with its Reliability Coordinator's direction per Requirement R2 unless the direction per Requirement R2 can not be implemented or such actions would violate safety, equipment, ~~or~~ regulatory or statutory requirements. <i>[Violation Risk Factor: High]</i> <i>[Time Horizon: Real-time Operations]</i> R4. Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider and Purchasing-Selling Entity shall inform its Reliability Coordinator upon recognition of its inability to perform as directed per Requirement R2. <i>[Violation Risk Factor: High]</i> <i>[Time Horizon: Real-time Operations]</i>
Notes: The RC SDT added the Distribution Provider per FERC Order 693 and added the blue text shown in the requirements above. The RC SDT proposes the replacement of IRO-001-1, R8 with two requirements IRO-001-2, R3, and R4. This will add clarity and measurability to the standard. The last part of the second sentence should be removed as it is implicit in R1, which states that the Reliability Coordinator will act or direct actions to mitigate issues. Stakeholders indicated issues with the ability to measure compliance with the phrase, "without intentional delay" and this was removed. Relating to First Energy's comment in FERC Order 693, the requirements address both personnel safety and equipment. There is no reference to a chain of command in the requirements. The standard is written such that decision-making authority rests with the Reliability Coordinator. No further revisions to the standard are required.	

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R9. The Reliability Coordinator shall act in the interests of reliability for the overall Reliability Coordinator Area and the Interconnection before the interests of any other entity. <i>[Violation Risk Factor: High]</i>	None – retire the requirement as redundant.
Notes: The RC SDT proposes retiring this requirement. All Reliability Coordinator Standard Requirements are developed so that the Reliability Coordinator shall act in the interest of reliability for the RC Area and the Interconnection. Section 6 of the NERC Standard Development Procedure states that NERC develops and maintains Reliability Standards. Equity issues are covered under the Reliability Coordinator Standards of Conduct.	

Functions that Must Comply with the Requirements in the Standards

Standard	Functions that Must Comply With the Requirements							
	Reliability Coordinator	Balancing Authority	Distribution Provider	Transmission Operator	Transmission Service Provider	Purchasing Selling Entity	Generator Operator	Load Serving Entity
IRO-001-2	X	X	X	X	X	X	X	X

Effective Dates

In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees approval.

Implementation Plan for IRO-001-2 Reliability Coordination — Responsibilities and Authorities

Implementation Plan for IRO-001-2 - Reliability Coordination — Responsibilities and Authorities

Revisions to Defined Terms in the NERC Glossary

The RC SDT proposes modifying the following approved definition:

Adverse Reliability Impact — The impact of an event that results in Bulk Electric System frequency-related instability; unplanned tripping of load or generation; or uncontrolled separation; or Cascading outages, that affects a widespread area of the Interconnection.

The RC SDT proposes the following new definition:

Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an actual or expected Emergency.

Prerequisite Approvals

- None

Conforming Changes to Requirements in Already Approved Standards

- IRO-005, R15 is being incorporated into IRO-001-2.

Revision Summary

- The RC SDT revised the standard and is proposing retiring several requirements (~~R1~~, R2, R4, R5, R6, R7 and R10). Changes were made to eliminate redundancies between standards (existing and proposed), to align with NERCs Rules of Procedure and to address issues in FERC Order 693.

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Implementation Plan for IRO-001-2

Reliability Coordination — Responsibilities and Authorities

Revisions or Retirements to Already Approved Standards

The following tables identify the sections of approved standards that shall be retired or revised when this standard is implemented. If the drafting team is recommending the retirement or revision of a requirement, that text is blue.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R1. Each Regional Reliability Organization, subregion, or interregional coordinating group shall establish one or more Reliability Coordinators to continuously assess transmission reliability and coordinate emergency operations among the operating entities within the region and across the regional boundaries. <i>[Violation Risk Factor: High]</i>	<u>R1. The Electric Reliability Organization shall certify at least one or more Reliability Coordinators to continuously assess transmission reliability and coordinate emergency operations among the operating entities within each region and across the regional boundaries. [Violation Risk Factor: High][Time Horizon: Operations Assessment]</u> None — The RC-SDT proposes retiring this requirement.
Notes: <u>After discussion with NERC legal staff, the above requirement was proposed as a revision to existing R1. The RC-SDT proposes that original IRO-001-1, R1 should be retired from the standard and addressed in NERC Rules of Procedure, Section 503, item 2.2: “Regional entities shall verify that all balancing authorities and transmission operators are under the responsibility of a reliability coordinator”.</u>	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R2. The Reliability Coordinator shall comply with a regional reliability plan approved by the NERC Operating Committee. <i>[Violation Risk Factor: High]</i> R5. The Reliability Coordinator shall list within its reliability plan all entities to which the Reliability Coordinator has delegated required tasks. <i>[Violation Risk Factor: Lower]</i>	None – The RC SDT proposes retiring these requirements.
Notes: The RC SDT proposes retiring R2 and R5 as the regional reliability plan is a “how” document that shows how an RC will comply with all other NERC Standards, making this requirement redundant.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R3. The Reliability Coordinator shall have clear decision-making authority to act and direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities and Purchasing-Selling Entities within its Reliability Coordinator Area to preserve the integrity and reliability of the Bulk Electric System. These actions shall be taken without delay, but no longer than 30 minutes. <i>[Violation Risk Factor: High]</i>	IRO-001-2 R21. ~~The Each~~ Reliability Coordinator shall take actions or direct actions , which could include ~~or issuing Reliability Directives, or direct actions to~~ Formatted: Font color: Red, Strikethrough Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations and Same Day Operations]</i>
Notes: • The RC SDT is proposing to remove the blue text in the first sentence. • The RC SDT is proposing that the last sentence of R3 be retired. The timing of RC response to events varies based on system conditions. The specific timing criteria for responses to IROLs are contained in other standards (e.g., TOP-007, R2). ▪ The Distribution Provider was added as an applicable entity per FERC Order 693.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R4. Reliability Coordinators that delegate tasks to other entities shall have formal operating agreements with each entity to which tasks are delegated. The Reliability Coordinator shall verify that all delegated tasks are understood, communicated, and addressed within its Reliability Coordinator Area. All responsibilities for complying with NERC and regional standards applicable to Reliability Coordinators shall remain with the Reliability Coordinator. <i>[Violation Risk Factor: Medium]</i>	None – retire the requirement RC SDT proposes that original IRO-001-1, R4 is redundant with NERC Rules of Procedure, section 500 and should be retired from the standard. Section 501 states: “The purpose of the compliance registry will be to clearly identify those entities that are responsible for compliance with reliability standards. Organizations listed on the registry will be responsible for knowing the content of and for complying with the NERC reliability standards.” Also, section 507, item 2 addresses written agreements; Joint registration pursuant to written agreement. “Where a JRO and any of its members or related entities agree, in writing, upon a division of compliance responsibility among them for one or more reliability standard(s) applicable to a particular function, and/or for one or more requirements within particular reliability standard(s), both the JRO and such member(s) or related entit(ies) shall register as an organization responsible for that function. The JRO and its member(s) or related entit(ies) must have a written agreement that clearly specifies their respective responsibilities, which shall be submitted as part of the joint registration. Neither NERC nor the regional entity shall be parties to any such agreement between a JRO and its member or related entit(ies), nor shall NERC or the regional entity have responsibility for reviewing or approving any such agreement, other than to verify that the agreement provides for an allocation or assignment of responsibilities consistent with the joint registration.”
Notes: The RC SDT recommends the retirement of IRO-001-1 R4.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R6. The Reliability Coordinator shall verify that all delegated tasks are carried out by NERC-certified Reliability Coordinator operating personnel. <i>[Violation Risk Factor: Medium]</i>	None – retire requirement because it is redundant with: PER-003-0 R1. Each Transmission Operator, Balancing Authority, and Reliability Coordinator shall staff all operating positions that meet both of the following criteria with personnel that are NERC certified for the applicable functions: R1.1. Positions that have the primary responsibility, either directly or through communications with others, for the real-time operation of the interconnected Bulk Electric System. R1.2. Positions directly responsible for complying with NERC standards.
Notes: The RC SDT recommends retiring IRO-001-1 R6 as it is redundant with PER-003-0 R1.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R7. The Reliability Coordinator shall have clear, comprehensive coordination agreements with adjacent Reliability Coordinators to ensure that System Operating Limit (SOL) or Interconnection Reliability Operating Limit (IROL) violation mitigation requiring actions in adjacent Reliability Coordinator Areas are coordinated. <i>[Violation Risk Factor: High]</i>	None – requirement should be retired because it is redundant with: IRO-014-1 R1. <u>For conditions or activities that impact other Reliability Coordinator Areas, e</u>~~The Each~~ Reliability Coordinator shall have Operating Procedures, Processes, or Plans ~~in place~~ for activities that require notification, exchange of information or coordination of actions with ~~one or more other impacted~~ Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall <u>collectively address the following: address Scenarios that affect other Reliability Coordinator Areas as well as those developed in coordination with other Reliability Coordinators.</u>
Notes: The RC SDT recommends the retirement of IRO-001-1 R7 as this is redundant with IRO-014-1 R1.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1	IRO-001-2
R8: Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities shall comply with Reliability Coordinator directives unless such actions would violate safety, equipment, or regulatory or statutory requirements. Under these circumstances, the Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, or Purchasing-Selling Entity shall immediately inform the Reliability Coordinator of the inability to perform the directive so that the Reliability Coordinator may implement alternate remedial actions. <i>[Violation Risk Factor: High]</i>	R32. ~~Each~~ Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Provider, and Purchasing-Selling Entity shall ~~act without intentional delay to~~ comply with its Reliability Coordinator's directives unless ~~the direction per Reliability Coordinator~~ implemented or such actions would violate regulatory or statutory requirements. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations]</i> R43. ~~The~~ Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider ~~or and~~ Purchasing-Selling Entity shall ~~immediately confirm the ability to comply with the directive or~~ inform its Reliability Coordinator upon recognition of the its inability to perform ~~as directed per R8~~. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations]</i> • R4. Each Reliability Coordinator or actual threat with Adverse Reliability Impact, the Reliability Coordinator Area shall notify, without intentional delay, all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i>
Notes: The RC SDT added the Distribution Provider per FERC Order 693 and added the blue text shown in the requirements above. The RC SDT proposes the replacement of IRO-001-1, R8 with ~~two~~ requirements IRO-001-2, R2, R3, and R4. This will add clarity and measurability to the standard. The last part of the second sentence should be removed as it is implicit in R1, which states that the Reliability Coordination will act or direct actions to mitigate issues. Stakeholders indicated issues with the ability to measure compliance with the phrase, "without intentional delay" and this was removed. Relating to First Energy's comment in FERC Order 693, the requirements address both personnel safety and equipment. There is no reference to a chain of command in the requirements. The standard is written such that decision-making authority rests with the Reliability Coordinator. No further revisions to the standard are required.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R9. The Reliability Coordinator shall act in the interests of reliability for the overall Reliability Coordinator Area and the Interconnection before the interests of any other entity. <i>[Violation Risk Factor: High]</i>	None – retire the requirement as redundant.
Notes: The RC SDT proposes retiring this requirement. All Reliability Coordinator Standard Requirements are developed so that the Reliability Coordinator shall act in the interest of reliability for the RC Area and the Interconnection. Section 6 of the NERC Standard Development Procedure states that NERC develops and maintains Reliability Standards. Equity issues are covered under the Reliability Coordinator Standards of Conduct.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Already-Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 (this requirement was incorporated from IRO-005-2) R15. Each Reliability Coordinator who foresees a transmission problem (such as an SOL or IROL violation, loss of reactive reserves, etc.) within its Reliability Coordinator Area shall issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area without delay. The receiving Reliability Coordinator shall disseminate this information to its impacted Transmission Operators and Balancing Authorities. The Reliability Coordinator shall notify all impacted Transmission Operators, Balancing Authorities, when the transmission problem has been mitigated. <i>[Violation Risk Factor: High]</i>	IRO-001-2 <u>R5R4.</u> Each Reliability Coordinator who <u>that identifies a real or potential threat with Adverse Reliability Impacts,</u> within its Reliability Coordinator Area shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations]</i> <u>R5.</u> <u>Each Reliability Coordinator that identifies an expected or actual threat with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when the transmission problem has been mitigated. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same-Day Operations and Operations Planning]</u>
Notes: This requirement was moved from IRO-005 into IRO-001-2, <u>R5R4</u> and <u>R5</u>.	

Implementation Plan for IRO-001-2
Reliability Coordination — Responsibilities and Authorities

Functions that Must Comply with the Requirements in the Standards

Standard	Functions that Must Comply With the Requirements							
	Reliability Coordinator	Balancing Authority	Distribution Provider	Transmission Operator	Transmission Service Provider	Purchasing Selling Entity	Generator Operator	Load Serving Entity
IRO-001-2	X	X	X	X	X	X	X	X

Effective Dates

~~To be determined.~~In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees approval.

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A. Introduction

1. **Title:** **Reliability Coordination – Analysis Tools**
2. **Number:** IRO-002-2
3. **Purpose:** To ensure that Reliability Coordinators provide their System Operators with authority with respect to analysis tool outages and to have procedures to mitigate effects of analysis tool outages.
4. **Applicability**
 - 4.1. Reliability Coordinators.
5. **Effective Date:** In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees approval.

B. Requirements

- R1. Each Reliability Coordinator shall provide its System Operators with the authority to approve, deny or cancel planned outages of its own analysis tools. *[Violation Risk Factor: Medium]*
[Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]
- R2. Each Reliability Coordinator shall have procedures in place to mitigate the effects of analysis tool outages. *[Violation Risk Factor: Medium]* *[Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

C. Measures

- M1. Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a documented procedure or equivalent evidence that will be used to confirm that the Reliability Coordinator has provided its System Operator with the authority to approve, deny or cancel planned outages of its own analysis tools. (R1)
- M2. Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a documented procedure or equivalent evidence that will be used to confirm that the Reliability Coordinator has procedures in place to mitigate the effects of analysis tool outages. (R2)

D. Compliance

1. **Compliance Monitoring Process**
 - 1.1. **Compliance Enforcement Authority**
Regional Entity
 - 1.2. **Compliance Monitoring and Enforcement Processes:**
Compliance Audits
Self-Certifications
Spot Checking
Compliance Violation Investigations
Self-Reporting
Complaints

1.3. Data Retention

The Reliability Coordinator shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- The Reliability Coordinator shall retain its current, in force document and any documents in force for the current year and previous calendar year for Requirements R1 and R2 and Measures M1 and M2.
- o If a Reliability Coordinator is found non-compliant, it shall keep information related to the non-compliance until found compliant.
- o The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

1.4. Additional Compliance Information

None.

Violation Severity Levels R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	N/A	N/A	N/A	The Reliability Coordinator failed to provide its System Operator with the authority to approve, deny or cancel planned outages of its own analysis tools.
R2	N/A	N/A	N/A	The Reliability Coordinator failed to have a procedure to mitigate the effects of analysis tool outages

E. Regional Variances

None identified.

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New
2		Retired R1, R3-8	Revised

A. Introduction

1. **Title:** Reliability Coordination – Facilities Analysis Tools
2. **Number:** IRO 002-~~12~~
3. **Purpose:** ~~Reliability Coordinators need information, tools and other capabilities to perform their responsibilities.~~ To ensure that Reliability Coordinators provide their System Operators with authority with respect to analysis tool outages and to have procedures to mitigate effects of analysis tool outages.
4. **Applicability**
 - 4.1. Reliability Coordinators.
5. **Effective Date:** TBD ~~June 4, 2007~~

B. Requirements

~~R1. Each Reliability Coordinator shall have adequate communications facilities (voice and data links) to appropriate entities within its Reliability Coordinator Area. These communications facilities shall be staffed and available to act in addressing a real-time emergency condition.~~	The RC SDT proposes retiring R1. The first sentence of this requirement is a basic facility requirement that should be addressed in certification. The second sentence is redundant with PER-004, R1 which requires the RC to be staffed 24x7.
~~R2. Each Reliability Coordinator shall determine the data requirements to support its reliability coordination tasks and shall request such data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load Serving Entities, or adjacent Reliability Coordinators.~~	The IROL SDT retired R2.
~~R3. Each Reliability Coordinator—or its Transmission Operators and Balancing Authorities—shall provide, or arrange provisions for, data exchange to other Reliability Coordinators or Transmission Operators and Balancing Authorities via a secure network.~~	The RC SDT proposes retiring R3. The TOP and BA portion of this requirement is redundant with TOP-005, R1. The RC to RC data exchange provisions are covered in IRO-014. The secure network is covered by the NERC Rules of Procedure, Section 1002. This requirement should be retired.
~~R4. Each Reliability Coordinator shall have multi-directional communications capabilities with its Transmission Operators and Balancing Authorities, and with neighboring Reliability Coordinators, for both voice and data exchange as required to meet reliability needs of the Interconnection.~~	The RC SDT proposes retiring R4 as it is a basic facility requirement that should be addressed in certification.
~~R5. Each Reliability Coordinator shall have detailed real-time monitoring capability of its Reliability Coordinator Area and sufficient monitoring capability of its surrounding Reliability Coordinator Areas to ensure that potential or actual System Operating~~	The RC SDT proposes retiring R5 as it is a basic facility requirement that should be addressed in certification.

~~Limit or Interconnection Reliability Operating Limit violations are identified. Each Reliability Coordinator shall have monitoring systems that provide information that can be easily understood and interpreted by the Reliability Coordinator's operating personnel, giving particular emphasis to alarm management and awareness systems, automated data transfers, and synchronized information systems, over a redundant and highly reliable infrastructure.~~

~~**R6.** Each Reliability Coordinator shall monitor Bulk Electric System elements (generators, transmission lines, buses, transformers, breakers, etc.) that could result in SOL or IROL violations within its Reliability Coordinator Area. Each Reliability Coordinator shall monitor both real and reactive power system flows, and operating reserves, and the status of Bulk Electric System elements that are or could be critical to SOLs and IROLs and system restoration requirements within its Reliability Coordinator Area.~~

The RC SDT proposes retiring R6. Real-time monitoring is a supporting activity and is one of several processes used to support operation. It is not practical to measure real-time monitoring nor is this necessary. The real reliability objective is to operate within SOL and IROL, not to monitor.

~~**R7.** Each Reliability Coordinator shall have adequate analysis tools such as state estimation, pre and post contingency analysis capabilities (thermal, stability, and voltage), and wide-area overview displays.~~

The RC SDT proposes retiring R7 as it is a basic facility requirement that should be addressed in certification.

~~**R8.** Each Reliability Coordinator shall continuously monitor its Reliability Coordinator Area. Each Reliability Coordinator shall have provisions for backup facilities that shall be exercised if the main monitoring system is unavailable. Each Reliability Coordinator shall ensure SOL and IROL monitoring and derivations continue if the main monitoring system is unavailable.~~

The RC SDT proposes retiring R8. Real-time monitoring is a supporting activity and is one of several processes used to support operation. It is not practical to measure real-time monitoring nor is this necessary. The real reliability objective is to operate within SOL and IROL, not to monitor. The second and third sentences are redundant with EOP-008, R1.

R1. Each Reliability Coordinator shall provide its System Operators with the authority to approve, deny or cancel planned outages of its own analysis tools ~~control its Reliability Coordinator analysis tools, including approvals for planned maintenance.~~ *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

~~**R9-R2.**~~ Each Reliability Coordinator shall have procedures in place to mitigate the effects of analysis tool outages. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

C. Measures

~~**M1.** Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a document that lists its voice communications facilities with Transmission Operators, Balancing Authorities and Generator Operators within its Reliability Coordinator Area and with neighboring Reliability Coordinators, that will be used to confirm that it has communication facilities in accordance with Requirements 1 and 4.~~

~~**M2.** Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a data-link facility description document, computer print out, training document, or other equivalent evidence that will be used to confirm that it has data links with~~

~~entities within its Reliability Coordinator Area and with neighboring Reliability Coordinators, as specified in Requirements 1 and 4.~~

- ~~M3. Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a letter to Transmission Operators, Balancing Authorities, Transmission Owners, Generator Owners, Generator Operators, and Load Serving Entities, or adjacent Reliability Coordinators, or other equivalent evidence that will be used to confirm that the Reliability Coordinator has requested the data required to support its reliability coordination tasks. (Requirement 2)~~
- ~~M4. Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, Energy Management System description documents, computer printouts, SCADA data collection system communications performance or equivalent evidence to demonstrate that it has real-time monitoring capability of its Reliability Coordinator Area and monitoring capability of its surrounding Reliability Coordinator Areas to identify potential or actual System Operating Limit or Interconnection Reliability Operating Limit violations.~~
- ~~M5. Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, documentation from suppliers, operating and planning staff training documents, examples of studies, or other equivalent evidence to show that it has analysis tools in accordance with Requirement 7.~~
- ~~M6. Each Reliability Coordinator shall provide evidence such as equipment specifications, operating procedures, staff records of their involvement in training, or other equivalent evidence to show that it has a backup monitoring facility that can be used to identify and monitor SOLs and IROLs. (Requirement 8)~~
- M7. Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a documented procedure or equivalent evidence that will be used to confirm that the Reliability Coordinator has provided its System Operator with the authority to approve, deny or cancel planned outages of its own analysis tools ~~the Reliability Coordinator has the authority to veto planned outages to analysis tools, including final approvals for planned maintenance as specified in Requirement 9 Part 1. (R9)~~
- M8. Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a documented procedure or equivalent evidence that will be used to confirm that the Reliability Coordinator has procedures in place to mitigate the effects of analysis tool outages. (R10)
- ~~M8-M9. Each Reliability Coordinator shall have and provide upon request its current procedures used to mitigate the effects of analysis tool outages as specified in Requirement 9 Part 2.~~

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance ~~Monitoring Responsibility~~ Enforcement Authority

~~Regional Reliability Organizations shall be responsible for compliance.~~
Monitoring Entity

1.2. Compliance Monitoring and Enforcement Processes:

Compliance Audits

Self-Certifications

Spot Checking

Compliance Violation Investigations

Self-Reporting

Complaints

~~1.2. Compliance Monitoring and Reset Time Frame~~

~~One or more of the following methods will be used to assess compliance:~~

- ~~— Self-certification (Conducted annually with submission according to schedule.)~~
- ~~— Spot Check Audits (Conducted anytime with up to 30 days notice given to prepare.)~~
- ~~— Periodic Audit (Conducted once every three years according to schedule.)~~
- ~~— Triggered Investigations (Notification of an investigation must be made within 60 days of an event or complaint of noncompliance. The entity will have up to 30 days to prepare for the investigation. An entity may request an extension of the preparation period and the extension will be considered by the Compliance Monitor on a case-by-case basis.)~~

~~The Performance Reset Period shall be 12 months from the last finding of non-compliance.~~

1.3. Data Retention

The Reliability Coordinator shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- The Reliability Coordinator shall retain its current, in force document and any documents in force for the current year and previous calendar year for Requirements R9 and R10 and Measures M9 and M10. The Reliability Coordinator shall have current in force documents used to show compliance with the Measures.
- o If a Reliability Coordinator is found non-compliant, it shall keep information related to the non-compliance until found compliant.
- o The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

~~Each Reliability Coordinator shall have current in force documents used to show compliance with Measures 1 through 8.~~

~~If an entity is found non-compliant the entity shall keep information related to the noncompliance until found compliant or for two years plus the current year, whichever is longer.~~

~~Evidence used as part of a triggered investigation shall be retained by the entity being investigated for one year from the date that the investigation is closed, as determined by the Compliance Monitor,~~

~~The Compliance Monitor shall keep the last periodic audit report and all requested and submitted subsequent compliance records.~~

1.4. Additional Compliance Information

None.

~~2. Levels of Non-Compliance for a Reliability Coordinator~~

~~2.1. Level 1: Not applicable.~~

~~2.2. Level 2: Did not confirm that the network used for data exchange to other Reliability Coordinators is secure as specified in R3.~~

~~2.3. Level 3: There shall be a separate Level 3 non-compliance, for every one of the following requirements that is in violation:~~

~~2.3.1 Has not requested the data required to support its reliability coordination tasks. (Requirement 2)~~

~~2.3.2 Does not control its Reliability Coordinator analysis tools, including the exercising of final approvals for planned maintenance (R7) or does not have current procedures in place to mitigate the effects of analysis tool outages as specified in R9.~~

~~2.4. Level 4: There shall be a separate Level 4 non-compliance, for every one of the following requirements that is in violation:~~

~~2.4.1 Does not have or could not demonstrate the use of voice communication facilities (or show data links) to one or more Transmission Operators, Generator Operators or Balancing Authorities with authority over Bulk Electrical System equipment or with one or more neighboring Reliability Coordinators. (R1 and R4)~~

~~2.4.2 Does not have real-time monitoring capability of its Reliability Coordinator Area and surrounding Reliability Coordinator Areas as specified in R5.~~

~~1.4.1 Does not have a documented procedure for the use of its backup monitoring facilities. (R8)~~

2.4.3 — Violation Severity Levels

<u>R#</u>	<u>Lower VSL</u>	<u>Moderate VSL</u>	<u>High VSL</u>	<u>Severe VSL</u>
R2	The Reliability Coordinator demonstrated that it ~~1) determined its data requirements and requested that data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators with a material impact on the Bulk Electric System in its Reliability Coordination Area but did not request the data from Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators with minimal impact on the Bulk Electric System in its Reliability Coordination Area~~ or 2) determined its data	The Reliability Coordinator demonstrated that it determined the majority but not all of its data requirements necessary to support its reliability coordination functions and requested that data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators.	The Reliability Coordinator demonstrated that it determined 1) some but less than the majority of its data requirements necessary to support its reliability coordination functions and requested that data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators Or 2) all of its data requirements necessary to support its reliability coordination functions but failed to demonstrate that it requested data from two of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators.	The Reliability Coordinator failed to demonstrate that it ~~1) determined its data requirements necessary to support its reliability coordination functions and requested that data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators~~ Or 2) requested the data from three or more of its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities or Adjacent Reliability Coordinators.

	~~requirements necessary to perform its reliability functions with the exceptions of data that may be needed for administrative purposes such as data reporting.~~			
R9	~~Reliability Coordinator has approval rights for planned outages of analysis tools but does not have approval rights for maintenance on analysis tools.~~ <u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>The Reliability Coordinator failed to provide its System Operator with the authority to approve, deny or cancel planned outages of its own analysis tools.</u> ~~Reliability Coordinator approval is not required for planned maintenance or planned outages.~~
<u>R10</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>The Reliability Coordinator failed to have a procedure to mitigate the effects of analysis tool outages</u>

E. **Regional** ~~Differences~~Variances

None identified.

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata

1	November 1, 2006	Adopted by Board of Trustees	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New
<u>2</u>		<u>Retired R1, R3-8</u>	<u>Revised</u>

Implementation Plan Contents:

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Prerequisite Approvals

- Adoption of IRO-001-2, IRO-007-0, IRO-010-0, COM-001-2

Conforming Changes to Requirements in Already Approved Standards

- None

Coordination with revisions proposed in other standards projects

- The IROL SDT proposes retiring the following requirements when IRO-010 is approved:
R2

Revision Summary

The RCSDT revised the standard and is proposing retiring several requirements (R1, R3, R4, R5, R6, R7 and R8). Changes were made to eliminate redundancies between standards (existing and proposed), align with NERCs Rules of Procedure and to address issues in FERC Order 693.

FERC Order 693 directive for IRO-002:

In addition we direct the ERO to develop a modification to IRO-002-1 through the Reliability Standards development process that requires a minimum set of tools that should be made available to reliability coordinators.

RCSDT response: The development of a minimum set of tools should be addressed through the work of the Real-Time Tools Best Practices Task Force. Their charge was to develop a list of tools required to perform real time operations functions and submit SARs based on their work. As requirements for these tools are developed, appropriate standards projects will be initiated to incorporate the tools within the NERC Organization Registration and Certification Process, and the applicable reliability standards. The RCSDT submits that this directive be addressed in that effort. This action is accommodated by the Standards Development Work Plan.

Revisions or Retirements to Already Approved Standards

The following tables identify the sections of approved standards that shall be retired or revised when this standard is implemented. If the drafting team is recommending the retirement or revision of a requirement, that text is blue.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-002-1 R1. Each Reliability Coordinator shall have adequate communications facilities (voice and data links) to appropriate entities within its Reliability Coordinator Area. These communications facilities shall be staffed and available to act in addressing a real-time emergency condition. <i>[Violation Risk Factor: High]</i>	The first sentence of this requirement should be retired because it is a basic facility issue that should be addressed in certification. The second sentence is redundant with PER-004, R1 which requires the RC to be staffed 24x7. PER-004-1 R1. Each Reliability Coordinator shall be staffed with adequately trained and NERC-certified Reliability Coordinator operators, 24 hours per day, seven days per week.
Notes:	
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-002-1 R2. Each Reliability Coordinator shall determine the data requirements to support its reliability coordination tasks and shall request such data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities, or adjacent Reliability Coordinators. <i>[Violation Risk Factor: Medium]</i>	None – this requirement should be retired as it is redundant with: IRO-010-1 R1. The Reliability Coordinator shall have a documented data specification for data and information to build and maintain models to support Real-Time Monitoring, Operational Planning Analyses, and Real-Time Assessments. The specification shall include the following: (Violation Risk Factor: Low) (Time Horizon: Operations Planning)
Notes: This requirement is redundant and will be retired upon the adoption of IRO-010-1, R1 {draft standard}.	

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-002-1 R3. Each Reliability Coordinator — or its Transmission Operators and Balancing Authorities — shall provide, or arrange provisions for, data exchange to other Reliability Coordinators or Transmission Operators and Balancing Authorities via a secure network. <i>[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]</i>	None – retire requirement as it is redundant with: TOP-005-1 R1. Each Transmission Operator and Balancing Authority shall provide its Reliability Coordinator with the operating data that the Reliability Coordinator requires to perform operational reliability assessments and to coordinate reliable operations within the Reliability Coordinator Area. (This requirement will be retired upon the implementation of IRO-010-1) IRO-014-1 R1. The Reliability Coordinator shall have Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with one or more other Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall address Scenarios that affect other Reliability Coordinator Areas as well as those developed in coordination with other Reliability Coordinators. R1.1. These Operating Procedures, Processes, or Plans shall collectively address, as a minimum, the following: R1.1.1. Communications and notifications, including the conditions¹ under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators. R1.1.2. Energy and capacity shortages. R1.1.3. Planned or unplanned outage information. R1.1.4. Voltage control, including the coordination of reactive resources for voltage control. R1.1.5. Coordination of information exchange to support reliability assessments. R1.1.6. Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas.

Already Approved Standard	Proposed Replacement Requirement(s)
Notes: - The “secure network” provisions of R3 are covered under the NERC Rules of Procedure, Section 1002 which states: NERC will provide tools and other support services for the benefit of reliability coordinators and other system operators, including the Area Control Error (ACE) and Frequency Monitoring System, NERC Hotline, Real-time Flows, System Data Exchange (SDX), Reliability Coordinator Information System (RCIS), Transmission Services Information Network (TSIN), Interchange Distribution Calculator (IDC), Interregional Security Network (ISN), and Central Repository for Security Events (CRC). To accomplish this goal, NERC will: 1. Maintain the reliability and effectiveness of all mission-critical operating reliability support systems and services; 2. Continue to support maintenance of a transmission provider curtailment report on the CRC site in response to Federal Energy Regulatory Commission Order 605; 3. Investigate and analyze the use of high-speed real-time system measurements, including phasors, in predicting the behavior and performance of the Eastern Interconnection; and 4. Facilitate real-time voice and data exchange services among reliability coordinators (e.g., Hotline, Interregional Security Network, NERCnet, System Data Exchange, etc.).	
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-002-1 R4. Each Reliability Coordinator shall have multi-directional communications capabilities with its Transmission Operators and Balancing Authorities, and with neighboring Reliability Coordinators, for both voice and data exchange as required to meet reliability needs of the Interconnection. <i>[Violation Risk Factor: Medium]</i>	None – Retire this requirement. R4 is addressed in COM-001 (Interpersonal Communications capability) and IRO-010 (data).
Notes:	

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-002-1 R5. Each Reliability Coordinator shall have detailed real-time monitoring capability of its Reliability Coordinator Area and sufficient monitoring capability of its surrounding Reliability Coordinator Areas to ensure that potential or actual System Operating Limit or Interconnection Reliability Operating Limit violations are identified. Each Reliability Coordinator shall have monitoring systems that provide information that can be easily understood and interpreted by the Reliability Coordinator's operating personnel, giving particular emphasis to alarm management and awareness systems, automated data transfers, and synchronized information systems, over a redundant and highly reliable infrastructure. <i>[Violation Risk Factor: High]</i> R6. Each Reliability Coordinator shall monitor Bulk Electric System elements (generators, transmission lines, buses, transformers, breakers, etc.) that could result in SOL or IROL violations within its Reliability Coordinator Area. Each Reliability Coordinator shall monitor both real and reactive power system flows, and operating reserves, and the status of Bulk Electric System elements that are or could be critical to SOLs and IROLs and system restoration requirements within its Reliability Coordinator Area. <i>[Violation Risk Factor: High]</i>	None – Both should be retired based on the notes below.
Notes: R5 is a basic facility requirement that should be addressed in certification. R6: Real-time monitoring is a supporting activity and is only one of several processes used to support operation within SOLs or IROLs. It is not practical to measure real-time monitoring, nor is this necessary. The real reliability objective is to operate within identified parameters, not to monitor.	

Implementation Plan for Reliability Coordination Standards

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-002-1 R7. Each Reliability Coordinator shall have adequate analysis tools such as state estimation, pre- and post-contingency analysis capabilities (thermal, stability, and voltage), and wide-area overview displays. <i>[Violation Risk Factor: High]</i>	None – Retire this requirement. R7 is a basic facility requirement that should be addressed in certification.
Notes:	

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-002-1 R8. Each Reliability Coordinator shall continuously monitor its Reliability Coordinator Area. Each Reliability Coordinator shall have provisions for backup facilities that shall be exercised if the main monitoring system is unavailable. Each Reliability Coordinator shall ensure SOL and IROL monitoring and derivations continue if the main monitoring system is unavailable. <i>[Violation Risk Factor: High]</i>	None – This requirement should be retired because it is redundant with: EOP-008-0 R1. Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have a plan to continue reliability operations in the event its control center becomes inoperable. The contingency plan must meet the following requirements: The contingency plan shall not rely on data or voice communication from the primary control facility to be viable. R1.2. The plan shall include procedures and responsibilities for providing basic tie line control and procedures and for maintaining the status of all inter-area schedules, such that there is an hourly accounting of all schedules. R1.3. The contingency plan must address monitoring and control of critical transmission facilities, generation control, voltage control, time and frequency control, control of critical substation devices, and logging of significant power system events. The plan shall list the critical facilities. R1.4. The plan shall include procedures and responsibilities for maintaining basic voice communication capabilities with other areas. R1.5. The plan shall include procedures and responsibilities for conducting periodic tests, at least annually, to ensure viability of the plan. R1.6. The plan shall include procedures and responsibilities for providing annual training to ensure that operating personnel are able to implement the contingency plans. R1.7. The plan shall be reviewed and updated annually. R1.8. Interim provisions must be included if it is expected to take more than one hour to implement the contingency plan for loss of primary control facility.

Already Approved Standard	Proposed Replacement Requirement(s)
Notes: Real-time monitoring is a supporting activity and is only one of several processes used to support operation within SOLs or IROLs. It is not practical to measure real-time monitoring, nor is this necessary. The real reliability objective is to operate within SOLs and IROLs, not to monitor. The proposed revisions to EOP-008 require the RC to have specific backup capabilities sufficient to, among other things, provide visualization capabilities that ensure that operating personnel have situational awareness of the BES.	
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-002-1 R9. Each Reliability Coordinator shall control its Reliability Coordinator analysis tools, including approvals for planned maintenance. Each Reliability Coordinator shall have procedures in place to mitigate the effects of analysis tool outages. <i>[Violation Risk Factor: Medium]</i>	IRO-002-2 R1. Each Reliability Coordinator shall provide its System Operators with the authority to approve, deny or cancel planned outages of its own analysis tools ~~control its Reliability Coordinator analysis tools, including approvals for planned maintenance.~~ <i>[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i> R2. Each Reliability Coordinator shall have procedures in place to mitigate the effects of analysis tool outages. <i>[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i>
Notes: ▪	

Implementation Plan for Reliability Coordination Standards

Standard	Functions that Must Comply With the Requirements							
	Reliability Coordinator	Balancing Authority	Interchange Authority	Transmission Operator	Transmission Owner	Generator Owner	Generator Operator	Load Serving Entity
IRO-002	X							

Effective Dates

TBD

Standard Development Roadmap

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed:

1. Draft SAR Version 1 posted January 15, 2007
2. Draft SAR Version 1 Comment Period ended February 14, 2007
3. Draft SAR Version 2 and comment responses on SAR version 1 posted March 19, 2007
4. Draft Version 2 SAR comment period ended April 17, 2007
5. SAR version 2 and comment responses for SAR version 2 accepted by SC and SDT appointed in June 2007.
6. First posting of revised standards on August 5, 2008 with comment period closed on September 16, 2008.
7. Draft Version 2 of standards and response to comments September 16, 2008–May 26, 2009.
8. Second posting of revised standards on July 10, 2009 with comment period closed on August 9, 2009.
9. RC SDT coordinated with OPCP SDT and RTO SDT on definitions relating to directives and three part communication and Draft Version 3 of standards and response to comments August 9–November 20, 2009.
10. Third posting of revised standards on January 4, 2010 with comment period closed on February 3, 2010.

Proposed Action Plan and Description of Current Draft:

The SDT began working on revisions to the standards in August 2007. The current posting contains revisions based on stakeholder comments on the third draft. The team is posting for a 30 day pre-ballot review.

Future Development Plan:

Anticipated Actions	Anticipated Date
1. Respond to comments on third posting	March 2010
2. Post Standards for pre-ballot period.	January 2011
3. Standards posted for initial and recirculation ballots.	February 2011
4. Standards sent to BOT for approval.	March 2011
5. Standards filed with regulatory authorities.	June 2011

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

None

Introduction

1. **Title:** Reliability Coordination — Current Day Operations
2. **Number:** IRO-005-4
3. **Purpose:** To ensure that entities are notified when an expected or actual event with Adverse Reliability Impacts is identified.
4. **Applicability:**
 - 4.1. Reliability Coordinators.
5. **Effective Date:** In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees approval.

A. Requirements

- R1. When the results of an Operational Planning Analysis or Real-time Assessment indicate an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*
- R2. The Each Reliability Coordinator that identifies an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when the problem has been mitigated. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

B. Measures

- M1. Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it notified all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when it identified a real or potential condition with Adverse Reliability Impacts, within its Reliability Coordinator Area.
(R1)
- M2. Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it notified all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when a real or potential condition with Adverse Reliability Impacts within its Reliability Coordinator Area had been mitigated.
(R2)

C. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

Regional Entity

1.2. Compliance Monitoring and Enforcement Processes:

Compliance Audits

Self-Certifications

Spot Checking

Compliance Violation Investigations

Self-Reporting

Complaints

1.3. Data Retention

The Reliability Coordinator shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- o The Reliability Coordinator shall retain its evidence for the most recent 90 days for voice recordings or 12 months for other documentation for Requirements R1 and R2 and Measures M1 and M2.
- o If a Reliability Coordinator is found non-compliant, it shall keep information related to the non-compliance until found compliant.
- o The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records or for the time period specified above, whichever is longer. .

1.4. Additional Compliance Information

None.

2. Violation Severity Levels

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	The Reliability Coordinator who identified an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to one, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.	The Reliability Coordinator who identified an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to two, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.	The Reliability Coordinator who identified an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to three, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.	The Reliability Coordinator who identified an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to more than three impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. OR The Reliability Coordinator who identified an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area (in cases where there are less than three impacted entities)..
R2	The Reliability Coordinator failed to notify one, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.	The Reliability Coordinator failed to notify two, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.	The Reliability Coordinator failed to notify three, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.	The Reliability Coordinator failed to notify more than three impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
				OR The Reliability Coordinator failed to notify more all impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated (in cases where there are less than three impacted entities).

D. Regional Differences

None identified.

E. Associated Documents**Version History**

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	August 28, 2006	Added three items that were inadvertently left out to “Applicability” section: 4.5 Generator Operators. 4.6 Load-Serving Entities. 4.7 Purchasing-Selling Entities.	Errata
1	February 7, 2006	BOT Approval	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New
2	August 3, 2010	Revised under Project 2006-06	Revised

A. Introduction

1. **Title:** Reliability Coordination — Current Day Operations
2. **Number:** IRO-005-~~41~~
3. **Purpose:** ~~To ensure that entities are notified when an expected or actual event with Adverse Reliability Impacts is identified. The Reliability Coordinator must be continuously aware of conditions within its Reliability Coordinator Area and include this information in its reliability assessments. The Reliability Coordinator must monitor Bulk Electric System parameters that may have significant impacts upon the Reliability Coordinator Area and neighboring Reliability Coordinator Areas.~~
4. **Applicability:**
 - ~~4.1. Reliability Coordinators.~~
 - ~~4.2. Balancing Authorities.~~
 - ~~4.3. Transmission Operators.~~
 - ~~4.4. Transmission Service Providers.~~
 - ~~4.5. Generator Operators.~~
 - ~~4.6. Load Serving Entities.~~
 - ~~4.7.4.1. Purchasing-Selling Entities.~~
5. **Effective Date:** In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees approval June 4, 2007.

The RCSDT is proposing to retire or move all requirements in this standard. This will result in retiring IRO-005-1.

B. Requirements

- R1.** ~~Each Reliability Coordinator shall monitor its Reliability Coordinator Area parameters, including but not limited to the following: [Violation Risk Factor: High]~~
 - R1.1.** ~~Current status of Bulk Electric System elements (transmission or generation including critical auxiliaries such as Automatic Voltage Regulators and Special Protection Systems) and system loading. [Violation Risk Factor: High]~~

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- R1.2.** ~~Current pre-contingency element conditions (voltage, thermal, or stability), including any applicable mitigation plans to alleviate System Operating Limits (SOL) or Interconnection Reliability Operating Limits (IROL) violations, including the plan's viability and scope. [Violation Risk Factor: High]~~
- R1.3.** ~~Current post-contingency element conditions (voltage, thermal, or stability), including any applicable mitigation plans to alleviate SOL or IROL violations, including the plan's viability and scope. [Violation Risk Factor: High]~~
- R1.4.** ~~System real and reactive reserves (actual versus required). [Violation Risk Factor: High]~~
- R1.5.** ~~Capacity and energy adequacy conditions. [Violation Risk Factor: High]~~
- R1.6.** ~~Current Area Control Error (ACE) for all its Balancing Authorities. [Violation Risk Factor: High]~~
- R1.7.** ~~Current local or Transmission Loading Relief procedures in effect. [Violation Risk Factor: High]~~
- R1.8.** ~~Planned generation dispatches. [Violation Risk Factor: High]~~
- R1.9.** ~~Planned transmission or generation outages. [Violation Risk Factor: High]~~
- R1.10.** ~~Contingency events. [Violation Risk Factor: High]~~
- R2.** ~~Each Reliability Coordinator shall be aware of all Interchange Transactions that wheel through, source, or sink in its Reliability Coordinator Area, and make that Interchange Transaction information available to all Reliability Coordinators in the Interconnection. [Violation Risk Factor: High]~~
- R3.** ~~As portions of the transmission system approach or exceed SOLs or IROLs, the Reliability Coordinator shall work with its Transmission Operators and Balancing Authorities to evaluate and assess any additional Interchange Schedules that would violate those limits. If a potential or actual IROL violation cannot be avoided through proactive intervention, the Reliability Coordinator shall initiate control actions or emergency procedures to relieve the violation without delay, and no longer than 30 minutes. The Reliability Coordinator shall ensure all resources, including load shedding, are available to address a potential or actual IROL violation. [Violation Risk Factor: High]~~
- R4.** ~~Each Reliability Coordinator shall monitor its Balancing Authorities' parameters to ensure that the required amount of operating reserves is provided and available as required to meet the Control Performance Standard (CPS) and Disturbance Control Standard (DCS) requirements. If necessary, the Reliability Coordinator shall direct the Balancing Authorities in the Reliability Coordinator Area to arrange for assistance from neighboring Balancing Authorities. The Reliability Coordinator shall issue Energy Emergency Alerts as needed and at the request of its Balancing Authorities and Load Serving Entities. [Violation Risk Factor: High]~~

- ~~R5. Each Reliability Coordinator shall identify the cause of any potential or actual SOL or IROL violations. The Reliability Coordinator shall initiate the control action or emergency procedure to relieve the potential or actual IROL violation without delay, and no longer than 30 minutes. The Reliability Coordinator shall be able to utilize all resources, including load shedding, to address an IROL violation. [Violation Risk Factor: High]~~
- ~~R6. Each Reliability Coordinator shall ensure its Transmission Operators and Balancing Authorities are aware of Geo Magnetic Disturbance (GMD) forecast information and assist as needed in the development of any required response plans. [Violation Risk Factor: High]~~
- ~~R7. The Reliability Coordinator shall disseminate information within its Reliability Coordinator Area, as required. [Violation Risk Factor: High]~~
- ~~R8. Each Reliability Coordinator shall monitor system frequency and its Balancing Authorities' performance and direct any necessary rebalancing to return to CPS and DCS compliance. The Transmission Operators and Balancing Authorities shall utilize all resources, including firm load shedding, as directed by its Reliability Coordinator to relieve the emergent condition. [Violation Risk Factor: High]~~
- ~~R9. The Reliability Coordinator shall coordinate with Transmission Operators, Balancing Authorities, and Generator Operators as needed to develop and implement action plans to mitigate potential or actual SOL, IROL, CPS, or DCS violations. The Reliability Coordinator shall coordinate pending generation and transmission maintenance outages with Transmission Operators, Balancing Authorities, and Generator Operators as needed in both the real time and next day reliability analysis time frames. [Violation Risk Factor: High]~~
- ~~R10. As necessary, the Reliability Coordinator shall assist the Balancing Authorities in its Reliability Coordinator Area in arranging for assistance from neighboring Reliability Coordinator Areas or Balancing Authorities. [Violation Risk Factor: High]~~
- ~~R11. The Reliability Coordinator shall identify sources of large Area Control Errors that may be contributing to Frequency Error, Time Error, or Inadvertent Interchange and shall discuss corrective actions with the appropriate Balancing Authority. The Reliability Coordinator shall direct its Balancing Authority to comply with CPS and DCS. [Violation Risk Factor: High]~~
- ~~R12. Whenever a Special Protection System that may have an inter-Balancing Authority, or inter-Transmission Operator impact (e.g., could potentially affect transmission flows resulting in a SOL or IROL violation) is armed, the Reliability Coordinators shall be aware of the impact of the operation of that Special Protection System on inter-area flows. The Transmission Operator shall immediately inform the Reliability Coordinator of the status of the Special Protection System including any degradation or potential failure to operate as expected. [Violation Risk Factor: High]~~

- R13.** ~~Each Reliability Coordinator shall ensure that all Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load Serving Entities, and Purchasing Selling Entities operate to prevent the likelihood that a disturbance, action, or non-action in its Reliability Coordinator Area will result in a SOL or IROL violation in another area of the Interconnection. In instances where there is a difference in derived limits, the Reliability Coordinator and its Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load Serving Entities, and Purchasing Selling Entities shall always operate the Bulk Electric System to the most limiting parameter. [Violation Risk Factor: High]~~
- R14.** ~~Each Reliability Coordinator shall make known to Transmission Service Providers within its Reliability Coordinator Area, SOLs or IROLs within its wide area view. The Transmission Service Providers shall respect these SOLs or IROLs in accordance with filed tariffs and regional Total Transfer Calculation and Available Transfer Calculation processes. [Violation Risk Factor: High]~~
- R15.** Each Reliability Coordinator that identifies an expected or actual condition with Adverse Reliability Impacts ~~who foresees a transmission problem (such as an SOL or IROL violation, loss of reactive reserves, etc.) within its Reliability Coordinator Area shall~~ notify ~~issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area without delay. The receiving Reliability Coordinator shall disseminate this information to its impacted Transmission Operators and Balancing Authorities.~~ [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]
- R15-R16.** ~~The~~ Each Reliability Coordinator that identifies an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area ~~shall notify all impacted Transmission Operators and, Balancing Authorities in its Reliability Coordinator Area, when the transmission problem has been mitigated. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]High]~~
- R16-R17.** Each Reliability Coordinator shall confirm reliability assessment results and determine the effects within its own and adjacent Reliability Coordinator Areas. ~~The Reliability Coordinator shall discuss options to mitigate potential or actual SOL or IROL violations and take actions as necessary to always act in the best interests of the Interconnection at all times. [Violation Risk Factor: High]~~
- R17-R18.** ~~When an IROL or SOL is exceeded, the Reliability Coordinator shall evaluate the local and wide area impacts, both real time and post contingency, and determine if the actions being taken are appropriate and sufficient to return the system to within IROL in thirty minutes. If the actions being taken are not appropriate or sufficient, the Reliability Coordinator shall direct the Transmission Operator, Balancing Authority, Generator Operator, or Load Serving Entity to return the system to within IROL or SOL. [Violation Risk Factor: High]~~

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C. Measures

M15. Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to dated operator logs, dated and timestamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it notified all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when it identified a real or potential condition with Adverse Reliability Impacts, within its Reliability Coordinator Area. (R15)

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M16. Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to dated operator logs, dated and timestamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it notified all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when a real or potential condition with Adverse Reliability Impacts within its Reliability Coordinator Area had been mitigated. (R16)

Not specified.

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

Regional Entity

1.2. Compliance Monitoring and Enforcement Processes:

Compliance Audits

Self-Certifications

Spot Checking

Compliance Violation Investigations

Self-Reporting

Complaints

1.3. Data Retention

The Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider, Transmission Service Provider, Purchasing-Selling Entity or Load Serving Entity shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

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- o The Reliability Coordinator shall retain its evidence for 90 days for Requirements R1 and R2 and Measures M1 and M2.
- o If a Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider, Transmission Service Provider, Purchasing-Selling Entity or Load Serving Entity is found non-compliant, it shall keep information related to the non-compliance until found compliant.
- o The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

1.4. Additional Compliance Information

None.

2. Violation Severity Levels

<u>R#</u>	<u>Lower VSL</u>	<u>Moderate VSL</u>	<u>High VSL</u>	<u>Severe VSL</u>
<u>R1</u>	<u>The Reliability Coordinator who identified an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to one, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.</u>	<u>The Reliability Coordinator who identified an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to two, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.</u>	<u>The Reliability Coordinator who identified an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to three, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.</u>	<u>The Reliability Coordinator who identified an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to more than three impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.</u> <u>OR</u> <u>The Reliability Coordinator who identified an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability</u>

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R2	Lower VSL	Moderate VSL	High VSL	Severe VSL
				<u>Coordinator Area (in cases where there are less than three impacted entities)..</u>
<u>R2</u>	<u>The Reliability Coordinator failed to notify one, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.</u>	<u>The Reliability Coordinator failed to notify two, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.</u>	<u>The Reliability Coordinator failed to notify three, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.</u>	<u>The Reliability Coordinator failed to notify more than three impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.</u> <u>OR</u> <u>The Reliability Coordinator failed to notify more all impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated (in cases where there are less than three impacted entities).</u>

E. **Regional Differences**

None identified.

F. **Associated Documents**

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	August 28, 2006	Added three items that were inadvertently left out to “Applicability” section: 4.5 Generator Operators. 4.6 Load-Serving Entities. 4.7 Purchasing-Selling Entities.	Errata
1	February 7, 2006	BOT Approval	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New
<u>2</u>	<u>August 3, 2010</u>	<u>Revised under Project 2006-06</u>	<u>Revised</u>

Standard Development Roadmap

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed:

1. Draft SAR Version 1 posted January 15, 2007
2. Draft SAR Version 1 Comment Period ended February 14, 2007
3. Draft SAR Version 2 and comment responses on SAR version 1 posted March 19, 2007
4. Draft Version 2 SAR comment period ended April 17, 2007
5. SAR version 2 and comment responses for SAR version 2 accepted by SC and SDT appointed in June 2007.
6. First posting of revised standards on August 5, 2008 with comment period closed on September 16, 2008.
7. Draft Version 2 of standards and response to comments September 16, 2008–May 26, 2009.
8. Second posting of revised standards on July 10, 2009 with comment period closed on August 9, 2009.
9. RC SDT coordinated with OCP SDT and RTO SDT on definitions relating to directives and three part communication and Draft Version 3 of standards and response to comments August 9–November 20, 2009.
10. Third posting of revised standards on January 4, 2010 with comment period closed on February 3, 2010.

Proposed Action Plan and Description of Current Draft:

The SDT began working on revisions to the standards in August 2007. The current posting contains revisions based on stakeholder comments on the third draft. The team is posting for a 30 day pre-ballot review.

Future Development Plan:

Anticipated Actions	Anticipated Date
1. Respond to comments on third posting	March 2010
2. Post Standards for pre-ballot period.	January 2011
3. Standards posted for initial and recirculation ballots.	February 2011
4. Standards sent to BOT for approval.	March 2011
5. Standards filed with regulatory authorities.	June 2011

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

Interpersonal Communication: Any medium~~thod~~ that allows two or more individuals to interact, consult, or exchange information.

Alternative Interpersonal Communication: Any ~~method~~ Interpersonal Communication that is able to serve as a substitute for, ~~and is redundant to normal Interpersonal Communication~~ and does not utilize the same infrastructure (medium) as, ~~normal~~ Interpersonal Communications used for day-to-day operation.

Introduction

1. **Title:** Reliability Coordination — Current Day Operations
2. **Number:** IRO-005-~~44~~
3. **Purpose:** ~~To ensure that entities are notified when an expected or actual event with Adverse Reliability Impacts is identified. The Reliability Coordinator must be continuously aware of conditions within its Reliability Coordinator Area and include this information in its reliability assessments. The Reliability Coordinator must monitor Bulk Electric System parameters that may have significant impacts upon the Reliability Coordinator Area and neighboring Reliability Coordinator Areas.~~
4. **Applicability:**
 - ~~4.1. Reliability Coordinators.~~
 - ~~4.2. Balancing Authorities.~~
 - ~~4.3. Transmission Operators.~~
 - ~~4.4. Transmission Service Providers.~~
 - ~~4.5. Generator Operators.~~
 - ~~4.6. Load Serving Entities.~~
 - ~~4.7.4.1. Purchasing-Selling Entities.~~
5. **Effective Date:** ~~In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees approval. June 4, 2007.~~

The RCSDT is proposing to retire or move all requirements in this standard. This will result in retiring IRO-005-1.

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~~B.A.~~ Requirements

- R1.** Each Reliability Coordinator shall monitor its Reliability Coordinator Area parameters, including but not limited to the following: *[Violation Risk Factor: High]*
- ~~1.R1.1.~~ Current status of Bulk Electric System elements (transmission or generation including critical auxiliaries such as Automatic Voltage Regulators and Special Protection Systems) and system loading. *[Violation Risk Factor: High]*
 - ~~2.R1.2.~~ Current pre-contingency element conditions (voltage, thermal, or stability), including any applicable mitigation plans to alleviate System Operating Limits (SOL) or Interconnection Reliability Operating Limits (IROL) violations, including the plan's viability and scope. *[Violation Risk Factor: High]*
 - ~~3.R1.3.~~ Current post-contingency element conditions (voltage, thermal, or stability), including any applicable mitigation plans to alleviate SOL or IROL violations, including the plan's viability and scope. *[Violation Risk Factor: High]*

Monitoring capability can **not** be objectively measured and is essential to real-time operations – however real-time monitoring is a support of several support of parameters should be assessed during certification and should not be a requirement. We propose retiring R1 and its subrequirements.

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~~4.R1.4.~~ System real and reactive reserves (actual versus required). *[Violation Risk Factor: High]*

~~5.R1.5.~~ Capacity and energy adequacy conditions. *[Violation Risk Factor: High]*

~~6.R1.6.~~ Current Area Control Error (ACE) for all its Balancing Authorities. *[Violation Risk Factor: High]*

~~7.R1.7.~~ Current local or Transmission Loading Relief procedures in effect. *[Violation Risk Factor: High]*

~~8.R1.8.~~ Planned generation dispatches. *[Violation Risk Factor: High]*

~~9.R1.9.~~ Planned transmission or generation outages. *[Violation Risk Factor: High]*

~~10.R1.10.~~ Contingency events. *[Violation Risk Factor: High]*

R2. Each Reliability Coordinator shall be aware of all Interchange Transactions that wheel through, source, or sink in its Reliability Coordinator Area, and make that Interchange Transaction information available to all Reliability Coordinators in the Interconnection. *[Violation Risk Factor: High]*

This requirement (R2) is not measureable (aware) and should be retired because it is redundant with INT-005, R1. The IA is responsible for making interchange information available to all reliability entities including the reliability Coordinator.

R3. As portions of the transmission system approach or exceed SOLs or IROLs, the Reliability Coordinator shall work with its Transmission Operators and Balancing Authorities to evaluate and assess any additional Interchange Schedules that would violate those limits. If a potential or actual IROL violation cannot be avoided through proactive intervention, the Reliability Coordinator shall initiate control actions or emergency procedures to relieve the violation without delay, and no longer than 30 minutes. The Reliability Coordinator shall ensure all resources, including load shedding, are available to address a potential or actual IROL violation. *[Violation Risk Factor: High]*

~~This requirement (R3 was retired) is proposed to be retired based on work by the IROL Standards Drafting Team. The RCSDT concurs.~~

R4. Each Reliability Coordinator shall monitor its Balancing Authorities' parameters to ensure that the required amount of operating reserves is provided and available as required to meet the Control Performance Standard (CPS) and Disturbance Control Standard (DCS) requirements. If necessary, the Reliability Coordinator shall direct the Balancing Authorities in the Reliability Coordinator Area to arrange for assistance from neighboring Balancing Authorities. The Reliability Coordinator shall issue Energy Emergency Alerts as needed and at the request of its Balancing Authorities and Load-Serving Entities. *[Violation Risk Factor: High]*

The BA has its own requirements regarding compliance with CPS and DCS standards as well as requesting emergency assistance. We view these as vestiges of an earlier program that no longer apply given the current mandatory requirements with which the BA must comply. We recommend retiring requirement 4.

R5. Each Reliability Coordinator shall identify the cause of any potential or actual SOL or IROL violations. The Reliability Coordinator shall initiate the control action or emergency procedure to relieve the potential or actual IROL violation without delay, and no longer than 30 minutes. The Reliability Coordinator shall be able to utilize all resources, including load shedding, to address an IROL violation. *[Violation Risk Factor: High]*

~~This requirement (R5 was retired by) is proposed to be retired based on work by the IROL Standards Drafting Team. The RCSDT concurs.~~

The RCSDT retiring this requirement as it is addressed in redundant with proposed IRO-001-2, R1R15 below~~1~~. A GMD is one of the "expected or actual threats with Adverse Reliability Impacts".

~~R6. Each Reliability Coordinator shall ensure its Transmission Operators and Balancing Authorities are aware of Geo-Magnetic Disturbance (GMD) forecast information and assist as needed in the development of any required response plans. [Violation Risk Factor: High]~~

The RCSDT proposes retiring requirement 7 as it is too vague and can not be measured.

~~R7. The Reliability Coordinator shall disseminate information within its Reliability Coordinator Area, as required. [Violation Risk Factor: High]~~

~~R8. Each Reliability Coordinator shall monitor system frequency and its Balancing Authorities' performance and direct any necessary rebalancing to return to CPS and DCS compliance. The Transmission Operators and Balancing Authorities shall utilize all resources, including firm load shedding, as directed by its Reliability Coordinator to relieve the emergent condition. [Violation Risk Factor: High]~~

The BA has its own requirements regarding compliance with CPS and DCS standards as well as requesting emergency assistance. We view these as vestiges of an earlier program that no longer apply given the current mandatory requirements with which the BA must comply. We recommend retiring requirement 8. The second sentence is redundant with EOP-002, R4, R6, R7 and R9. This requirement should be retired.

~~R9. The Reliability Coordinator shall coordinate with Transmission Operators, Balancing Authorities, and Generator Operators as needed to develop and implement action plans to mitigate potential or actual SOL, IROL, CPS, or DCS violations. The Reliability Coordinator shall coordinate pending generation and transmission maintenance outages with Transmission Operators, Balancing Authorities, and Generator Operators as needed in both the real-time and next-day reliability analysis time frames. [Violation Risk Factor: High]~~

The RCSDT proposes retiring this requirement as it is redundant with TOP-003 and IRO-004 (all requirements) for next day requirements. The RC has the authority to coordinate pending outages in real-time through IRO-001-2, R1 (proposed). The issue of CPS and DCS is covered in EOP-002-2, R6, R7 and R8.

~~R10. As necessary, the Reliability Coordinator shall assist the Balancing Authorities in its Reliability Coordinator Area in arranging for assistance from neighboring Reliability Coordinator Areas or Balancing Authorities. [Violation Risk Factor: High]~~

The RCSDT proposes retiring requirement 10 as it is redundant with EOP-002, R7.2 and R8.

~~R11. The Reliability Coordinator shall identify sources of large Area Control Errors that may be contributing to Frequency Error, Time Error, or Inadvertent Interchange and shall discuss corrective actions with the appropriate Balancing Authority. The Reliability Coordinator shall direct its Balancing Authority to comply with CPS and DCS. [Violation Risk Factor: High]~~

The RCSDT proposes retiring requirement 11 as it is redundant with proposed IRO-001-2 R1 and TOP-006-1, R7.

~~R12. Whenever a Special Protection System that may have an inter-Balancing Authority, or inter-Transmission Operator impact (e.g., could potentially affect transmission flows resulting in a SOL or IROL violation) is armed, the Reliability Coordinators shall be aware of the impact of the operation of that Special Protection System on inter-area flows. The Transmission Operator shall immediately inform the Reliability Coordinator of the status of the Special Protection System including any degradation or potential failure to operate as expected. [Violation Risk Factor: High]~~

The RCSDT proposes retiring requirement 12 as it is redundant with proposed IRO-010. Also, the scope of project 2007-3 includes enhancing the SPS provisions of TOP-005. IRO-003, R1 indicates that the RC will monitor all items that will impact reliability and SPS's are a part of that.

R13. Each Reliability Coordinator shall ensure that all Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities operate to prevent the likelihood that a disturbance, action, or non-action in its Reliability Coordinator Area will result in a SOL or IROL violation in another area of the Interconnection. In instances where there is a difference in derived limits, the Reliability Coordinator and its Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities shall always operate the Bulk Electric System to the most limiting parameter. *[Violation Risk Factor: High]*

The IROL SDT has proposed retiring the first sentence of this requirement as it is redundant with the proposed IRO-009-1. The RCSDT recommends retiring the remaining portion of this requirement as it is a facet of the SOL / IROL methodology required in FAC-010-1, FAC-011-1 and FAC-014-1. 2007-3 includes enhancing the SPS provisions of TOP-005. IRO-003, R1 indicates that the RC will monitor all items that will impact reliability and SPS's are a part of that.

R14. Each Reliability Coordinator shall make known to Transmission Service Providers within its Reliability Coordinator Area, SOLs or IROLs within its wide-area view. The Transmission Service Providers shall respect these SOLs or IROLs in accordance with filed tariffs and regional Total Transfer Calculation and Available Transfer Calculation processes. *[Violation Risk Factor: High]*

~~RPer the IROL SDT, requirement 14 was retired by the work of the IROL SDT, is redundant with FAC 014, R5.1 and should be retired. The RCSDT concurs.~~

R15. ~~When the results of an Operational Planning Analysis or Real-time Assessment indicate Each Reliability Coordinator an expected or actual condition with Adverse Reliability Impacts who foresees a transmission problem (such as an SOL or IROL violation, loss of reactive reserves, etc.) within its Reliability Coordinator Area, each Reliability Coordinator shall notify issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area without delay. The receiving Reliability Coordinator shall disseminate this information to its impacted Transmission Operators and Balancing Authorities. *[Violation Risk Factor: High]* *[Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*~~

R15.R16. ~~The Each Reliability Coordinator that identifies an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area shall notify all impacted Transmission Operators and, Balancing Authorities in its Reliability Coordinator Area, when the transmission problem has been mitigated. *[Violation Risk Factor: Medium]* *[Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*High}~~

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R16.R17. ~~Each Reliability Coordinator shall confirm reliability assessment results and determine the effects within its own and adjacent Reliability Coordinator Areas. The Reliability Coordinator shall discuss options to mitigate potential or actual SOL or IROL violations and take actions as necessary to always act in the best interests of the Interconnection at all times. *[Violation Risk Factor: High]*~~

Requirement 176 was retired is proposed to be retired based on work by the IROL Standards Drafting Team. The RCSDT concurs.

R17.R18. ~~When an IROL or SOL is exceeded, the Reliability Coordinator shall evaluate the local and wide-area impacts, both real-time and post-contingency, and determine if the actions being taken are appropriate and sufficient to return the system to within IROL in thirty minutes. If the actions being taken are not appropriate or sufficient, the~~

Requirement 187 was retired is proposed to be retired based on work by the IROL Standards Drafting Team. The RCSDT concurs.

~~Reliability Coordinator shall direct the Transmission Operator, Balancing Authority, Generator Operator, or Load Serving Entity to return the system to within IROL or SOL. [Violation Risk Factor: High]~~

~~C.B.~~ **Measures**

M1. Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it notified all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when it identified a real or potential condition with Adverse Reliability Impacts, within its Reliability Coordinator Area. (R1)

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M2. Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it notified all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when a real or potential condition with Adverse Reliability Impacts within its Reliability Coordinator Area had been mitigated. (R2)

Not specified.

~~D.C.~~ **Compliance**

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1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

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Regional Entity

1.2. Compliance Monitoring and Enforcement Processes:

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Compliance Audits

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Self-Certifications

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Spot Checking

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Compliance Violation Investigations

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Self-Reporting

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Complaints

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1.3. Data Retention

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The Reliability Coordinator shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- o The Reliability Coordinator shall retain its evidence for the most recent 90 days for voice recordings or 12 months for other documentation for Requirements R1 and R2 and Measures M1 and M2.

o If a Reliability Coordinator is found non-compliant, it shall keep information related to the non-compliance until found compliant.

o The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records or for the time period specified above, whichever is longer. .

1.4. Additional Compliance Information

None.

2. Violation Severity Levels

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<u>Lower VSL</u>	<u>Moderate VSL</u>	<u>High VSL</u>	<u>Sev</u>
<u>The Reliability Coordinator who identified an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to one, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.</u>	<u>The Reliability Coordinator who identified an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to two, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.</u>	<u>The Reliability Coordinator who identified an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to three, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.</u>	<u>The Reliability Coordinator who identified an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to more than three impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.</u> <u>OR</u> <u>The Reliability Coordinator who identified an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area (in cases where there are less than three impacted entities).</u>
<u>The Reliability Coordinator failed to notify one, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.</u>	<u>The Reliability Coordinator failed to notify two, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.</u>	<u>The Reliability Coordinator failed to notify three, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.</u>	<u>The Reliability Coordinator failed to notify more than three impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.</u> <u>OR</u> <u>The Reliability Coordinator failed to notify more all impacted Transmission Operators, Balancing Authorities, when the</u>

Low VSL	Moderate VSL	High VSL	Severe VSL
			transmission problem had been mitigated (in cases where there are less than three impacted entities).

E.D. Regional Differences

None identified.

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F.E. Associated Documents

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Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	August 28, 2006	Added three items that were inadvertently left out to “Applicability” section: 4.5 Generator Operators. 4.6 Load-Serving Entities. 4.7 Purchasing-Selling Entities.	Errata
1	February 7, 2006	BOT Approval	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New
<u>2</u>	<u>August 3, 2010</u>	<u>Revised under Project 2006-06</u>	<u>Revised</u>

Implementation Plan for Reliability Coordination Standards

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Prerequisite Approvals

- IRO-007-1
- IRO-008-1
- IRO-009-1
- IRO-010-1

Conforming Changes to Requirements in Already Approved Standards

Revision Summary

- Many of the requirements in this standard will be retired under the IROL SDT work plan. The RCSDT proposes retiring other requirements and revising R15 into two separate requirements..

Implementation Plan for Reliability Coordination Standards

Revisions or Retirements to Already Approved Standards

The following tables identify the sections of approved standards that shall be retired or revised when this standard is implemented. If the drafting team is recommending the retirement or revision of a requirement, that text is blue.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R1. and sub-requirements Each Reliability Coordinator shall monitor its Reliability Coordinator Area parameters, including but not limited to the following: <i>[Violation Risk Factor: High]</i>	Retire R1 and its subrequirements – Monitoring capability can be objectively measured and is essential to real-time operations – however real-time monitoring is a supporting activity and is only one of several processes used to support operation within defined parameters. Monitoring capability should be assessed during certification and not as a requirement.
Notes: ▪	

Implementation Plan for Reliability Coordination Standards

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R2. Each Reliability Coordinator shall be aware of all Interchange Transactions that wheel through, source, or sink in its Reliability Coordinator Area, and make that Interchange Transaction information available to all Reliability Coordinators in the Interconnection. <i>[Violation Risk Factor: High]</i>	None – Requirement should be retired as it is redundant with: INT-005-1 R1. Prior to the expiration of the time period defined in the Timing Table, Column A, the Interchange Authority shall distribute the Arranged Interchange information for reliability assessment to all reliability entities involved in the interchange. R1.1. When a Balancing Authority or Reliability Coordinator initiates a Curtailment to Confirmed or Implemented Interchange for reliability, the Interchange Authority shall distribute the Arranged Interchange information for reliability assessment only to the Source Balancing Authority and the Sink Balancing Authority.
Notes: ▪ The requirement is not measurable (shall be aware) and should be retired because it is redundant with INT-005-1, R1. ▪ The IA is responsible for making interchange information available to all reliability entities including the Reliability Coordinator. ▪ When IRO-010-1 becomes effective, IRO-005-2 R2 should be retired. The e-tag system replaced the need for this requirement. In addition, if the Reliability Coordinator needs this information, the Reliability Coordinator can add this item to the list of data and information on its data specification under IRO-010 R1	

Implementation Plan for Reliability Coordination Standards

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R3. As portions of the transmission system approach or exceed SOLs or IROLs, the Reliability Coordinator shall work with its Transmission Operators and Balancing Authorities to evaluate and assess any additional Interchange Schedules that would violate those limits. If a potential or actual IROL violation cannot be avoided through proactive intervention, the Reliability Coordinator shall initiate control actions or emergency procedures to relieve the violation without delay, and no longer than 30 minutes. The Reliability Coordinator shall ensure all resources, including load shedding, are available to address a potential or actual IROL violation. <i>[Violation Risk Factor: High]</i>	▪ None – This requirement is to be retired per the IROL team’s implementation plan.
Notes: ▪ The IROL Implementation Plan proposes retiring IRO-005-2 R3 when IRO-009-1 becomes effective. IRO-005 R3 can lead the Reliability Coordinator to believe it has up to 30 minutes to relieve an IROL violation – but some IROLs have a T_v that is much shorter than 30 minutes.	

Implementation Plan for Reliability Coordination Standards

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R4. Each Reliability Coordinator shall monitor its Balancing Authorities' parameters to ensure that the required amount of operating reserves is provided and available as required to meet the Control Performance Standard (CPS) and Disturbance Control Standard (DCS) requirements. If necessary, the Reliability Coordinator shall direct the Balancing Authorities in the Reliability Coordinator Area to arrange for assistance from neighboring Balancing Authorities. The Reliability Coordinator shall issue Energy Emergency Alerts as needed and at the request of its Balancing Authorities and Load-Serving Entities. <i>[Violation Risk Factor: High]</i>	None – The RCSDT proposes that this requirement be retired. The BA has its own requirements regarding compliance with CPS and DCS standards as well as requesting emergency assistance. We view these as vestiges of an earlier program that no longer apply given the current mandatory requirements with which the BA must comply. This requirement should be retired. The requirement is also redundant with existing EOP-002-2.

Notes: EOP-002-2

- R1.** Each Balancing Authority and Reliability Coordinator shall have the responsibility and clear decision-making authority to take whatever actions are needed to ensure the reliability of its respective area and shall exercise specific authority to alleviate capacity and energy emergencies.
- R2.** Each Balancing Authority shall implement its capacity and energy emergency plan, when required and as appropriate, to reduce risks to the interconnected system.
- R3.** A Balancing Authority that is experiencing an operating capacity or energy emergency shall communicate its current and future system conditions to its Reliability Coordinator and neighboring Balancing Authorities.
- R4.** A Balancing Authority anticipating an operating capacity or energy emergency shall perform all actions necessary including bringing on all available generation, postponing equipment maintenance, scheduling interchange purchases in advance, and being prepared to reduce firm load.
- R5.** A deficient Balancing Authority shall only use the assistance provided by the Interconnection's frequency bias for the time needed to implement corrective actions. The Balancing Authority shall not unilaterally adjust generation in an attempt to return Interconnection frequency to normal beyond that supplied through frequency bias action and Interchange Schedule changes. Such unilateral adjustment may overload transmission facilities.
- R6.** If the Balancing Authority cannot comply with the Control Performance and Disturbance Control Standards, then it shall immediately implement remedies to do so. These remedies include, but are not limited to:
- R6.1.** Loading all available generating capacity. **R6.2.** Deploying all available operating reserve.
- R6.3.** Interrupting interruptible load and exports. **R6.4.** Requesting emergency assistance from other Balancing Authorities.
- R6.5.** Declaring an Energy Emergency through its Reliability Coordinator; and
- R6.6.** Reducing load, through procedures such as public appeals, voltage reductions, curtailing interruptible loads and firm loads.
- R7.** Once the Balancing Authority has exhausted the steps listed in Requirement 6, or if these steps cannot be completed in sufficient time to resolve the emergency condition, the Balancing Authority shall:
- R7.1.** Manually shed firm load without delay to return its ACE to zero; and
- R7.2.** Request the Reliability Coordinator to declare an Energy Emergency Alert in accordance with Attachment 1-EOP-002-0 "Energy Emergency Alert Levels."
- R8.** A Reliability Coordinator that has any Balancing Authority within its Reliability Coordinator area experiencing a potential or actual Energy Emergency shall initiate an Energy Emergency Alert as detailed in Attachment 1-EOP-002-0 "Energy Emergency Alert Levels." The Reliability Coordinator shall act to mitigate the emergency condition, including a request for emergency assistance if required.

R9. When a Transmission Service Provider expects to elevate the transmission service priority of an Interchange Transaction from Priority 6 (Network Integration Transmission Service from Non-designated Resources) to Priority 7 (Network Integration Transmission Service from designated Network Resources) as permitted in its transmission tariff (See Attachment 1-IRO-006-0 “Transmission Loading Relief Procedure” for explanation of Transmission Service Priorities):

R9.1. The deficient Load-Serving Entity shall request its Reliability Coordinator to initiate an Energy Emergency Alert in accordance with Attachment 1-EOP-002-0.

R9.2. The Reliability Coordinator shall submit the report to NERC for posting on the NERC Website, noting the expected total MW that may have its transmission service priority changed.

R9.3. The Reliability Coordinator shall use EEA 1 to forecast the change of the priority of transmission service of an Interchange Transaction on the system from Priority 6 to Priority 7.

R9.4. The Reliability Coordinator shall use EEA 2 to announce the change of the priority of transmission service of an Interchange Transaction on the system from Priority 6 to Priority 7.

Implementation Plan for Reliability Coordination Standards

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R5. Each Reliability Coordinator shall identify the cause of any potential or actual SOL or IROL violations. The Reliability Coordinator shall initiate the control action or emergency procedure to relieve the potential or actual IROL violation without delay, and no longer than 30 minutes. The Reliability Coordinator shall be able to utilize all resources, including load shedding, to address an IROL violation. <i>[Violation Risk Factor: High]</i>	None – This requirement is to be retired per the IROL team’s implementation plan.
Notes: ▪ The IROL Implementation Plan proposes retiring IRO-005-2 R5 when IRO-009-1 becomes effective. IRO-005 R5 can lead the Compliance Enforcement Authority to believe that the Reliability Coordinator has information to see all SOLs, and this is not always true. Every facility in the Transmission Operator’s area has a System Operating Limit, but the Reliability Coordinator isn’t required to see all these limits and may not have information to determine the cause of instances of exceeding these limits.	

Implementation Plan for Reliability Coordination Standards

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R6. Each Reliability Coordinator shall ensure its Transmission Operators and Balancing Authorities are aware of Geo-Magnetic Disturbance (GMD) forecast information and assist as needed in the development of any required response plans.	The RCSDT proposes retiring this requirement as it is addressed in R15 below. A GMD is one of the “expected or actual threats with Adverse Reliability Impacts”. IRO-005-4 (proposed) R15. Each Reliability Coordinator that identifies an expected or actual threat with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify, all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i>
Notes: ▪	

Implementation Plan for Reliability Coordination Standards

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R7. The Reliability Coordinator shall disseminate information within its Reliability Coordinator Area, as required.	IRO-005-2 (proposed) None - The RCSDT recommends retiring this requirement.
Notes: • The RCSDT proposes that this requirement is too vague and ambiguous to measure. We recommend retiring this requirement.	

Implementation Plan for Reliability Coordination Standards

Already Approved Standard	Proposed Replacement Requirement(s)

IRO-005-2

R8. Each Reliability Coordinator shall monitor system frequency and its Balancing Authorities' performance and direct any necessary rebalancing to return to CPS and DCS compliance. The Transmission Operators and Balancing Authorities shall utilize all resources, including firm load shedding, as directed by its Reliability Coordinator to relieve the emergent condition.

IRO-005-2

None –The BA has its own requirements regarding compliance with CPS and DCS standards as well as requesting emergency assistance. RCSDT views these as vestiges of an earlier program that no longer apply given the current mandatory requirements with which the BA must comply. The second sentence is redundant with EOP-002, R4, R6, R7, and R9. This requirement should be retired.

The RCSDT recommends retiring this requirement as it is redundant with:

TOP-006-1, R7

Each Reliability Coordinator, Transmission Operator and Balancing Authority shall monitor system frequency.

EOP-002-2

R4. A Balancing Authority anticipating an operating capacity or energy emergency shall perform all actions necessary including bringing on all available generation, postponing equipment maintenance, scheduling interchange purchases in advance, and being prepared to reduce firm load.

R6. If the Balancing Authority cannot comply with the Control Performance and Disturbance Control Standards, then it shall immediately implement remedies to do so.

These remedies include, but are not limited to:

R6.1. Loading all available generating capacity.

R6.2. Deploying all available operating reserve.

R6.3. Interrupting interruptible load and exports.

R6.4. Requesting emergency assistance from other Balancing Authorities.

R6.5. Declaring an Energy Emergency through its Reliability Coordinator; and

R6.6. Reducing load, through procedures such as public appeals, voltage reductions, curtailing interruptible loads and firm loads. November 23, 2010

Implementation Plan for Reliability Coordination Standards

	R7. Once the Balancing Authority has exhausted the steps listed in Requirement 6, or if these steps cannot be completed in sufficient time to resolve the emergency condition, the Balancing Authority shall: R7.1. Manually shed firm load without delay to return its ACE to zero; and R7.2. Request the Reliability Coordinator to declare an Energy Emergency Alert in accordance with Attachment 1-EOP-002-0 “Energy Emergency Alert Levels.”
Notes: ▪	

Implementation Plan for Reliability Coordination Standards

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R9. The Reliability Coordinator shall coordinate with Transmission Operators, Balancing Authorities, and Generator Operators as needed to develop and implement action plans to mitigate potential or actual SOL, IROL, CPS or DCS violations. The Reliability Coordinator shall coordinate pending generation and transmission maintenance outages with Transmission Operators, Balancing Authorities, and Generator Operators as needed in both the real time and next-day reliability analysis timeframes.	The RCSDT proposes to retire this requirement from IRO-005. The RCSDT proposes retiring this requirement as it is redundant with TOP-003 and IRO-004 (all requirements) for next day requirements. The RC has the authority to coordinate pending outages in real-time through IRO-001-2, R1 (proposed). The issue of CPS and DCS is covered in EOP-002-2, R6, R7 and R8 (see above).
Notes: TOP-003-0 R1. Generator Operators and Transmission Operators shall provide planned outage information. R1.1. Each Generator Operator shall provide outage information daily to its Transmission Operator for scheduled generator outages planned for the next day (any foreseen outage of a generator greater than 50 MW). The Transmission Operator shall establish the outage reporting requirements. R1.2. Each Transmission Operator shall provide outage information daily to its Reliability Coordinator, and to affected Balancing Authorities and Transmission Operators for scheduled generator and bulk transmission outages planned for the next day (any foreseen outage of a transmission line or transformer greater than 100 kV or generator greater than 50 MW) that may collectively cause or contribute to an SOL or IROL violation or a regional operating area limitation. The Reliability Coordinator shall establish the outage reporting requirements. R1.3. Such information shall be available by 1200 Central Standard Time for the Eastern Interconnection and 1200 Pacific Standard Time for the Western Interconnection. R2. Each Transmission Operator, Balancing Authority, and Generator Operator shall plan and coordinate scheduled outages of system voltage regulating equipment, such as automatic voltage regulators on generators, supplementary excitation control, synchronous condensers, shunt and series capacitors, reactors, etc., among affected Balancing Authorities and Transmission Operators as required. R3. Each Transmission Operator, Balancing Authority, and Generator Operator shall plan and coordinate scheduled outages of telemetering and control equipment and associated communication channels between the affected areas. R4. Each Reliability Coordinator shall resolve any scheduling of potential reliability conflicts.	

IRO-004-1

R1. Each Reliability Coordinator shall conduct next-day reliability analyses for its Reliability Coordinator Area to ensure that the Bulk Electric System can be operated reliably in anticipated normal and Contingency event conditions. The Reliability Coordinator shall conduct Contingency analysis studies to identify potential interface and other SOL and IROL violations, including overloaded transmission lines and transformers, voltage and stability limits, etc.

R2. Each Reliability Coordinator shall pay particular attention to parallel flows to ensure one Reliability Coordinator Area does not place an unacceptable or undue Burden on an adjacent Reliability Coordinator Area.

R3. Each Reliability Coordinator shall, in conjunction with its Transmission Operators and Balancing Authorities, develop action plans that may be required, including reconfiguration of the transmission system, re-dispatching of generation, reduction or curtailment of Interchange Transactions, or reducing load to return transmission loading to within acceptable SOLs or IROLs.

R4. Each Transmission Operator, Balancing Authority, Transmission Owner, Generator Owner, Generator Operator, and Load-Serving Entity in the Reliability Coordinator Area shall provide information required for system studies, such as critical facility status, Load, generation, operating reserve projections, and known Interchange Transactions. This information shall be available by 1200 Central Standard Time for the Eastern Interconnection and 1200 Pacific Standard Time for the Western Interconnection.

R5. Each Reliability Coordinator shall share the results of its system studies, when conditions warrant or upon request, with other Reliability Coordinators and with Transmission Operators, Balancing Authorities, and Transmission Service Providers within its Reliability Coordinator Area. The Reliability Coordinator shall make study results available no later than 1500 Central Standard Time for the Eastern Interconnection and 1500 Pacific Standard Time for the Western Interconnection, unless circumstances warrant otherwise.

R6. If the results of these studies indicate potential SOL or IROL violations, the Reliability Coordinator shall direct its Transmission Operators, Balancing Authorities and Transmission Service Providers to take any necessary action the Reliability Coordinator deems appropriate to address the potential SOL or IROL violation.

R7. Each Transmission Operator, Balancing Authority, and Transmission Service Provider shall comply with the directives of its Reliability Coordinator based on the next day assessments in the same manner in which it would comply during real time operating events.

IRO-001-2, R1 (proposed)

R1. The Reliability Coordinator shall act or direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts.

[Violation Risk Factor: High][Time Horizon: Real-time Operations and Same Day Operations]

Implementation Plan for Reliability Coordination Standards

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R10. As necessary, the Reliability Coordinator shall assist the Balancing Authorities in its Reliability Coordinator Area in arranging for assistance from neighboring Reliability Coordinator Areas or Balancing Authorities. <i>[Violation Risk Factor: High]</i>	None – The RCSDT proposes to retire this requirement as it is redundant with: EOP-002-2 R7.2. Request the Reliability Coordinator to declare an Energy Emergency Alert in accordance with Attachment 1-EOP-002-0 “Energy Emergency Alert Levels.” R8. A Reliability Coordinator that has any Balancing Authority within its Reliability Coordinator area experiencing a potential or actual Energy Emergency shall initiate an Energy Emergency Alert as detailed in Attachment 1-EOP-002-0 “Energy Emergency Alert Levels.” The Reliability Coordinator shall act to mitigate the emergency condition, including a request for emergency assistance if required.
Notes:	

Implementation Plan for Reliability Coordination Standards

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R11. The Reliability Coordinator shall identify sources of large Area Control Errors that may be contributing to Frequency Error, Time Error, or Inadvertent Interchange and shall discuss corrective actions with the appropriate Balancing Authority. The Reliability Coordinator shall direct its Balancing Authority to comply with CPS and DCS.	None – The RCSDT recommends retiring this requirement as it is redundant with: IRO-001-2 (proposed) R2. Each Reliability Coordinator shall take actions or direct actions, which could include issuing Reliability Directives, of Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i> TOP-006-1, R7 (existing) R7. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall monitor system frequency.
Notes:	

Implementation Plan for Reliability Coordination Standards

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R12. Whenever a Special Protection System that may have an inter-Balancing Authority, or inter-Transmission Operator impact (e.g., could potentially affect transmission flows resulting in a SOL or IROL violation) is armed, the Reliability Coordinators shall be aware of the impact of the operation of that Special Protection System on inter-area flows. The Transmission Operator shall immediately inform the Reliability Coordinator of the status of the Special Protection System including any degradation or potential failure to operate as expected.	None - The RCSDT recommends retiring this requirement as it is redundant with proposed IRO-010: R1. The Reliability Coordinator shall have a documented data specification for data and information to build and maintain models to support Real-Time monitoring, Operational Planning Analyses, and Real-time Assessments. The specification shall include the following: <i>(Violation Risk Factor: Low) (Time Horizon: Operations Planning)</i> R1.1. List of required data and information. R1.2. Mutually agreeable format. R1.3. Timeframe and periodicity for providing data and information (based on its hardware and software requirements, and the time needed to do its Operational Planning Analyses). R1.4. Process for data provision when automated Real-Time system operating data is unavailable. R2. The Reliability Coordinator shall distribute its data specification to entities that have Facilities monitored by the Reliability Coordinator and to entities that provide Facility status to the Reliability Coordinator. <i>(Violation Risk Factor: Low) (Time Horizon: Operations Planning)</i> R3. Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. The data and information is limited to data needed by the Reliability Coordinator to support Real-Time Monitoring, Operational Planning Analyses, and Real-Time Assessments. <i>(Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations)</i>

Implementation Plan for Reliability Coordination Standards

Notes: The RCSDT recommends retiring this requirement as it is redundant with proposed IRO-010, R1 and R3. Also, the scope of project 2007-3 includes enhancing the SPS provisions of TOP-005. IRO-003, R1 indicates the RC will monitor all items that will impact reliability, and SPSs are a part of that.

Implementation Plan for Reliability Coordination Standards

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R13. Each Reliability Coordinator shall ensure that all Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities operate to prevent the likelihood that a disturbance, action, or non-action in its Reliability Coordinator Area will result in a SOL or IROL violation in another area of the Interconnection. In instances where there is a difference in derived limits, the Reliability Coordinator and its Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities shall always operate the Bulk Electric System to the most limiting parameter.	None – The IROL SDT retired the first sentence of this requirement as it is redundant with the proposed IRO-009-1. The RCSDT recommends retiring the remaining portion of this requirement as it is a facet of the SOL / IROL methodology required in FAC-010-1, FAC-011-1 and FAC-014-1.
Notes:	

Implementation Plan for Reliability Coordination Standards

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R14. Each Reliability Coordinator shall make known to Transmission Service Providers within its Reliability Coordinator Area, SOLs or IROLs within its wide-area view. The Transmission Service Providers shall respect these SOLs or IROLs in accordance with filed tariffs and regional Total Transfer Calculation and Available Transfer Calculation processes.	Per the IROL SDT implementation plan, the first sentence of this requirement should be retired upon the implementation of IRO-009-1. The RC SDT proposes retiring the second sentence of this requirement. The concept of this requirement is more appropriately addressed in the proposed MOD standards under project 2006-7. As written, this requirement is not measureable and unenforceable as a TSP's tariff may supersede the requirement.
Notes:	
Already Approved Standard	Proposed Replacement Requirement(s)

Implementation Plan for Reliability Coordination Standards

IRO-005-2

R15. Each Reliability Coordinator who foresees a transmission problem (such as an SOL or IROL violation, loss of reactive reserves, etc.) within its Reliability Coordinator Area shall issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area without delay. The receiving Reliability Coordinator shall disseminate this information to its impacted Transmission Operators and Balancing Authorities. The Reliability Coordinator shall notify all impacted Transmission Operators, Balancing Authorities, when the transmission problem has been mitigated.

- R1. When the results of an Operational Planning Analysis or Real-time Assessment indicate an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator that shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]**
- R2. The Each Reliability Coordinator that identifies an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area shall g Authorities in its Reliability Coordinator Area when the problem has been mitigated. notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when the transmission problem has been mitigated. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]**

Notes:

Implementation Plan for Reliability Coordination Standards

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R16. Each Reliability Coordinator shall confirm reliability assessment results and determine the effects within its own and adjacent Reliability Coordinator Areas. The Reliability Coordinator shall discuss options to mitigate potential or actual SOL or IROL violations and take actions as necessary to always act in the best interests of the Interconnection at all times. <i>[Violation Risk Factor: High]</i> R17. When an IROL or SOL is exceeded, the Reliability Coordinator shall evaluate the local and wide-area impacts, both real-time and post-contingency, and determine if the actions being taken are appropriate and sufficient to return the system to within IROL in thirty minutes. If the actions being taken are not appropriate or sufficient, the Reliability Coordinator shall direct the Transmission Operator, Balancing Authority, Generator Operator, or Load-Serving Entity to return the system to within IROL or SOL. <i>[Violation Risk Factor: High]</i>	IRO-005-2 None – The IROL SDT's Implementation plan proposes retirement of R16 and R17.
Notes: IRO-005 R16 is a mix of requirements and the Missing Measures and Compliance Elements drafting team determined that, as written, R16 is too vague to be measured. The intent of this requirement is duplicated more clearly in IRO-008 and IRO-009. ■ IRO-005 R17 can lead the Reliability Coordinator to believe it has up to 30 minutes to relieve an IROL violation – but some IROLs have a T_v that is much shorter than 30 minutes. Note that the RC does not see all SOLs.	

Implementation Plan for Reliability Coordination Standards

Functions that Must Comply with the Requirements in the Standards

Standard	Functions that Must Comply With the Requirements							
	Reliability Coordinator	Balancing Authority	Interchange Authority	Transmission Operator	Transmission Owner	Generator Owner	Generator Operator	Load Serving Entity
IRO-005								

Effective Dates

In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees approval.

Implementation Plan for Reliability Coordination Standards

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Implementation Plan for Reliability Coordination Standards

Prerequisite Approvals

- ♦IRO-001-2
- IRO-007-1
- IRO-008-1
- IRO-009-1
- IRO-010-1

Conforming Changes to Requirements in Already Approved Standards

- ♦~~IRO-001-2 with respect to R6 and R15~~

Revision Summary

- ♦Many of the requirements in this standard will be retired under the IROL SDT work plan. The RCSDT proposes retiring other requirements and revising moving R6 and R15 into two separate requirements, to IRO-001-2. ~~This will retire or move all requirements in this standard. The RCSDT proposes retiring the standard.~~

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Implementation Plan for Reliability Coordination Standards

Revisions or Retirements to Already Approved Standards

The following tables identify the sections of approved standards that shall be retired or revised when this standard is implemented. If the drafting team is recommending the retirement or revision of a requirement, that text is blue.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R1. and sub-requirements Each Reliability Coordinator shall monitor its Reliability Coordinator Area parameters, including but not limited to the following: [Violation Risk Factor: High]	Retire R1 and its subrequirements – Monitoring capability can be objectively measured and is essential to real-time operations – however real-time monitoring is a supporting activity and is only one of several processes used to support operation within defined parameters. Monitoring capability should be assessed during certification and not as a requirement.
Notes: ▪	

Implementation Plan for Reliability Coordination Standards

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R2. Each Reliability Coordinator shall be aware of all Interchange Transactions that wheel through, source, or sink in its Reliability Coordinator Area, and make that Interchange Transaction information available to all Reliability Coordinators in the Interconnection. [Violation Risk Factor: High]	None – Requirement should be retired as it is redundant with: INT-005-1 R1. Prior to the expiration of the time period defined in the Timing Table, Column A, the Interchange Authority shall distribute the Arranged Interchange information for reliability assessment to all reliability entities involved in the interchange. R1.1. When a Balancing Authority or Reliability Coordinator initiates a Curtailment to Confirmed or Implemented Interchange for reliability, the Interchange Authority shall distribute the Arranged Interchange information for reliability assessment only to the Source Balancing Authority and the Sink Balancing Authority.
Notes: ▪ The requirement is not measurable (shall be aware) and should be retired because it is redundant with INT-005-1, R1. ▪ The IA is responsible for making interchange information available to all reliability entities including the Reliability Coordinator. ▪ When IRO-010-1 becomes effective, IRO-005-2 R2 should be retired. The e-tag system replaced the need for this requirement. In addition, if the Reliability Coordinator needs this information, the Reliability Coordinator can add this item to the list of data and information on its data specification under IRO-010 R1	

Implementation Plan for Reliability Coordination Standards

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R3. As portions of the transmission system approach or exceed SOLs or IROLs, the Reliability Coordinator shall work with its Transmission Operators and Balancing Authorities to evaluate and assess any additional Interchange Schedules that would violate those limits. If a potential or actual IROL violation cannot be avoided through proactive intervention, the Reliability Coordinator shall initiate control actions or emergency procedures to relieve the violation without delay, and no longer than 30 minutes. The Reliability Coordinator shall ensure all resources, including load shedding, are available to address a potential or actual IROL violation. <i>[Violation Risk Factor: High]</i>	None – This requirement is to be retired per the IROL team’s implementation plan.
Notes: The IROL Implementation Plan proposes retiring IRO-005-2 R3 when IRO-009-1 becomes effective. IRO-005 R3 can lead the Reliability Coordinator to believe it has up to 30 minutes to relieve an IROL violation – but some IROLs have a T_v that is much shorter than 30 minutes.	

Implementation Plan for Reliability Coordination Standards

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R4. Each Reliability Coordinator shall monitor its Balancing Authorities' parameters to ensure that the required amount of operating reserves is provided and available as required to meet the Control Performance Standard (CPS) and Disturbance Control Standard (DCS) requirements. If necessary, the Reliability Coordinator shall direct the Balancing Authorities in the Reliability Coordinator Area to arrange for assistance from neighboring Balancing Authorities. The Reliability Coordinator shall issue Energy Emergency Alerts as needed and at the request of its Balancing Authorities and Load-Serving Entities. [Violation Risk Factor: High]	None – The RCSDT proposes that this requirement be retired. The BA has its own requirements regarding compliance with CPS and DCS standards as well as requesting emergency assistance. We view these as vestiges of an earlier program that no longer apply given the current mandatory requirements with which the BA must comply. This requirement should be retired. The requirement is also redundant with existing EOP-002-2.

Implementation Plan for Reliability Coordination Standards

Notes: EOP-002-2

R1. Each Balancing Authority and Reliability Coordinator shall have the responsibility and clear decision-making authority to take whatever actions are needed to ensure the reliability of its respective area and shall exercise specific authority to alleviate capacity and energy emergencies.

R2. Each Balancing Authority shall implement its capacity and energy emergency plan, when required and as appropriate, to reduce risks to the interconnected system.

R3. A Balancing Authority that is experiencing an operating capacity or energy emergency shall communicate its current and future system conditions to its Reliability Coordinator and neighboring Balancing Authorities.

R4. A Balancing Authority anticipating an operating capacity or energy emergency shall perform all actions necessary including bringing on all available generation, postponing equipment maintenance, scheduling interchange purchases in advance, and being prepared to reduce firm load.

R5. A deficient Balancing Authority shall only use the assistance provided by the Interconnection's frequency bias for the time needed to implement corrective actions. The Balancing Authority shall not unilaterally adjust generation in an attempt to return Interconnection frequency to normal beyond that supplied through frequency bias action and Interchange Schedule changes. Such unilateral adjustment may overload transmission facilities.

R6. If the Balancing Authority cannot comply with the Control Performance and Disturbance Control Standards, then it shall immediately implement remedies to do so. These remedies include, but are not limited to:

R6.1. Loading all available generating capacity.

R6.2. Deploying all available operating reserve.

R6.3. Interrupting interruptible load and exports.

R6.4. Requesting emergency assistance from other Balancing Authorities.

R6.5. Declaring an Energy Emergency through its Reliability Coordinator; and

R6.6. Reducing load, through procedures such as public appeals, voltage reductions, curtailing interruptible loads and firm loads.

R7. Once the Balancing Authority has exhausted the steps listed in Requirement 6, or if these steps cannot be completed in sufficient time to resolve the emergency condition, the Balancing Authority shall:

R7.1. Manually shed firm load without delay to return its ACE to zero; and

R7.2. Request the Reliability Coordinator to declare an Energy Emergency Alert in accordance with Attachment 1-EOP-002-0 "Energy Emergency Alert Levels."

R8. A Reliability Coordinator that has any Balancing Authority within its Reliability Coordinator area experiencing a potential or actual Energy Emergency shall initiate an Energy Emergency Alert as detailed in Attachment 1-EOP-002-0 "Energy Emergency Alert Levels." The Reliability Coordinator shall act to mitigate the emergency condition, including a request for emergency assistance if required.

Implementation Plan for Reliability Coordination Standards

R9. When a Transmission Service Provider expects to elevate the transmission service priority of an Interchange Transaction from Priority 6 (Network Integration Transmission Service from Non-designated Resources) to Priority 7 (Network Integration Transmission Service from designated Network Resources) as permitted in its transmission tariff (See Attachment 1-IRO-006-0 “Transmission Loading Relief Procedure” for explanation of Transmission Service Priorities):

R9.1. The deficient Load-Serving Entity shall request its Reliability Coordinator to initiate an Energy Emergency Alert in accordance with Attachment 1-EOP-002-0.

R9.2. The Reliability Coordinator shall submit the report to NERC for posting on the NERC Website, noting the expected total MW that may have its transmission service priority changed.

R9.3. The Reliability Coordinator shall use EEA 1 to forecast the change of the priority of transmission service of an Interchange Transaction on the system from Priority 6 to Priority 7.

R9.4. The Reliability Coordinator shall use EEA 2 to announce the change of the priority of transmission service of an Interchange Transaction on the system from Priority 6 to Priority 7.

Implementation Plan for Reliability Coordination Standards

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R5. Each Reliability Coordinator shall identify the cause of any potential or actual SOL or IROL violations. The Reliability Coordinator shall initiate the control action or emergency procedure to relieve the potential or actual IROL violation without delay, and no longer than 30 minutes. The Reliability Coordinator shall be able to utilize all resources, including load shedding, to address an IROL violation. <i>[Violation Risk Factor: High]</i>	None – This requirement is to be retired per the IROL team’s implementation plan.
Notes: ▪ The IROL Implementation Plan proposes retiring IRO-005-2 R5 when IRO-009-1 becomes effective. IRO-005 R5 can lead the Compliance Enforcement Authority to believe that the Reliability Coordinator has information to see all SOLs, and this is not always true. Every facility in the Transmission Operator’s area has a System Operating Limit, but the Reliability Coordinator isn’t required to see all these limits and may not have information to determine the cause of instances of exceeding these limits.	

Implementation Plan for Reliability Coordination Standards

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R6. Each Reliability Coordinator shall ensure its Transmission Operators and Balancing Authorities are aware of Geo-Magnetic Disturbance (GMD) forecast information and assist as needed in the development of any required response plans.	The RCSDT ~~proposes retiring this requirement as it is addressed in R15 below. retiring this requirement as it is redundant with proposed IRO-001-2, R11.~~ A GMD is one of the “expected or actual threats with Adverse Reliability Impacts”. IRO-005-24-2 (proposed) <u>R15.</u> Each Reliability Coordinator ~~that~~who identifies an expected or actual threat with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify, ~~without intentional delay,~~ all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i>
Notes: ▪	

Implementation Plan for Reliability Coordination Standards

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R7. The Reliability Coordinator shall disseminate information within its Reliability Coordinator Area, as required.	IRO-005-2 (proposed) None - The RCSDT recommends retiring this requirement.
Notes: The RCSDT proposes that this requirement is too vague and ambiguous to measure. We recommend retiring this requirement.	

Implementation Plan for Reliability Coordination Standards

Already Approved Standard	Proposed Replacement Requirement(s)

Implementation Plan for Reliability Coordination Standards

IRO-005-2

R8. Each Reliability Coordinator shall monitor system frequency and its Balancing Authorities' performance and direct any necessary rebalancing to return to CPS and DCS compliance. The Transmission Operators and Balancing Authorities shall utilize all resources, including firm load shedding, as directed by its Reliability Coordinator to relieve the emergent condition.

IRO-005-2

None –The BA has its own requirements regarding compliance with CPS and DCS standards as well as requesting emergency assistance. RCSDT views these as vestiges of an earlier program that no longer apply given the current mandatory requirements with which the BA must comply. The second sentence is redundant with EOP-002, R4, R6, R7, and R9. This requirement should be retired.

The RCSDT recommends retiring this requirement as it is redundant with:

TOP-006-1, R7

Each Reliability Coordinator, Transmission Operator and Balancing Authority shall monitor system frequency.

EOP-002-2

R4. A Balancing Authority anticipating an operating capacity or energy emergency shall perform all actions necessary including bringing on all available generation, postponing equipment maintenance, scheduling interchange purchases in advance, and being prepared to reduce firm load.

R6. If the Balancing Authority cannot comply with the Control Performance and Disturbance Control Standards, then it shall immediately implement remedies to do so.

These remedies include, but are not limited to:

R6.1. Loading all available generating capacity.

R6.2. Deploying all available operating reserve.

R6.3. Interrupting interruptible load and exports.

R6.4. Requesting emergency assistance from other Balancing Authorities.

R6.5. Declaring an Energy Emergency through its Reliability Coordinator; and

R6.6. Reducing load, through procedures such as public appeals, voltage reductions, curtailing interruptible loads and firm loads

~~July 16, 2008~~ November 23, 2010

Implementation Plan for Reliability Coordination Standards

	R7. Once the Balancing Authority has exhausted the steps listed in Requirement 6, or if these steps cannot be completed in sufficient time to resolve the emergency condition, the Balancing Authority shall: R7.1. Manually shed firm load without delay to return its ACE to zero; and R7.2. Request the Reliability Coordinator to declare an Energy Emergency Alert in accordance with Attachment 1-EOP-002-0 “Energy Emergency Alert Levels.”
Notes: ■	

Implementation Plan for Reliability Coordination Standards

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R9. The Reliability Coordinator shall coordinate with Transmission Operators, Balancing Authorities, and Generator Operators as needed to develop and implement action plans to mitigate potential or actual SOL, IROL, CPS or DCS violations. The Reliability Coordinator shall coordinate pending generation and transmission maintenance outages with Transmission Operators, Balancing Authorities, and Generator Operators as needed in both the real time and next-day reliability analysis timeframes.	The RCSDT proposes to retire this requirement from IRO-005. The RCSDT proposes retiring this requirement as it is redundant with TOP-003 and IRO-004 (all requirements) for next day requirements. The RC has the authority to coordinate pending outages in real-time through IRO-001-2, R1 (proposed). The issue of CPS and DCS is covered in EOP-002-2, R6, R7 and R8 (see above).
Notes: TOP-003-0 R1. Generator Operators and Transmission Operators shall provide planned outage information. R1.1. Each Generator Operator shall provide outage information daily to its Transmission Operator for scheduled generator outages planned for the next day (any foreseen outage of a generator greater than 50 MW). The Transmission Operator shall establish the outage reporting requirements. R1.2. Each Transmission Operator shall provide outage information daily to its Reliability Coordinator, and to affected Balancing Authorities and Transmission Operators for scheduled generator and bulk transmission outages planned for the next day (any foreseen outage of a transmission line or transformer greater than 100 kV or generator greater than 50 MW) that may collectively cause or contribute to an SOL or IROL violation or a regional operating area limitation. The Reliability Coordinator shall establish the outage reporting requirements. R1.3. Such information shall be available by 1200 Central Standard Time for the Eastern Interconnection and 1200 Pacific Standard Time for the Western Interconnection. R2. Each Transmission Operator, Balancing Authority, and Generator Operator shall plan and coordinate scheduled outages of system voltage regulating equipment, such as automatic voltage regulators on generators, supplementary excitation control, synchronous condensers, shunt and series capacitors, reactors, etc., among affected Balancing Authorities and Transmission Operators as required. R3. Each Transmission Operator, Balancing Authority, and Generator Operator shall plan and coordinate scheduled outages of telemetering and control equipment and associated communication channels between the affected areas. R4. Each Reliability Coordinator shall resolve any scheduling of potential reliability conflicts.	

Implementation Plan for Reliability Coordination Standards

IRO-004-1

R1. Each Reliability Coordinator shall conduct next-day reliability analyses for its Reliability Coordinator Area to ensure that the Bulk Electric System can be operated reliably in anticipated normal and Contingency event conditions. The Reliability Coordinator shall conduct Contingency analysis studies to identify potential interface and other SOL and IROL violations, including overloaded transmission lines and transformers, voltage and stability limits, etc.

R2. Each Reliability Coordinator shall pay particular attention to parallel flows to ensure one Reliability Coordinator Area does not place an unacceptable or undue Burden on an adjacent Reliability Coordinator Area.

R3. Each Reliability Coordinator shall, in conjunction with its Transmission Operators and Balancing Authorities, develop action plans that may be required, including reconfiguration of the transmission system, re-dispatching of generation, reduction or curtailment of Interchange Transactions, or reducing load to return transmission loading to within acceptable SOLs or IROLs.

R4. Each Transmission Operator, Balancing Authority, Transmission Owner, Generator Owner, Generator Operator, and Load-Serving Entity in the Reliability Coordinator Area shall provide information required for system studies, such as critical facility status, Load, generation, operating reserve projections, and known Interchange Transactions. This information shall be available by 1200 Central Standard Time for the Eastern Interconnection and 1200 Pacific Standard Time for the Western Interconnection.

R5. Each Reliability Coordinator shall share the results of its system studies, when conditions warrant or upon request, with other Reliability Coordinators and with Transmission Operators, Balancing Authorities, and Transmission Service Providers within its Reliability Coordinator Area. The Reliability Coordinator shall make study results available no later than 1500 Central Standard Time for the Eastern Interconnection and 1500 Pacific Standard Time for the Western Interconnection, unless circumstances warrant otherwise.

R6. If the results of these studies indicate potential SOL or IROL violations, the Reliability Coordinator shall direct its Transmission Operators, Balancing Authorities and Transmission Service Providers to take any necessary action the Reliability Coordinator deems appropriate to address the potential SOL or IROL violation.

R7. Each Transmission Operator, Balancing Authority, and Transmission Service Provider shall comply with the directives of its Reliability Coordinator based on the next day assessments in the same manner in which it would comply during real time operating events.

IRO-001-2, R1 (proposed)

R1. The Reliability Coordinator shall act or direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts.

[Violation Risk Factor: High][Time Horizon: Real-time Operations and Same Day Operations]

Implementation Plan for Reliability Coordination Standards

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R10. As necessary, the Reliability Coordinator shall assist the Balancing Authorities in its Reliability Coordinator Area in arranging for assistance from neighboring Reliability Coordinator Areas or Balancing Authorities. <i>[Violation Risk Factor: High]</i>	None – The RCSDT proposes to retire this requirement as it is redundant with: EOP-002-2 R7.2. Request the Reliability Coordinator to declare an Energy Emergency Alert in accordance with Attachment 1-EOP-002-0 “Energy Emergency Alert Levels.” R8. A Reliability Coordinator that has any Balancing Authority within its Reliability Coordinator area experiencing a potential or actual Energy Emergency shall initiate an Energy Emergency Alert as detailed in Attachment 1-EOP-002-0 “Energy Emergency Alert Levels.” The Reliability Coordinator shall act to mitigate the emergency condition, including a request for emergency assistance if required.
Notes:	

Implementation Plan for Reliability Coordination Standards

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R11. The Reliability Coordinator shall identify sources of large Area Control Errors that may be contributing to Frequency Error, Time Error, or Inadvertent Interchange and shall discuss corrective actions with the appropriate Balancing Authority. The Reliability Coordinator shall direct its Balancing Authority to comply with CPS and DCS.	None – The RCSdT recommends retiring this requirement as it is redundant with: IRO-001-2 (proposed) <u>R2. Each Reliability Coordinator shall take actions or direct actions, which could include issuing Reliability Directives, of Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. [Violation Risk Factor: High][Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</u> ~~R1. Reliability Coordinator shall act or direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area to prevent or mitigate the magnitude or duration of Adverse Reliability Impacts. [Violation Risk Factor: High][Time Horizon: Real-time Operations and Same-Day Operations]~~ TOP-006-1, R7 (existing) R7. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall monitor system frequency.
Notes:	

Implementation Plan for Reliability Coordination Standards

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R12. Whenever a Special Protection System that may have an inter-Balancing Authority, or inter-Transmission Operator impact (e.g., could potentially affect transmission flows resulting in a SOL or IROL violation) is armed, the Reliability Coordinators shall be aware of the impact of the operation of that Special Protection System on inter-area flows. The Transmission Operator shall immediately inform the Reliability Coordinator of the status of the Special Protection System including any degradation or potential failure to operate as expected.	None - The RCSDT recommends retiring this requirement as it is redundant with proposed IRO-010: R1. The Reliability Coordinator shall have a documented data specification for data and information to build and maintain models to support Real-Time monitoring, Operational Planning Analyses, and Real-time Assessments. The specification shall include the following: (<i>Violation Risk Factor: Low</i>) (<i>Time Horizon: Operations Planning</i>) R1.1. List of required data and information. R1.2. Mutually agreeable format. R1.3. Timeframe and periodicity for providing data and information (based on its hardware and software requirements, and the time needed to do its Operational Planning Analyses). R1.4. Process for data provision when automated Real-Time system operating data is unavailable. R2. The Reliability Coordinator shall distribute its data specification to entities that have Facilities monitored by the Reliability Coordinator and to entities that provide Facility status to the Reliability Coordinator. (<i>Violation Risk Factor: Low</i>) (<i>Time Horizon: Operations Planning</i>) R3. Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. The data and information is limited to data needed by the Reliability Coordinator to support Real-Time Monitoring, Operational Planning Analyses, and Real-Time Assessments. (<i>Violation Risk Factor: Medium</i>) (<i>Time Horizon: Operations Planning; Same-day Operations; Real-time Operations</i>)

Implementation Plan for Reliability Coordination Standards

Notes: The RCSDT recommends retiring this requirement as it is redundant with proposed IRO-010, R1 and R3. Also, the scope of project 2007-3 includes enhancing the SPS provisions of TOP-005. IRO-003, R1 indicates the RC will monitor all items that will impact reliability, and SPSs are a part of that.

Implementation Plan for Reliability Coordination Standards

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R13. Each Reliability Coordinator shall ensure that all Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities operate to prevent the likelihood that a disturbance, action, or non-action in its Reliability Coordinator Area will result in a SOL or IROL violation in another area of the Interconnection. In instances where there is a difference in derived limits, the Reliability Coordinator and its Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities shall always operate the Bulk Electric System to the most limiting parameter.	None – The IROL SDT ~~has proposed~~ retiring the first sentence of this requirement as it is redundant with the proposed IRO-009-1. The RCS DT recommends retiring the remaining portion of this requirement as it is a facet of the SOL / IROL methodology required in FAC-010-1, FAC-011-1 and FAC-014-1.
Notes:	

Implementation Plan for Reliability Coordination Standards

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R14. Each Reliability Coordinator shall make known to Transmission Service Providers within its Reliability Coordinator Area, SOLs or IROLs within its wide-area view. The Transmission Service Providers shall respect these SOLs or IROLs in accordance with filed tariffs and regional Total Transfer Calculation and Available Transfer Calculation processes.	Per the IROL SDT implementation plan, the first sentence of this requirement should be retired upon the implementation of IRO-009-1. The RC SDT proposes retiring the second sentence of this requirement. The concept of this requirement is more appropriately addressed in the proposed MOD standards under project 2006-7. As written, this requirement is not measureable and unenforceable as a TSP's tariff may supersede the requirement.
Notes:	
Already Approved Standard	Proposed Replacement Requirement(s)

Implementation Plan for Reliability Coordination Standards

IRO-005-2 R15. Each Reliability Coordinator who foresees a transmission problem (such as an SOL or IROL violation, loss of reactive reserves, etc.) within its Reliability Coordinator Area shall issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area without delay. The receiving Reliability Coordinator shall disseminate this information to its impacted Transmission Operators and Balancing Authorities. The Reliability Coordinator shall notify all impacted Transmission Operators, Balancing Authorities, when the transmission problem has been mitigated.	<u>R1. When the results of an Operational Planning Analysis or Real-time Assessment indicate an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator that shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</u> <u>R2. The Each Reliability Coordinator that identifies an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area shall g Authorities in its Reliability Coordinator Area when the problem has been mitigated. notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when the transmission problem has been mitigated. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</u> ~~None~~—this requirement was moved to IRO-001-2
Notes:	

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Implementation Plan for Reliability Coordination Standards

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R16. Each Reliability Coordinator shall confirm reliability assessment results and determine the effects within its own and adjacent Reliability Coordinator Areas. The Reliability Coordinator shall discuss options to mitigate potential or actual SOL or IROL violations and take actions as necessary to always act in the best interests of the Interconnection at all times. <i>[Violation Risk Factor: High]</i> R17. When an IROL or SOL is exceeded, the Reliability Coordinator shall evaluate the local and wide-area impacts, both real-time and post-contingency, and determine if the actions being taken are appropriate and sufficient to return the system to within IROL in thirty minutes. If the actions being taken are not appropriate or sufficient, the Reliability Coordinator shall direct the Transmission Operator, Balancing Authority, Generator Operator, or Load-Serving Entity to return the system to within IROL or SOL. <i>[Violation Risk Factor: High]</i>	IRO-005-2 None – The IROL SDT’s Implementation plan proposes retirement of R16 and R17.
Notes: IRO-005 R16 is a mix of requirements and the Missing Measures and Compliance Elements drafting team determined that, as written, R16 is too vague to be measured. The intent of this requirement is duplicated more clearly in IRO-008 and IRO-009. IRO-005 R17 can lead the Reliability Coordinator to believe it has up to 30 minutes to relieve an IROL violation – but some IROLs have a T_v that is much shorter than 30 minutes. Note that the RC does not see all SOLs.	

Implementation Plan for Reliability Coordination Standards

Functions that Must Comply with the Requirements in the Standards

Standard	Functions that Must Comply With the Requirements							
	Reliability Coordinator	Balancing Authority	Interchange Authority	Transmission Operator	Transmission Owner	Generator Owner	Generator Operator	Load Serving Entity
IRO-005								

Effective Dates

In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees approval.~~TBD~~

Standard Development Roadmap

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed:

1. Draft SAR Version 1 posted January 15, 2007
2. Draft SAR Version 1 Comment Period ended February 14, 2007
3. Draft SAR Version 2 and comment responses on SAR version 1 posted March 19, 2007
4. Draft Version 2 SAR comment period ended April 17, 2007
5. SAR version 2 and comment responses for SAR version 2 accepted by SC and SDT appointed in June 2007.
6. First posting of revised standards on August 5, 2008 with comment period closed on September 16, 2008.
7. Draft Version 2 of standards and response to comments September 16, 2008–May 26, 2009.
8. Second posting of revised standards on July 10, 2009 with comment period closed on August 9, 2009.
9. RC SDT coordinated with OPCP SDT and RTO SDT on definitions relating to directives and three part communication and Draft Version 3 of standards and response to comments August 9–November 20, 2009.
10. Third posting of revised standards on January 4, 2010 with comment period closed on February 3, 2010.

Proposed Action Plan and Description of Current Draft:

The SDT began working on revisions to the standards in August 2007. The current posting contains revisions based on stakeholder comments on the third draft. The team is posting for a 30 day pre-ballot review.

Future Development Plan:

Anticipated Actions	Anticipated Date
1. Respond to comments on third posting	March 2010
2. Post Standards for pre-ballot period.	January 2011
3. Standards posted for initial and recirculation ballots.	February 2011
4. Standards sent to BOT for approval.	April 2011
5. Standards filed with regulatory authorities.	June 2011

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

None

A. Introduction

1. **Title:** **Coordination Among Reliability Coordinators**
2. **Number:** IRO-014-2
3. **Purpose:** To ensure that each Reliability Coordinator's operations are coordinated such that they will not have an Adverse Reliability Impact on other Reliability Coordinator Areas and to preserve the reliability benefits of interconnected operations.
4. **Applicability:**
 - 4.1. Reliability Coordinators.
5. **Effective Date:** In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter that is 12 months after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter that is 12 months after Board of Trustees approval.

B. Requirements

- R1. Each Reliability Coordinator shall have Operating Procedures, Operating Processes, or Operating Plans for activities that require notification, exchange of information or coordination of actions that may impact other Reliability Coordinator Areas to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following: *[Violation Risk Factor: Medium] [Time Horizon: Operations Planning]*
 - 1.1. Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators.
 - 1.2. Energy and capacity shortages.
 - 1.3. Planned or unplanned outage information.
 - 1.4. Control of voltage, including the coordination of reactive resources.
 - 1.5. Coordination of information exchange to support reliability assessments.
 - 1.6. Authority to act to prevent and mitigate system conditions which could cause Adverse Reliability Impacts to other Reliability Coordinator Areas.
 - 1.7. Weekly conference calls
- R2. Each Reliability Coordinator shall maintain its Operating Procedures, Operating Processes, or Operating Plans identified in Requirement R1 as follows: *[Violation Risk Factor: Lower] [Time Horizon: Same Day Operations and Operations Planning]*
 - 2.1. Review and update annually with no more that 15 months between reviews.
 - 2.2. Obtain written agreement from all of the Reliability Coordinators required to take the indicated action(s) for each update.

- 2.3.** Distribute to all Reliability Coordinators that are required to take the indicated action(s) within 30 days of an update.
- R3.** Each Reliability Coordinator shall make notifications and exchange reliability-related information with other Reliability Coordinators in accordance with the Operating Procedures, Operating Processes, or Operating Plans identified in Requirement R1. *[Violation Risk Factor: Medium][Time Horizon: Real-time Operations and Operations Planning]*
- R4.** Each Reliability Coordinator shall participate in agreed upon conference calls, at least weekly (per Requirement 1, Part 1.7) with other Reliability Coordinators within the same Interconnection. *[Violation Risk Factor: Lower][Time Horizon: Real-time Operations]*
- R5.** Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify all other Reliability Coordinators. *[Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*
- R6.** During each instance where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact each impacted Reliability Coordinator shall operate as though the problem exists. *[Violation Risk Factor: High][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*
- R7.** During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, the Reliability Coordinator that identified the Adverse Reliability Impact shall develop an action plan to resolve the Adverse Reliability Impact. *[Violation Risk Factor: High][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*
- R8.** When a Reliability Coordinator has identified an Adverse Reliability Impact and the other Reliability Coordinators disagree on an action plan, each Reliability Coordinator shall implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact unless such actions would violate safety, equipment, regulatory or statutory requirements. *[Violation Risk Factor: High][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*

C. Measures

- M1.** Each Reliability Coordinator shall have available the latest approved documented version of its Operating Procedures, Processes, and Operating Plans that require notifications, information exchange or the coordination of actions among impacted Reliability Coordinators for conditions or activities that impact other Reliability Coordinator Areas. This documentation shall include dated, current in force documentation with the specified elements. (R1)
- M2.** Each Reliability Coordinator shall have dated evidence that the Operating Procedures, Processes, and Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were:
- 2.1** Reviewed and updated annually with no more than 15 months between reviews.

- 2.2 Agreed to, in writing, by all the Reliability Coordinators required to take the indicated action(s).
- 2.3 Distributed within 30 days of an update to all Reliability Coordinators that are required to take the indicated action(s).

This evidence may include, but is not limited to dated documentation with confirmation of receipt, dated notice of acceptance or agreement to take specified actions, or dated electronic communications with confirmation of receipt and acceptance or agreement to take specified actions. (R2)

- M3.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to dated operator logs, dated and timestamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent dated documentation, that will be used to determine that it made notifications and exchanged reliability-related information with impacted Reliability Coordinators in accordance with the Operating Procedures, Processes, or Plans identified in Requirement R1. (R3)
- M4.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to dated operator logs, dated and timestamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent dated documentation, that will be used to determine that it participated in agreed upon (at least weekly) conference calls with other Reliability Coordinators within the same Interconnection. (R4)
- M5.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to dated operator logs, dated and timestamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent dated documentation, that will be used to determine that it, upon identification of an Adverse Reliability Impact, notified impacted Reliability Coordinators. (R5)
- M6.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to dated operator logs, dated and timestamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent dated documentation, that will be used to determine that it operated under the assumption that the Adverse Reliability Impact existed during each instance where Reliability Coordinators disagreed on the existence of an Adverse Reliability Impact. (R6)
- M7.** Each Reliability Coordinator that identified an Adverse Reliability Impact shall have evidence and provide evidence that it developed an action plan during those instances where Reliability Coordinators disagreed on the existence of an Adverse Reliability Impact. This evidence may include, but is not limited to dated operator logs, dated and timestamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent dated documentation. (R7)
- M8.** Each impacted Reliability Coordinator shall have and provide evidence which may include, but is not limited to dated operator logs, dated and timestamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent dated documentation, that will be used to determine that it implemented the action plan developed by the Reliability Coordinator who has the identified the Adverse Reliability Impact when a Reliability Coordinator has identified an Adverse

Reliability Impact and the impacted Reliability Coordinators disagree on an action unless such actions would have violated safety, equipment, or regulatory or statutory requirements. (R8)

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

Regional Entity

1.2. Compliance Monitoring Period and Reset Time Frame

Not Applicable

1.3. Compliance Monitoring and Enforcement Processes:

Compliance Audits

Self-Certifications

Spot Checking

Compliance Violation Investigations

Self-Reporting

Complaints

1.4. Data Retention

The Reliability Coordinator shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- o Each Reliability Coordinator shall retain its current, in force document and any documents in force since the last compliance audit for Requirements R1, R2, and Measures M1, M2.
- o Each Reliability Coordinator shall retain its most recent 12 months of evidence for Requirement R3, R4, R5 and Measure M3, M4, M5.
- o Each Reliability Coordinator shall retain 3 calendar years plus current calendar year of evidence for Requirements R6 through R8 and Measures M6 through M8.
- o If a Reliability Coordinator is found non-compliant, it shall keep information related to the non-compliance until found compliant, or for the time period specified above, whichever is longer.
- o The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

2. Violation Severity Levels

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	The Reliability Coordinator has Operating Procedures, Operating Processes, or Operating Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address one of the topical areas identified in Parts 1.1 through 1.7..	The Reliability Coordinator has Operating Procedures, Operating Processes, or Operating Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address two of the topical areas identified in Parts 1.1 through 1.7.	The Reliability Coordinator has Operating Procedures, Operating Processes, or Operating Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address three of the topical areas identified in Parts 1.1 through 1.7.	The Reliability Coordinator failed to have Operating Procedures, Operating Processes, or Operating Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability to address three or more of the topical areas identified in Parts 1.1 through 1.7.
R2	N/A	The Reliability Coordinator Operating Procedures, Operating Processes, or Operating Plans identified in R1 but failed to distributed these to all Reliability Coordinators that are required to take action.	The Reliability Coordinator has Operating Procedures, Operating Processes, or Operating Plans identified in R1 but failed to obtain agreement from all Reliability Coordinators that are required to take action. OR Failed to review and update the Operating Procedures, Operating Processes, and Operating Plans identified in R1 annually.	The Reliability Coordinator has Operating Procedures, Operating Processes, or Operating Plans identified in R1 but failed to review and update annually and obtain written agreement from all Reliability Coordinators that are required to take action and failed to distribute these to all Reliability Coordinators that are required to take action.
R3	N/A	N/A	The Reliability Coordinator failed to make notifications OR exchange reliability-related information with impacted Reliability Coordinators.	The Reliability Coordinator failed to make notifications AND exchange reliability-related information with impacted Reliability Coordinators.

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R4	N/A	N/A	N/A	The Reliability Coordinator failed to participate in an agreed upon (at least weekly) conference call with impacted Reliability Coordinators within the same Interconnection.
R5	N/A	The Reliability Coordinator failed to notify one, but not all, of the impacted Reliability Coordinators upon identification of an Adverse Reliability Impact.	N/A	The Reliability Coordinator failed to notify more than one impacted Reliability Coordinators upon identification of an Adverse Reliability Impact. OR The Reliability Coordinator failed to notify the impacted Reliability Coordinator (when there is only one impacted Reliability Coordinator) upon identification of an Adverse Reliability Impact.
R6	N/A	N/A	N/A	The Reliability Coordinator failed to operate under the assumption that the Adverse Reliability Impact existed during an instance where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact..

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R7	N/A	N/A	N/A	The Reliability Coordinator that identified the Adverse Reliability Impact failed to develop an action plan to resolve the Adverse Reliability Impact during an instance where Reliability Coordinators disagreed on the existence of an Adverse Reliability Impact.
R8	N/A	N/A	N/A	The Reliability Coordinator failed to implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact when a Reliability Coordinator has identified an Adverse Reliability Impact and the impacted Reliability Coordinators disagree on an action plan

E. Regional Differences

None identified.

F. Associated Documents**Version History**

Version	Date	Action	Change Tracking
1	August 10, 2005	1. Changed incorrect use of certain hyphens (-) to “en dash (–).” 2. Hyphenated “30-day” when used as adjective. 3. Changed standard header to be consistent with standard “Title.” 4. Initial capped heading “Definitions of Terms Used in Standard.” 5. Added “periods” to items where appropriate. 6. Changed “Timeframe” to “Time Frame” in item D, 1.2. 7. Lower cased all words that are not “defined” terms — drafting team, self-certification. 8. Changed apostrophes to “smart” symbols. 9. Added comma in all word strings “Procedures, Processes, or Plans,” etc. 10. Added hyphens to “Reliability Coordinator-to-Reliability Coordinator” where used as adjective. 11. Removed comma in item 2.1.2. 12. Removed extra spaces between words where appropriate.	January 20, 2006
1	February 7, 2006	Approved by BOT	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New
2	TBD	Revised per SAR for Project 2006-6, RC SDT	Revised

Standard Development Roadmap

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed:

1. Draft SAR Version 1 posted January 15, 2007
2. Draft SAR Version 1 Comment Period ended February 14, 2007
3. Draft SAR Version 2 and comment responses on SAR version 1 posted March 19, 2007
4. Draft Version 2 SAR comment period ended April 17, 2007
5. SAR version 2 and comment responses for SAR version 2 accepted by SC and SDT appointed in June 2007.
6. First posting of revised standards on August 5, 2008 with comment period closed on September 16, 2008.
7. Draft Version 2 of standards and response to comments September 16, 2008–May 26, 2009.
8. Second posting of revised standards on July 10, 2009 with comment period closed on August 9, 2009.
9. RC SDT coordinated with OPCP SDT and RTO SDT on definitions relating to directives and three part communication and Draft Version 3 of standards and response to comments August 9–November 20, 2009.

10. Third posting of revised standards on January 4, 2010 with comment period closed on February 3, 2010.

Proposed Action Plan and Description of Current Draft:

The SDT began working on revisions to the standards in August 2007. The current posting contains revisions based on stakeholder comments on the ~~second~~third draft. The team is ~~seeking comments on the revised standards~~posting for a 30 day pre-ballot review.

Future Development Plan:

Anticipated Actions	Anticipated Date
1. Respond to comments on third posting	March 2010
2. Post Standards for pre-ballot period.	~~April 2010~~ <u>January 2011</u>
3. Standards posted for initial and recirculation ballots.	~~May 2010~~ <u>February 2011</u>
4. Standards sent to BOT for approval.	~~July 2010~~ <u>April 2011</u>

5. Standards filed with regulatory authorities.

~~September 2010~~June 2011

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

None

A. Introduction

1. **Title:** Coordination Among Reliability Coordinators
2. **Number:** IRO-014-2
3. **Purpose:** To ensure that each Reliability Coordinator's operations are coordinated such that they will not have an Adverse Reliability Impact on other Reliability Coordinator Areas and to preserve the reliability benefits of interconnected operations.
4. **Applicability:**
 - 4.1. Reliability Coordinators.
5. **Effective Date:** In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter that is 12 months after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter that is 12 months after Board of Trustees approval.

B. Requirements

- R1. ~~For conditions or activities that impact other Reliability Coordinator Areas,~~ Each Reliability Coordinator shall have Operating Procedures, Operating Processes, or Operating Plans for activities that require notification, exchange of information or coordination of actions ~~with impacted~~that may impact other Reliability ~~Coordinators~~Coordinator Areas to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following: [Violation Risk Factor: Medium] [Time Horizon: ~~Same Day Operations and Operations Planning~~]
 - 1.1. Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators.
 - 1.2. Energy and capacity shortages.
 - 1.3. Planned or unplanned outage information.
 - 1.4. Control of voltage, including the coordination of reactive resources.
 - 1.5. Coordination of information exchange to support reliability assessments.
 - 1.6. Authority to act to prevent and mitigate system conditions which could cause Adverse Reliability Impacts to other Reliability Coordinator Areas.
 - 1.7. Weekly conference calls
- R2. Each Reliability ~~Coordinator's~~Coordinator shall maintain its Operating ~~Procedure, Process~~Procedures, Operating Processes, or Plan that requires one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) ~~shall be~~Operating Plans identified in Requirement R1 as follows:

[Violation Risk Factor: Lower] [Time Horizon: Same Day Operations and Operations Planning]

2.1. Agreed to by all Review and update annually with no more than 15 months between reviews.

2.1.2. Obtain written agreement from all of the Reliability Coordinators required to take the indicated action(s) for each update.

2.2.2.3. Distributed Distribute to all Reliability Coordinators that are required to take the indicated action(s) within 30 days of an update.

- R3. ~~For conditions or activities that impact other Reliability Coordinator Areas,~~ Each Reliability Coordinator shall make notifications and exchange reliability-related information with ~~impacted other~~ Reliability Coordinators ~~using its predefined in accordance with the~~ Operating Procedures, ~~Operating~~ Processes, or ~~Operating~~ Plans ~~for conditions that may impact other Reliability Coordinator Areas or other means to accomplish the notifications and exchange of reliability-related information identified in Requirement R1.~~ *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations and Operations Planning]*
- R4. Each Reliability Coordinator shall participate in agreed upon conference calls, at least weekly, ~~and (per Requirement 1, Part 1.7) with other communication forums with impacted~~ Reliability Coordinators within the same Interconnection. *[Violation Risk Factor: Lower] [Time Horizon: Real-time Operations]*
- R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify all ~~impacted other~~ Reliability Coordinators. *[Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*
- R6. During each instance where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact each impacted Reliability Coordinator shall operate as though the problem exists ~~when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators.~~ *[Violation Risk Factor: Medium/High] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*
- R7. ~~The~~ During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, the Reliability Coordinator ~~with the that~~ identified the Adverse Reliability Impact shall develop a mitigation action plan ~~when the impacted Reliability Coordinators can not agree that to resolve the problem exists~~ Adverse Reliability Impact. *[Violation Risk Factor: Medium/High] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*
- R8. ~~Each impacted~~ When a Reliability Coordinator has identified an Adverse Reliability Impact and the other Reliability Coordinators disagree on an action plan, each Reliability Coordinator shall implement the mitigation action plan developed by the Reliability Coordinator ~~who has the that~~ identified Adverse Reliability Impact when the impacted Adverse Reliability Coordinators can not agree on a mitigation plan Impact unless such actions would violate safety, equipment, ~~or~~ regulatory or statutory

requirements. [Violation Risk Factor: ~~Medium~~High][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

C. Measures

- M1.** Each Reliability Coordinator shall have available the latest approved documented version of its Operating Procedures, Processes, ~~or and~~ Operating Plans that require notifications, information exchange or the coordination of actions among impacted Reliability Coordinators for conditions or activities that impact other Reliability Coordinator Areas. This documentation ~~may~~shall include, ~~but is not limited to,~~ dated, current in force documentation with the specified elements. (R1)
- M2.** Each Reliability Coordinator shall have dated evidence that the Operating Procedures, Processes, ~~or and~~ Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were:
- 2.1 Reviewed and updated annually with no more than 15 months between reviews.
- ~~2.12.2~~ 2.2.2 Agreed to, in writing, by all the Reliability Coordinators required to take the indicated action(s).
- ~~2.22.3~~ 2.2.3 Distributed within 30 days of an update to all Reliability Coordinators that are required to take the indicated action(s).
- This evidence may include, but is not limited to dated ~~document~~documentation with confirmation of receipt, dated notice of acceptance or agreement to take specified actions, or dated electronic communications with confirmation of receipt and acceptance or agreement to take specified actions. (R2)
- M3.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to dated operator logs, dated and timestamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent dated documentation, that will be used to determine that it made notifications and exchanged reliability-related information with impacted Reliability Coordinators ~~using its predefined in accordance with the~~ Operating Procedures, Processes, or Plans ~~for conditions or activities that impact other Reliability Coordinator Areas or other means to accomplish the notifications and exchange of reliability related information identified in Requirement R1.~~ (R3)
- M4.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to dated operator logs, dated and timestamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent dated documentation, that will be used to determine that it participated in agreed upon (at least weekly) conference calls ~~and with~~ other ~~communication forums with impacted~~ Reliability Coordinators within the same Interconnection. (R4)
- M5.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to dated operator logs, dated and timestamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent dated documentation, that will be used to determine that it, upon identification of an Adverse Reliability Impact, notified impacted Reliability Coordinators. (R5)

- M6.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to dated operator logs, dated and timestamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent dated documentation, that will be used to determine that it operated ~~as though~~under the ~~problem exists when~~assumption that the ~~identified~~ Adverse Reliability Impact ~~was not agreed to by the impacted~~existed during each instance where Reliability Coordinators ~~disagreed on the existence of an Adverse Reliability Impact~~. (R6)
- M7.** Each Reliability Coordinator ~~with the~~that identified an Adverse Reliability Impact shall have evidence and provide evidence that it developed ~~a mitigation~~an action plan ~~when the impacted during those instances where~~ Reliability Coordinators ~~could not agree that the problem exists~~disagreed on the existence of an Adverse Reliability Impact. This evidence may include, but is not limited to dated operator logs, dated and timestamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent dated documentation. (R7)
- M8.** Each impacted Reliability Coordinator shall have and provide evidence which may include, but is not limited to dated operator logs, dated and timestamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent dated documentation, that will be used to determine that it implemented the ~~mitigation~~action plan developed by the Reliability Coordinator who has the identified the Adverse Reliability Impact when a Reliability Coordinator has identified an Adverse Reliability Impact and the impacted Reliability Coordinators ~~can not agree~~disagree on a mitigation planan action unless such actions would have violated safety, equipment, or regulatory or statutory requirements. (R8)

D. Compliance

- 1. Compliance Monitoring Process**
 - 1.1. Compliance Enforcement Authority**

Regional Entity
 - 1.2. Compliance Monitoring Period and Reset Time Frame**

Not Applicable
 - 1.3. Compliance Monitoring and Enforcement Processes:**

Compliance Audits

Self-Certifications

Spot Checking

Compliance Violation Investigations

Self-Reporting

Complaints
 - 1.4. Data Retention**

The Reliability Coordinator shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- o Each Reliability Coordinator shall retain its current, in force document and any documents in force since the last compliance audit for ~~all~~ Requirements R1, R2, and Measures M1, M2.
- o Each Reliability Coordinator shall retain its most recent 12 months of evidence for Requirement R3, R4, R5 and Measure M3, M4, M5.
- o Each Reliability Coordinator shall retain 3 calendar years plus current calendar year of evidence for Requirements R6 through R8 and Measures M6 through M8.
- o If a Reliability Coordinator is found non-compliant, it shall keep information related to the non-compliance until found compliant, or for the time period specified above, whichever is longer.
- o The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

2. Violation Severity Levels

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	The Reliability Coordinator has Operating Procedures, <u>Operating</u> Processes, or <u>Operating</u> Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address one ~~or two of the parts of the~~ <u>topical areas identified in Parts 1.1 through 1.7.</u>	The Reliability Coordinator has Operating Procedures, <u>Operating</u> Processes, or <u>Operating</u> Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address ~~three or four~~ <u>two</u> of the ~~part~~ <u>topical areas identified in Parts 1.1 through 1.7.</u>	The Reliability Coordinator has Operating Procedures, <u>Operating</u> Processes, or <u>Operating</u> Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address ~~five~~ <u>three</u> of the ~~part~~ <u>topical areas identified in Parts 1.1 through 1.7.</u>	The Reliability Coordinator failed to have Operating Procedures, <u>Operating</u> Processes, or <u>Operating</u> Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability- ~~to address three or more of the topical areas identified in Parts 1.1 through 1.7.~~
R2	N/A	The Reliability Coordinator ~~failed to have evidence that the~~ Operating Procedures, <u>Operating</u> Processes, or <u>Operating</u> Plans ~~that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were identified in R1 but failed to distributed these~~ to all Reliability Coordinators that are required to take action.	The Reliability Coordinator ~~failed to have evidence that the~~ has Operating Procedures, <u>Operating</u> Processes, or <u>Operating</u> Plans ~~that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were agreed to by~~ identified in R1 but failed to <u>obtain agreement from</u> all Reliability Coordinators that are required to take action. <u>OR</u> <u>Failed to review and update the Operating Procedures, Operating Processes, and Operating Plans identified in R1 annually.</u>	The Reliability Coordinator ~~failed to have evidence that the~~ has Operating Procedures, <u>Operating</u> Processes, or <u>Operating</u> Plans ~~that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were agreed to by~~ identified in R1 but failed to <u>review and update annually and obtain written agreement from</u> all Reliability Coordinators that are required to take action and ~~were distributed~~ <u>failed to distribute these</u> to all Reliability Coordinators that are required to take action.

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Standard IRO-014-2 — Coordination Among Reliability Coordinators

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R3	N/A	N/A	The Reliability Coordinator failed to make notifications OR exchange reliability-related information with impacted Reliability Coordinators.	The Reliability Coordinator failed to make notifications AND exchange reliability-related information with impacted Reliability Coordinators.
R4	N/A	N/A	N/A	The Reliability Coordinator failed to participate in an agreed upon (at least weekly) conference call ~~or other communication forum~~ with impacted Reliability Coordinators <u>within the same Interconnection.</u>
R5	N/A	The Reliability Coordinator failed to notify one, but not all, of the impacted Reliability Coordinators upon identification of an Adverse Reliability Impact.	N/A	The Reliability Coordinator failed to notify ~~any more than one~~ impacted Reliability Coordinators upon identification of an Adverse Reliability Impact. <u>OR</u> <u>The Reliability Coordinator failed to notify the impacted Reliability Coordinator (when there is only one impacted Reliability Coordinator) upon identification of an Adverse Reliability Impact.</u>
R6	N/A	N/A	N/A	The Reliability Coordinator failed to operate ~~as though~~ <u>under</u> the ~~problem existed when~~ <u>assumption</u> ~~that the identified~~ Adverse Reliability Impact ~~was not agreed to by the impacted~~ <u>existed</u> <u>during an instance where</u> Reliability Coordinators.

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R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
				~~disagree on the existence of an Adverse Reliability Impact.~~
R7	N/A	N/A	N/A	The Reliability Coordinator ~~with the~~ that identified ~~the~~ Adverse Reliability Impact failed to develop ~~a mitigation~~ an action plan ~~when~~ to resolve the ~~impacted~~ Adverse Reliability Impact during an instance where Reliability Coordinators ~~can not agree that~~ disagreed on the ~~problem exists~~ existence of an Adverse Reliability Impact.
R8	N/A	N/A	N/A	The ~~impacted~~ Reliability Coordinator failed to implement the ~~mitigation~~ action plan developed by the Reliability Coordinator ~~who has the~~ that identified ~~the~~ Adverse Reliability Impact when ~~a Reliability Coordinator has identified an Adverse Reliability Impact and~~ the impacted Reliability Coordinators ~~could not agree~~ disagree on ~~a mitigation~~ an

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
				<u>action</u> plan -

E. Regional Differences

None identified.

F. Associated Documents

Version History

Version	Date	Action	Change Tracking
1	August 10, 2005	1. Changed incorrect use of certain hyphens (-) to “en dash (–).” 2. Hyphenated “30-day” when used as adjective. 3. Changed standard header to be consistent with standard “Title.” 4. Initial capped heading “Definitions of Terms Used in Standard.” 5. Added “periods” to items where appropriate. 6. Changed “Timeframe” to “Time Frame” in item D, 1.2. 7. Lower cased all words that are not “defined” terms — drafting team, self-certification. 8. Changed apostrophes to “smart” symbols. 9. Added comma in all word strings “Procedures, Processes, or Plans,” etc. 10. Added hyphens to “Reliability Coordinator-to-Reliability Coordinator” where used as adjective. 11. Removed comma in item 2.1.2. 12. Removed extra spaces between words where appropriate.	January 20, 2006
1	February 7, 2006	Approved by BOT	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New
2	TBD	Revised per SAR for Project 2006-6, RC SDT	Revised

Implementation Plan for IRO-014-2 — Coordination Among Reliability Coordinators

Prerequisite Approvals

- None required

Conforming Changes to Requirements in Already Approved Standards

- IRO-001-2 — Reliability Coordination — Responsibilities and Authorities
- IRO-015-1 — Notifications and Information Exchange Between Reliability Coordinators
- IRO-016-1 — Coordination of Real-time Activities between Reliability Coordinators

Revision Summary

The Reliability Coordination SDT (RC SDT) revised the standard and is proposing retiring two requirements (R3 and R4). New requirements were brought into this standard from IRO-015-1 (R1-R2) and IRO-016-1 (R1 and its sub requirements). Changes were made to eliminate redundancies between standards (existing and proposed), eliminate administrative items, align with NERCs Rules of Procedure and to address issues in FERC Order 693.

Functions that Must Comply with the Requirements in the Standard

- Reliability Coordinator

Effective Dates

In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter that is 12 months after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter that is 12 months after Board of Trustees approval.

Implementation Plan for IRO-014-2 — Coordination Among Reliability Coordinators

Revisions or Retirements to Already Approved Standards

The following tables identify the sections of approved standards that shall be retired or revised when this standard is implemented. If the drafting team is recommending the retirement or revision of a requirement, that text is blue.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R7. The Reliability Coordinator shall have clear, comprehensive coordination agreements with adjacent Reliability Coordinators to ensure that System Operating Limit or Interconnection Reliability Operating Limit violation mitigation requiring actions in adjacent Reliability Coordinator Areas are coordinated.	IRO-014-2 R1. Each Reliability Coordinator shall have Operating Procedures, Operating Processes, or Operating Plans for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following: <i>[Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning]</i> 1.1. Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators. 1.2. Energy and capacity shortages. 1.3. Planned or unplanned outage information. 1.4. Control of voltage, including the coordination of reactive resources for voltage control. 1.5. Coordination of information exchange to support reliability assessments. 1.6. Authority to act to prevent and mitigate system conditions which could instances of causeing Adverse Reliability Impacts to other Reliability Coordinator Areas.
Notes: The RC SDT proposes retiring R7 as it is redundant with IRO-014, R1.	

Implementation Plan for IRO-014-2 — Coordination Among Reliability Coordinators

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-014-1 R1. The Reliability Coordinator shall have Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with one or more other Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall address Scenarios that affect other Reliability Coordinator Areas as well as those developed in coordination with other Reliability Coordinators. <i>[Violation Risk Factor: Medium]</i> R1.1 These Operating Procedures, Processes, or Plans shall collectively address, as a minimum, the following: <i>[Violation Risk Factor: Lower]</i> R1.1.1 Communications and notifications, including the conditions¹ under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators. <i>[Violation Risk Factor: Medium]</i> R1.1.2 Energy and capacity shortages. <i>[Violation Risk Factor: Medium]</i> R1.1.3 Planned or unplanned outage information. <i>[Violation Risk Factor: Medium]</i> R1.1.4 Voltage control, including the coordination of reactive resources for voltage control. <i>[Violation Risk Factor: Medium]</i> R1.1.5 Coordination of information exchange to support reliability assessments. <i>[Violation Risk Factor: Lower]</i> R1.1.6 Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas. <i>[Violation Risk Factor: Lower]</i>	IRO-14-2 R1. Each Reliability Coordinator shall have Operating Procedures, Operating Processes, or Operating Plans for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following: <i>[Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning]</i> 1.1 Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators. 1.2 Energy and capacity shortages. 1.3 Planned or unplanned outage information. 1.4 Control of voltage, including the coordination of reactive resources for voltage control. 1.5 Coordination of information exchange to support reliability assessments. Authority to act to prevent and mitigate system conditions which could cause Adverse Reliability Impacts to other Reliability Coordinator Areas.
Notes: Revise R1 as shown and delete the footnote.	

¹ Examples of conditions when one Reliability Coordinator may need to notify another Reliability Coordinator may include (but aren't limited to) sabotage events, Interconnection Reliability Operating Limit violations, voltage reductions, insufficient resources, arming of special protection systems, etc.

Implementation Plan for IRO-014-2 — Coordination Among Reliability Coordinators

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-014-1 R2. Each Reliability Coordinator's Operating Procedure, Process, or Plan that requires one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) shall be: R2.1. Agreed to by all the Reliability Coordinators required to take the indicated action(s). R2.2. Distributed to all Reliability Coordinators that are required to take the indicated action(s).	IRO-014-2 R2. Each Reliability Coordinator's Operating Procedure, Operating Process, or Operating Plan that requires one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) shall be: <i>[Violation Risk Factor: Lower] [Time Horizon: Same Day Operations Planning and Long-term Planning]</i> 2.1 Agreed to by all the Reliability Coordinators required to take the indicated action(s). <i>[Violation Risk Factor: Lower]</i> 2.2 Distributed to all Reliability Coordinators that are required to take the indicated action(s). <i>[Violation Risk Factor: Lower]</i>
Notes: The RC SDT added a Time Horizon to the requirement and eliminated the VRFs that were applied to the subrequirements.	

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-014-1 R3. A Reliability Coordinator's Operating Procedures, Processes, or Plans developed to support a Reliability Coordinator-to-Reliability Coordinator Operating Procedure, Process, or Plan shall include: R3.1. A reference to the associated Reliability Coordinator-to-Reliability Coordinator Operating Procedure, Process, or Plan. R3.2. The agreed-upon actions from the associated Reliability Coordinator-to-Reliability Coordinator Operating Procedure, Process, or Plan.	None – Retire the requirement
Notes: This requirement is administrative in nature describing the contents of the plans and should not be in a standard. The RC SDT proposes retiring R3 and its subrequirements and recommends converting these good utility practices into a guideline document for use in developing the operating procedures, processes or plans.	

Implementation Plan for IRO-014-2 — Coordination Among Reliability Coordinators

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-014-1 R4. Each of the Operating Procedures, Processes, and Plans addressed in Reliability Standard IRO-014 Requirement 1 and Requirement 3 shall: R4.1. Include version control number or date. R4.2. Include a distribution list. R4.3. Be reviewed, at least once every three years, and updated if needed	None – retire the requirement.
Notes: This requirement is administrative in nature describing the contents of the plans and should not be in a standard. The RC SDT proposes retiring R4 and its subrequirements and recommends converting these good utility practices into a guideline document for use in developing the operating procedures, processes or plans.	

Implementation Plan for IRO-014-2 — Coordination Among Reliability Coordinators

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-015-1 R1. The Reliability Coordinator shall follow its Operating Procedures, Processes, or Plans for making notifications and exchanging reliability-related information with other Reliability Coordinators. <i>[Violation Risk Factor: Medium]</i> R1.1 The Reliability Coordinator shall make notifications to other Reliability Coordinators of conditions in its Reliability Coordinator Area that may impact other Reliability Coordinator Areas. <i>[Violation Risk Factor: Medium]</i> R2. The Reliability Coordinator shall participate in agreed upon conference calls and other communication forums with adjacent Reliability Coordinators. <i>[Violation Risk Factor: Lower]</i> R2.1 The frequency of these conference calls shall be agreed upon by all involved Reliability Coordinators and shall be at least weekly. <i>[Violation Risk Factor: Lower]</i> R3. The Reliability Coordinator shall provide reliability-related information as requested by other Reliability Coordinators. <i>[Violation Risk Factor: Medium]</i>	IRO-014-2 R3. For conditions or activities that impact other Reliability Coordinator Areas , Each Reliability Coordinator shall make notifications and exchange reliability-related information with impacted Reliability Coordinators using its predefined Operating Procedures, Operating Processes, or Operating Plans for conditions that may impact other Reliability Coordinator Areas or other means to accomplish the notifications and exchange of reliability-related information. <i>[Violation Risk Factor: Medium]]</i>[Time Horizon: Real-time Operations and Operations Planning] R4. Each Reliability Coordinator shall participate in agreed upon conference calls, at least weekly, and other communication forums with Reliability Coordinators within the same Interconnection. <i>[Violation Risk Factor: Lower]</i> <i>[Time Horizon: Real-time Operations]</i>
The RC SDT recommends retiring Standard IRO-015 and moving Requirements R1 and R2 to IRO-014-2 and revising as shown. The RC SDT proposes retiring R3 (as shown in the left column) as it is redundant with proposed R5 above. Reliability Coordinators already have several requirements aimed at providing data or information to other Reliability Coordinators in support of Reliability Coordinator responsibilities. For example, Reliability Coordinators provide reliability-related information to other Reliability Coordinators as part of IRO-010-1, R3 – they share information as they try to confirm the existence of operating issues as part of IRO-014-2 R5, etc.	

Implementation Plan for IRO-014-2 — Coordination Among Reliability Coordinators

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-016-1 R1. The Reliability Coordinator that identifies a potential, expected, or actual problem that requires the actions of one or more other Reliability Coordinators shall contact the other Reliability Coordinator(s) to confirm that there is a problem and then discuss options and decide upon a solution to prevent or resolve the identified problem. <i>[Violation Risk Factor: Medium]</i> R1.1 If the involved Reliability Coordinators agree on the problem and the actions to take to prevent or mitigate the system condition, each involved Reliability Coordinator shall implement the agreed-upon solution, and notify the involved Reliability Coordinators of the action(s) taken. <i>[Violation Risk Factor: Medium]</i> R1.2 If the involved Reliability Coordinators cannot agree on the problem(s) each Reliability Coordinator shall re-evaluate the causes of the disagreement (bad data, status, study results, tools, etc.). <i>[Violation Risk Factor: Medium]</i> R1.2.1 If time permits, this re-evaluation shall be done before taking corrective actions. <i>[Violation Risk Factor: Medium]</i> R1.2.2 If time does not permit, then each Reliability Coordinator shall operate as though the problem(s) exist(s) until the conflicting system status is resolved. <i>[Violation Risk Factor: Medium]</i> R1.3 If the involved Reliability Coordinators cannot agree on the solution, the more conservative solution shall be implemented. <i>[Violation Risk Factor: Medium]</i>	IRO-014-2 R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify all impacted Reliability Coordinators. <i>[Violation Risk Factor: Medium]</i> <i>[Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i> R6. Each impacted Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators <i>[Violation Risk Factor: High]</i> <i>[Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i> R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators cannot agree that the problem exists. <i>[Violation Risk Factor: High]</i> <i>[Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i> R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators cannot agree on a mitigation plan unless such actions would violate safety, equipment, regulatory or statutory requirements. <i>[Violation Risk Factor: High]</i> <i>[Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i>
Notes: IRO-014-2 R5 and R6 are revised versions of IRO-016-1, R1 and its subrequirements which were moved to this standard. The RC SDT removed the wording relating to the “most conservative solution” because it can not be measured. We are proposing to use the mitigation plan of the RC who is experiencing the issue in cases where an agreed to mitigation plan can not be developed. Note that stakeholders proposed revisions to these requirements, and the RC SDT subdivided the requirements to add more clarity.	

Implementation Plan for IRO-014-2 — Coordination Among Reliability Coordinators

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-016-1 R2. The Reliability Coordinator shall document (via operator logs or other data sources) its actions taken for either the event or for the disagreement on the problem(s) or for both.	IRO-014-2 Retire the requirement as it is a measure of Requirement R1.
Notes:	

Implementation Plan for IRO-014-2 — Coordination Among Reliability Coordinators

Prerequisite Approvals

- None required

Conforming Changes to Requirements in Already Approved Standards

- IRO-001-2 — Reliability Coordination — Responsibilities and Authorities
- IRO-015-1 — Notifications and Information Exchange Between Reliability Coordinators
- IRO-016-1 — Coordination of Real-time Activities between Reliability Coordinators

Revision Summary

The Reliability Coordination SDT (RC SDT) revised the standard and is proposing retiring two requirements (R3 and R4). New requirements were brought into this standard from IRO-015-1 (R1-R2) and IRO-016-1 (R1 and its sub requirements). Changes were made to eliminate redundancies between standards (existing and proposed), eliminate administrative items, align with NERC's Rules of Procedure and to address issues in FERC Order 693.

Functions that Must Comply with the Requirements in the Standard:

- Reliability Coordinator

Effective Dates

~~To be determined.~~

In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter that is 12 months after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter that is 12 months after Board of Trustees approval.

Implementation Plan for IRO-014-2

Coordination Among Reliability Coordinators

Revisions or Retirements to Already Approved Standards

The following tables identify the sections of approved standards that shall be retired or revised when this standard is implemented. If the drafting team is recommending the retirement or revision of a requirement, that text is blue.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R7. The Reliability Coordinator shall have clear, comprehensive coordination agreements with adjacent Reliability Coordinators to ensure that System Operating Limit or Interconnection Reliability Operating Limit violation mitigation requiring actions in adjacent Reliability Coordinator Areas are coordinated.	IRO-014-2 R1. ~~The Each~~ Reliability Coordinator shall have Operating Procedures, <u>Operating</u> Processes, or <u>Operating</u> Plans for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address ~~as a minimum~~ , the following: <i>[Violation Risk Factor: Medium]</i> <i>[Time Horizon: Same Day Operations and Operations Planning]</i> 1.1. Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators. 1.2. Energy and capacity shortages. 1.3. Planned or unplanned outage information. 1.4. <u>Control of V</u>oltage ~~control~~, including the coordination of reactive resources for voltage control. 1.5. Coordination of information exchange to support reliability assessments. 1.6. Authority to act to prevent and mitigate <u>system conditions which could instances of causing</u> Adverse Reliability Impacts to other Reliability Coordinator Areas.
Notes: The RC_SDT proposes retiring R7 as it is redundant with IRO-014, R1.	
Already Approved Standard	Proposed Replacement Requirement(s)

[July 30, 2008](#)
[July 10](#)
[December 30, 2009](#)
[August 25, 2010](#)
[January 18, 2011](#)

Implementation Plan for IRO-014-2 Coordination Among Reliability Coordinators

IRO-014-1	IRO-14-2
R1. The Reliability Coordinator shall have Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with one or more other Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall address Scenarios that affect other Reliability Coordinator Areas as well as those developed in coordination with other Reliability Coordinators. [Violation Risk Factor: Medium] R1.1 These Operating Procedures, Processes, or Plans shall collectively address, as a minimum, the following: [Violation Risk Factor: Lower] R1.1.1 Communications and notifications, including the conditions 1 under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators. [Violation Risk Factor: Medium] R1.1.2 Energy and capacity shortages. [Violation Risk Factor: Medium] R1.1.3 Planned or unplanned outage information. [Violation Risk Factor: Medium] R1.1.4 Voltage control, including the coordination of reactive resources for voltage control. [Violation Risk Factor: Medium] R1.1.5 Coordination of information exchange to support reliability assessments. [Violation Risk Factor: Lower] R1.1.6 Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas. [Violation Risk Factor: Lower]	<u>R1. Each Reliability Coordinator shall have Operating Procedures, Operating Processes, or Operating Plans for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following: [Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning]</u> <u>1.1 Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators.</u> <u>1.2 Energy and capacity shortages.</u> <u>1.3 Planned or unplanned outage information.</u> <u>1.4 Control of voltage, including the coordination of reactive resources for voltage control.</u> <u>1.5 Coordination of information exchange to support reliability assessments.</u> <u>Authority to act to prevent and mitigate system conditions which could instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas. ~~R1. The Each Reliability Coordinator shall have Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted with one or more other Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall address Scenarios that affect other Reliability Coordinator Areas as well as those developed in coordination with other Reliability Coordinators. These Operating Procedures, Processes, or Plans shall collectively address the following: [Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning]~~</u> ~~R1.1 These Operating Procedures, Processes, or Plans shall collectively address, as a minimum, the following: [Violation Risk Factor: Lower]~~ ~~R1.1.1 Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators. [Violation Risk Factor: Medium]~~ ~~R1.1.2 Energy and capacity shortages. [Violation Risk Factor: Medium]~~ ~~R1.1.3 Planned or unplanned outage information. [Violation Risk Factor: Medium]~~ ~~R1.1.4 Control of Vvoltage control, including the coordination of reactive~~
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Implementation Plan for IRO-014-2 Coordination Among Reliability Coordinators

Notes:

Revise R1 as shown and delete the footnote.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-014-1 R2. Each Reliability Coordinator's Operating Procedure, Process, or Plan that requires one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) shall be: R2.1. Agreed to by all the Reliability Coordinators required to take the indicated action(s). R2.2. Distributed to all Reliability Coordinators that are required to take the indicated action(s).	IRO-014-2 R2. Each Reliability Coordinator's Operating Procedure, <u>Operating</u> Process, or <u>Operating</u> Plan that requires one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) shall be: <i>[Violation Risk Factor: Lower] [Time Horizon: <u>Same Day Real-time Operations Planning and Operations-Long-term Planning</u>]</i> R2.1 Agreed to by all the Reliability Coordinators required to take the indicated action(s). <i>[Violation Risk Factor: Lower]</i> R2.2 Distributed to all Reliability Coordinators that are required to take the indicated action(s). <i>[Violation Risk Factor: Lower]</i>
Notes: The RC SDT added a Time Horizon to the requirement and eliminated the VRFs that were applied to the subrequirements.	

Interconnection Reliability Operating Limit violations, voltage reductions, insufficient resources, arming of special protection systems, etc.

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Implementation Plan for IRO-014-2
Coordination Among Reliability Coordinators

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-014-1 R3. A Reliability Coordinator's Operating Procedures, Processes, or Plans developed to support a Reliability Coordinator-to-Reliability Coordinator Operating Procedure, Process, or Plan shall include: R3.1. A reference to the associated Reliability Coordinator-to-Reliability Coordinator Operating Procedure, Process, or Plan. R3.2. The agreed-upon actions from the associated Reliability Coordinator-to-Reliability Coordinator Operating Procedure, Process, or Plan.	None – Retire the requirement
Notes: This requirement is administrative in nature describing the contents of the plans and should not be in a standard. The RC SDT proposes retiring R3 and its subrequirements and recommends converting these good utility practices into a guideline document for use in developing the operating procedures, processes or plans.	

Implementation Plan for IRO-014-2
Coordination Among Reliability Coordinators

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-014-1 R4. Each of the Operating Procedures, Processes, and Plans addressed in Reliability Standard IRO-014 Requirement 1 and Requirement 3 shall: R4.1. Include version control number or date. R4.2. Include a distribution list. R4.3. Be reviewed, at least once every three years, and updated if needed	None – retire the requirement.
Notes: This requirement is administrative in nature describing the contents of the plans and should not be in a standard. The RC SDT proposes retiring R4 and its subrequirements and recommends converting these good utility practices into a guideline document for use in developing the operating procedures, processes or plans.	

Implementation Plan for IRO-014-2
Coordination Among Reliability Coordinators

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-015-1 R1. The Reliability Coordinator shall follow its Operating Procedures, Processes, or Plans for making notifications and exchanging reliability-related information with other Reliability Coordinators. <i>[Violation Risk Factor: Medium]</i> R1.1 The Reliability Coordinator shall make notifications to other Reliability Coordinators of conditions in its Reliability Coordinator Area that may impact other Reliability Coordinator Areas. <i>[Violation Risk Factor: Medium]</i> R2. The Reliability Coordinator shall participate in agreed upon conference calls and other communication forums with adjacent Reliability Coordinators. <i>[Violation Risk Factor: Lower]</i> R2.1 The frequency of these conference calls shall be agreed upon by all involved Reliability Coordinators and shall be at least weekly. <i>[Violation Risk Factor: Lower]</i> R3. The Reliability Coordinator shall provide reliability-related information as requested by other Reliability Coordinators. <i>[Violation Risk Factor: Medium]</i>	IRO-014-2 ~~R5~~R3. ~~For conditions or activities that impact other Reliability Coordinator Areas .~~ ~~The Each~~ Reliability Coordinator shall make notifications and exchange reliability-related information with impacted Reliability Coordinators using its predefined Operating Procedures, <u>Operating</u> Processes, or <u>Operating</u> Plans for conditions that may impact other Reliability Coordinator Areas or other means to accomplish the notifications and exchange of reliability-related information. <i>[Violation Risk Factor: Medium]</i> <u>~~Time Horizon: Real-time Operations and Operations Planning~~</u> ~~R6~~R4. ~~The Each~~ Reliability Coordinator shall participate in agreed upon conference calls, <u>at least weekly</u>, and other communication forums with impacted adjacent Reliability Coordinators <u>within the same Interconnection</u>. <i>[Violation Risk Factor: Lower]</i> <u>~~Time Horizon: Real-time Operations~~</u> ~~R6.1~~ ~~The frequency of these conference calls shall be agreed upon by all involved Reliability Coordinators and shall be at least weekly.~~ <i>[Violation Risk Factor: Lower]</i>
The RC SDT recommends retiring Standard IRO-015 and moving Requirements R1 and R2 to IRO-014-2 and revising as shown. The RC SDT proposes retiring R3 (as shown in the left column) as it is redundant with proposed R5 above. Reliability Coordinators already have several requirements aimed at providing data or information to other Reliability Coordinators in support of Reliability Coordinator responsibilities. For example, Reliability Coordinators provide reliability-related information to other Reliability Coordinators as part of IRO-010-1, R3 – they share information as they try to confirm the existence of operating issues as part of IRO-014-2 R5, etc.	

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Implementation Plan for IRO-014-2
Coordination Among Reliability Coordinators

Already Approved Standard	Proposed Replacement Requirement(s)

Implementation Plan for IRO-014-2

Coordination Among Reliability Coordinators

IRO-016-1 R1. The Reliability Coordinator that identifies a potential, expected, or actual problem that requires the actions of one or more other Reliability Coordinators shall contact the other Reliability Coordinator(s) to confirm that there is a problem and then discuss options and decide upon a solution to prevent or resolve the identified problem. <i>[Violation Risk Factor: Medium]</i> R1.1 If the involved Reliability Coordinators agree on the problem and the actions to take to prevent or mitigate the system condition, each involved Reliability Coordinator shall implement the agreed-upon solution, and notify the involved Reliability Coordinators of the action(s) taken. <i>[Violation Risk Factor: Medium]</i> R1.2 If the involved Reliability Coordinators cannot agree on the problem(s) each Reliability Coordinator shall re-evaluate the causes of the disagreement (bad data, status, study results, tools, etc.). <i>[Violation Risk Factor: Medium]</i> R1.2.1 If time permits, this re-evaluation shall be done before taking corrective actions. <i>[Violation Risk Factor: Medium]</i> R1.2.2 If time does not permit, then each Reliability Coordinator shall operate as though the problem(s) exist(s) until the conflicting system status is resolved. <i>[Violation Risk Factor: Medium]</i> R1.3 If the involved Reliability Coordinators cannot agree on the solution, the more conservative solution shall be implemented. <i>[Violation Risk Factor: Medium]</i>	IRO-014-2 R5. ~~When an expected or actual reliability issue is detected, the~~ Each Reliability Coordinator, ~~upon identification of an~~ <u>Adverse Reliability Impact,</u> ~~shall confirm the existence of the issue with the~~ <u>notify all</u> impacted ~~other~~ Reliability Coordinators ~~that are involved.~~ <u>In the event that the issue cannot be confirmed, each RC shall operate as though the problem exists.</u> <i>[Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i> R6. ~~When an expected or actual reliability issue exists and the~~ Each impacted ~~affected~~ Reliability Coordinators <u>shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators.</u> ~~can not agree on a mitigation plan, all impacted affected Reliability Coordinators shall implement the mitigation plan developed by the Reliability Coordinator who has the reliability issue.~~ <i>[Violation Risk Factor: <u>HighMedium</u>] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i> ▪ R7. The Reliability Coordinator with the identified <u>Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists.</u> <i>[Violation Risk Factor: <u>HighMedium</u>] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i> R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact <u>when the impacted Reliability Coordinators can not agree on a mitigation plan unless such actions would violate safety, equipment, regulatory or statutory requirements.</u> <i>[Violation Risk Factor: <u>HighMedium</u>] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i>

Implementation Plan for IRO-014-2 Coordination Among Reliability Coordinators

Notes: IRO-014-2 R5 and R6 are revised versions of IRO-016-1, R1 and its subrequirements which were moved to this standard. The RC SDT removed the wording relating to the “most conservative solution” because it can not be measured. We are proposing to use the mitigation plan of the RC who is experiencing the issue in cases where an agreed to mitigation plan can not be developed. Note that stakeholders proposed revisions to these requirements, and the RC SDT subdivided the requirements to add more clarity.

July 30, 2008July 10December 30, 2009August 25, 2010January 18, 2011

Implementation Plan for IRO-014-2
Coordination Among Reliability Coordinators

<u>Already Approved Standard</u>	<u>Proposed Replacement Requirement(s)</u>
<u>IRO-016-1</u> <u>R2. The Reliability Coordinator shall document (via operator logs or other data sources) its actions taken for either the event or for the disagreement on the problem(s) or for both.</u>	<u>IRO-014-2</u> <u>Retire the requirement as it is a measure of Requirement R1.</u>
<u>Notes:</u>	

July 30, 2008 July 10 December 30, 2009 August 25, 2010 January 18, 2011

A. Introduction

1. **Title:** **Notifications and Information Exchange Between Reliability Coordinators**
2. **Number:** IRO-015-1
3. **Purpose:** To ensure that each Reliability Coordinator's operations are coordinated such that they will not have an Adverse Reliability Impact on other Reliability Coordinator Areas and to preserve the reliability benefits of interconnected operations.
4. **Applicability:**
 - 4.1. Reliability Coordinators.
5. **Effective Date:** ~~June 4, 2007~~ TBD

B. Requirements

- ~~**R1.** The Reliability Coordinator shall follow its Operating Procedures, Processes, or Plans for making notifications and exchanging reliability related information with other Reliability Coordinators. *[Violation Risk Factor: Medium]*~~
- ~~**R1.1.** The Reliability Coordinator shall make notifications to other Reliability Coordinators of conditions in its Reliability Coordinator Area that may impact other Reliability Coordinator Areas. *[Violation Risk Factor: Medium]*~~
- ~~**R2.** The Reliability Coordinator shall participate in agreed upon conference calls and other communication forums with adjacent Reliability Coordinators. *[Violation Risk Factor: Lower]*~~
- ~~**R2.1.** The frequency of these conference calls shall be agreed upon by all involved Reliability Coordinators and shall be at least weekly. *[Violation Risk Factor: Lower]*~~
- ~~**R3.** The Reliability Coordinator shall provide reliability related information as requested by other Reliability Coordinators. *[Violation Risk Factor: Medium]*~~

The RCSDT recommends retiring Standard IRO-015 and moving all requirements to IRO-014-2.

C. Measures

- M1.** The Reliability Coordinator shall have evidence (such as operator logs or other data sources) it has followed its Operating Procedures, Processes, or Plans for notifying other Reliability Coordinators of conditions in its Reliability Coordinator Area that may impact other Reliability Coordinator Areas.
- M2.** The Reliability Coordinator shall have evidence (such as operator logs or other data sources) that it participated in agreed upon (at least weekly) conference calls and other communication forums with adjacent Reliability Coordinators.
- M3.** The Reliability Coordinator shall have evidence that it provided requested reliability-related information to other Reliability Coordinators.

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Monitoring Responsibility

Regional Reliability Organization

1.2. Compliance Monitoring Period and Reset Time Frame

The Performance Reset Period shall be one calendar year.

1.3. Data Retention

The Reliability Coordinator shall keep auditable documentation for a rolling 12 months. The Compliance Monitor shall keep compliance data for a minimum of three years or until the Reliability Coordinator has achieved full compliance — whichever is longer.

1.4. Additional Compliance Information

The Reliability Coordinator shall demonstrate compliance through self-certification submitted to its Compliance Monitor annually. The Compliance Monitor shall also use a scheduled on-site review at least once every three years and investigations upon complaint. The Compliance Monitor shall conduct an investigation upon a complaint within 30 days of the alleged infraction's discovery date. The Compliance Monitor shall complete the investigation within 45 days after the start of the investigation. As part of an audit or an investigation, the Compliance Monitor shall interview other Reliability Coordinators within the Interconnection and verify that the Reliability Coordinator being audited or investigated has been making notifications and exchanging reliability-related information according to agreed Operating Procedures, Processes, or Plans.

The Reliability Coordinator shall have the following available for its Compliance Monitor to inspect during a scheduled, on-site review or within five days of a request as part of an investigation upon complaint:

1.4.1 Evidence it has participated in agreed-upon conference calls or other communications forums.

1.4.2 Operating logs or other data sources that document notifications made to other Reliability Coordinators.

2. Levels of Non-Compliance

2.1. Level 1: Did not participate in agreed upon (at least weekly) conference calls and other communication forums with adjacent Reliability Coordinators.

2.2. Level 2: Did not notify other Reliability Coordinators as specified in its Operating Procedures, Processes, or Plans for making notifications but no Adverse Reliability Impacts resulted from the incident.

2.3. Level 3: Did not provide requested reliability-related information to other Reliability Coordinators.

- 2.4. Level 4:** Did not notify other Reliability Coordinators as specified in its Operating Procedures, Processes, or Plans for making notifications and Adverse Reliability Impacts resulted from the incident.

E. Regional Differences

None identified.

F. Associated Documents

Version History

Version	Date	Action	Change Tracking
1	August 2, 2005	1. Changed incorrect use of certain hyphens (-) to “en dash (–).” 2. Hyphenated “30-day” and reliability-related when used as adjective. 3. Changed standard header to be consistent with standard “Title.” 4. Added “periods” to items where appropriate. 5. Initial capped heading “Definitions of Terms Used in Standard.” 6. Changed “Timeframe” to “Time Frame” in item D, 1.2. 7. Lower cased all words that are not “defined” terms — drafting team, and self-certification. 8. Changed apostrophes to “smart” symbols. 9. Added comma in all word strings “Procedures, Processes, or Plans,” etc. 10. Added hyphens to “Reliability Coordinator-to-Reliability Coordinator” where used as adjective. 11. Removed comma in item 2.1.2. 12. Removed extra spaces between words where appropriate.	January 20, 2006
1	February 7, 2006	Approved by BOT	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New
<u>2</u>	<u>August 16, 2007</u>	<u>Revised per SAR for Project 2006-6</u>	<u>Revised</u>

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Prerequisite Approvals

- None required

Conforming Changes to Requirements in Already Approved Standards

- IRO-014-2

Revision Summary

The RCSDT recommends retiring Standard IRO-015 and moving all requirements to IRO-014-2.

Revisions or Retirements to Already Approved Standards

The following tables identify the sections of approved standards that shall be retired or revised when this standard is implemented. If the drafting team is recommending the retirement or revision of a requirement, that text is blue.

Already Approved Standard	Proposed Replacement Requirement(s)

IRO-015-1 R1. The Reliability Coordinator shall follow its Operating Procedures, Processes, or Plans for making notifications and exchanging reliability-related information with other Reliability Coordinators. <i>[Violation Risk Factor: Medium]</i> R1.1. The Reliability Coordinator shall make notifications to other Reliability Coordinators of conditions in its Reliability Coordinator Area that may impact other Reliability Coordinator Areas. <i>[Violation Risk Factor: Medium]</i> R2. The Reliability Coordinator shall participate in agreed upon conference calls and other communication forums with adjacent Reliability Coordinators. <i>[Violation Risk Factor: Lower]</i> R2.1. The frequency of these conference calls shall be agreed upon by all involved Reliability Coordinators and shall be at least weekly. <i>[Violation Risk Factor: Lower]</i> R3. The Reliability Coordinator shall provide reliability-related information as requested by other Reliability Coordinators. <i>[Violation Risk Factor: Medium]</i> <i>The RCSDT proposes retiring R3 (as shown above) as it is redundant with proposed R5 in the right column.</i>	The RCSDT recommends retiring Standard IRO-015 and moving all requirements to IRO-014-2 and revising as shown. Proposed IRO-014-2, R5-6: R5. The Reliability Coordinator shall make notifications and exchange reliability-related information with impacted Reliability Coordinators using its predefined shall follow its Operating Procedures, Processes, or Plans for conditions that may impact other Reliability Coordinator Areas or other means to accomplish the notifications and exchange of reliability-related information.—~~for making notifications and exchanging reliability-related information with impacted other Reliability Coordinators.~~ <i>[Violation Risk Factor: Medium]</i><i>[Time Horizon: Real-time Operations and Operations Planning]</i> ~~R5.1 The Reliability Coordinator shall make notifications to impacted other Reliability Coordinators of conditions in its Reliability Coordinator Area that may impact other Reliability Coordinator Areas. <i>[Violation Risk Factor: Medium]</i>~~ R6. The Reliability Coordinator shall participate in agreed upon conference calls and other communication forums with ~~impacted adjacent~~ Reliability Coordinators. <i>[Violation Risk Factor: Lower]</i><i>[Time Horizon: Real-time Operations]</i> R6.1 The frequency of these conference calls shall be agreed upon by all involved Reliability Coordinators and shall be at least weekly. ~~<i>[Violation Risk Factor: Lower]</i>~~ ~~R7. The Reliability Coordinator shall provide reliability-related information as requested by other Reliability Coordinators. <i>[Violation Risk Factor: Medium]</i>~~ <i>The RCSDT proposes retiring R7 as it is redundant with R5.</i>
Notes:	

Implementation Plan for Reliability Coordination Standards

Functions that Must Comply with the Requirements in the Standards

Standard	Functions that Must Comply With the Requirements						
	Reliability Coordinat or	Balancin g Authority	Interchang e Authority	Transmissio n Operator	Transmissio n Owner	Generator Owner	Ge Op
IRO-015	X						

Effective Dates

TBD

A. Introduction

1. **Title:** Coordination of Real-time Activities between Reliability Coordinators
2. **Number:** IRO-016-1
3. **Purpose:** To ensure that each Reliability Coordinator's operations are coordinated such that they will not have an Adverse Reliability Impact on other Reliability Coordinator Areas and to preserve the reliability benefits of interconnected operations.
4. **Applicability:**
 - 4.1. Reliability Coordinators.
5. **Effective Date:** TBD

B. Requirements

R1. ~~The Reliability Coordinator that identifies a potential, expected, or actual problem that requires the actions of one or more other Reliability Coordinators shall contact the other Reliability Coordinator(s) to confirm that there is a problem and then discuss options and decide upon a solution to prevent or resolve the identified problem. [Violation Risk Factor: Medium]~~

The RCSDT proposes retiring this standard and having the requirements of R1 and its subrequirements moved into IRO-014 as R8 and R9.

R1.1. ~~If the involved Reliability Coordinators agree on the problem and the actions to take to prevent or mitigate the system condition, each involved Reliability Coordinator shall implement the agreed-upon solution, and notify the involved Reliability Coordinators of the action(s) taken. [Violation Risk Factor: Medium]~~

R1.2. ~~If the involved Reliability Coordinators cannot agree on the problem(s) each Reliability Coordinator shall re-evaluate the causes of the disagreement (bad data, status, study results, tools, etc.). [Violation Risk Factor: Medium]~~

R1.2.1. ~~If time permits, this re-evaluation shall be done before taking corrective actions. [Violation Risk Factor: Medium]~~

R1.2.2. ~~If time does not permit, then each Reliability Coordinator shall operate as though the problem(s) exist(s) until the conflicting system status is resolved. [Violation Risk Factor: Medium]~~

R1.3. ~~If the involved Reliability Coordinators cannot agree on the solution, the more conservative solution shall be implemented. [Violation Risk Factor: Medium]~~

R2. ~~The Reliability Coordinator shall document (via operator logs or other data sources) its actions taken for either the event or for the disagreement on the problem(s) or for both. [Violation Risk Factor: Lower]~~

Requirement 2 should be retired because it is a measure of performance of R1.

C. Measures

- M1.** The measure will be retired along with the requirement. ~~For each event that requires Reliability Coordinator-to-Reliability Coordinator coordination, each involved Reliability Coordinator shall have evidence (operator logs or other data sources) of the actions taken for either the event or for the disagreement on the problem or for both.~~

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Monitoring Responsibility

Regional Reliability Organization

1.2. Compliance Monitoring Period and Reset Time Frame

The performance reset period shall be one calendar year.

1.3. Data Retention

The Reliability Coordinator shall keep auditable evidence for a rolling 12 months. In addition, entities found non-compliant shall keep information related to the non-compliance until it has been found compliant. The Compliance Monitor shall keep compliance data for a minimum of three years or until the Reliability Coordinator has achieved full compliance, whichever is longer.

1.4. Additional Compliance Information

The Reliability Coordinator shall demonstrate compliance through self-certification submitted to its Compliance Monitor annually. The Compliance Monitor shall use a scheduled on-site review at least once every three years. The Compliance Monitor shall conduct an investigation upon a complaint that is received within 30 days of an alleged infraction's discovery date. The Compliance Monitor shall complete the investigation and report back to all involved Reliability Coordinators (the Reliability Coordinator that complained as well as the Reliability Coordinator that was investigated) within 45 days after the start of the investigation. As part of an audit or investigation, the Compliance Monitor shall interview other Reliability Coordinators within the Interconnection and verify that the Reliability Coordinator being audited or investigated has been coordinating actions to prevent or resolve potential, expected, or actual problems that adversely impact the Interconnection.

The Reliability Coordinator shall have the following available for its Compliance Monitor to inspect during a scheduled, on-site review or within five working days of a request as part of an investigation upon complaint:

- 1.4.1** Evidence (operator log or other data source) to show coordination with other Reliability Coordinators.

2. Levels of Non-Compliance

- 2.1. Level 1:** For potential, actual or expected events which required Reliability Coordinator-to-Reliability Coordinator coordination, the Reliability Coordinator did coordinate, but did not have evidence that it coordinated with other Reliability Coordinators.

2.2. Level 2: Not applicable.

2.3. Level 3: Not applicable.

2.4. Level 4: For potential, actual or expected events which required Reliability Coordinator-to-Reliability Coordinator coordination, the Reliability Coordinator did not coordinate with other Reliability Coordinators.

E. Regional Differences

None identified.

F. Associated Documents

Version	Date	Action	Change Tracking
1	August 10, 2005	1. Changed incorrect use of certain hyphens (-) to “en dash (–).” 2. Hyphenated “30-day” when used as adjective. 3. Changed standard header to be consistent with standard “Title.” 4. Initial capped heading “Definitions of Terms Used in Standard.” 5. Added “periods” to items where appropriate. 6. Changed “Timeframe” to “Time Frame” in item D, 1.2. 7. Lower cased all words that are not “defined” terms — drafting team, self-certification. 8. Changed apostrophes to “smart” symbols. 9. Added comma in all word strings “Procedures, Processes, or Plans,” etc. 10. Added hyphens to “Reliability Coordinator-to-Reliability Coordinator” where used as adjective. 11. Removed comma in item 2.1.2. 12. Removed extra spaces between words where appropriate.	January 20, 2006
1	February 7, 2006	Approved by BOT	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New
2	April 22, 2008	Revised per SAR for project 2006-6	Retired

Implementation Plan Contents:

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Prerequisite Approvals

- None required

Conforming Changes to Requirements in Already Approved Standards

- IRO-014-2

Revision Summary

The RCSDT recommends retiring this Standard. The requirements listed in R1 and its sub-requirements were incorporated into IRO-014-2 as new requirements. The RCSDT recommends retiring R2 because it is a measure of performance of R1.

Revisions or Retirements to Already Approved Standards

The following tables identify the sections of approved standards that shall be retired or revised when this standard is implemented. If the drafting team is recommending the retirement or revision of a requirement, that text is blue.

Already Approved Standard	Proposed Replacement Requirement(s)

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-016-1, R1 R1. The Reliability Coordinator that identifies a potential, expected, or actual problem that requires the actions of one or more other Reliability Coordinators shall contact the other Reliability Coordinator(s) to confirm that there is a problem and then discuss options and decide upon a solution to prevent or resolve the identified problem. <i>[Violation Risk Factor: Medium]</i> R1.1 If the involved Reliability Coordinators agree on the problem and the actions to take to prevent or mitigate the system condition, each involved Reliability Coordinator shall implement the agreed-upon solution, and notify the involved Reliability Coordinators of the action(s) taken. <i>[Violation Risk Factor: Medium]</i> R1.2 If the involved Reliability Coordinators cannot agree on the problem(s) each Reliability Coordinator shall re-evaluate the causes of the disagreement (bad data, status, study results, tools, etc.). <i>[Violation Risk Factor: Medium]</i> R1.2.1 If time permits, this re-evaluation shall be done before taking corrective actions. <i>[Violation Risk Factor: Medium]</i> R1.2.2 If time does not permit, then each Reliability Coordinator shall operate as though the problem(s) exist(s) until the conflicting system status is resolved. <i>[Violation Risk Factor: Medium]</i> R1.3 If the involved Reliability Coordinators cannot agree on the solution, the more conservative solution shall be implemented. <i>[Violation Risk Factor: Medium]</i>	IRO-014-2 <i>Proposed R8 and R9 are revised versions of IRO-016-1, R1 and its subrequirements which were moved to this standard. The RCSDT removed the wording relating to the “most conservative solution” because it can not be measured. We are proposing to use the mitigation plan of the RC who is experiencing the issue in cases where an agreed to mitigation plan can not be developed.</i> R8. When an expected or actual reliability issue is detected, the Reliability Coordinator shall confirm the existence of the issue with the other Reliability Coordinators that are involved. In the event that the issue cannot be confirmed, each RC shall operate as though the problem exists. <i>[Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i> R9. When an expected or actual reliability issue exists and the affected Reliability Coordinators can not agree on a mitigation plan, all affected Reliability Coordinators shall implement the mitigation plan developed by the Reliability Coordinator who has the reliability issue. <i>[Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i>
Notes:	

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-016-1 R2. The Reliability Coordinator shall document (via operator logs or other data sources) its actions taken for either the event or for the disagreement on the problem(s) or for both. <i>[Violation Risk Factor: Lower]</i>	The RCSDT recommends retiring R2 because it is a measure of performance of R1.
Notes: ▪	

Implementation Plan for Reliability Coordination Standards

Standard	Functions that Must Comply With the Requirements							
	Reliability Coordinator	Balancing Authority	Interchange Authority	Transmission Operator	Transmission Owner	Generator Owner	Generator Operator	Load Serving Entity
IRO-016								

Effective Dates

TBD

Comment Form for Reliability Coordination – Project 2006-06

Please **DO NOT** use this form. Please use the [electronic comment form](#) to submit comments on the proposed revisions to COM-001-2, IRO-001-2, IRO-002-2 and IRO-005-4. Comments must be submitted by **March 7, 2011**. If you have questions please contact Stephen Crutchfield at stephen.crutchfield@nerc.net or by telephone at 609-651-9455.

Individual Commenter Information (Complete this page for comments from one organization or individual.)		
Name:		
Organization:		
Telephone:		
E-mail:		
NERC Region (check all Regions in which your company operates)		Registered Ballot Body Segment (check all industry segments in which your company is registered)
☐ ERCOT	☐	1 — Transmission Owners
☐ FRCC	☐	2 — RTOs and ISOs
☐ MRO	☐	3 — Load-serving Entities
☐ NPCC	☐	4 — Transmission-dependent Utilities
☐ RFC	☐	5 — Electric Generators
☐ SERC	☐	6 — Electricity Brokers, Aggregators, and Marketers
☐ SPP	☐	7 — Large Electricity End Users
☐ WECC	☐	8 — Small Electricity End Users
☐ NA – Not Applicable	☐	9 — Federal, State, Provincial Regulatory or other Government Entities
	☐	10 — Regional Reliability Organizations and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

[illegible]

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

Based on comments received on the last posting, the RCSDT has revised the proposed definitions in COM-001-2 as:

Interpersonal Communication: Any medium~~thod~~ that allows two or more individuals to interact, consult, or exchange information.

Alternative Interpersonal Communication: Any ~~method~~ Interpersonal Communication that is able to serve as a substitute for, ~~and is redundant to normal Interpersonal Communication~~ and does not utilize the same infrastructure (medium) as, ~~normal~~ Interpersonal Communications used for day-to-day operation.

The RCSDT believes that these are better, more concise definitions.

The RCSDT reviewed the Interpersonal Communications capability requirements (COM-001) and determined that there were implicit requirements within the requirements. For example, the requirement to identify an Alternative Interpersonal Communications capability implied that an entity had an interpersonal Communication capability. Rather than leave these requirements implicit, the RCSDT explicitly delineated, by entity, the requirements for Interpersonal Communications capability and Alternative Interpersonal Communications capability. These explicit requirements are R1 through R8.

Minor clarifying revisions were made to R2 and R3 of COM-002-2 and the words “actual or expected” were removed from the proposed definition of Adverse Reliability Impacts. The RCSDT believes that these conforming revisions indicate that consensus has been achieved with respect to COM-002-2.

The RCSDT also is seeking stakeholder input with regard to a FERC Order 693 directive to consider Xcel’s comments relating to COM-002. The comment is as follows:

Paragraph 523: “NERC should consider Xcel’s suggestion that the entity taking operating actions should not be held responsible for the delays caused by the reliability coordinator’s assessment and approval. We note that the operating entity has the authority to take emergency actions to protect its system that may circumvent or preempt the reliability coordinator’s approval process under TOP-001-1 Requirement R3 in cases of personnel safety, potential equipment failure or environmental needs.”

The RCSDT agrees with FERC that an entity has the right and obligation to take action to prevent or mitigate emergencies, etc. Footnote 226 of Order 693 discusses TOP-001 requirements:

Footnote 226: TOP-001-1, R1 states in part “Each transmission operator shall have the responsibility and clear decision-making authority to take whatever actions are needed to ensure the reliability of its area” and R2 states in part “Each transmission operator shall take immediate actions to alleviate operating emergencies”.

The RCSDT believes that these requirements obviate the need to develop additional requirements to address Xcel’s comment.

The RCSDT also met with FERC staff regarding the requirements contained in the proposed IRO-001. A suggestion was made to move some of the proposed requirements to IRO-002

and IRO-005, as these requirements did not meet the purpose of the proposed IRO-001 standard. The proposed IRO-001 standard is the “umbrella” standard that established Reliability Coordinators and their authority. The requirements that were subsequently re-inserted into IRO-002 and IRO-005 pertained to analysis tool outages and Reliability Coordinator notifications respectively.

The drafting team also re-introduced into IRO-001 the requirement for regions to establish Reliability Coordinators. The requirement is now applicable to Regional Entities and calls for the RE to “ensure at least one or more Reliability Coordinators is certified to continuously assess transmission reliability and coordinate emergency operations among the operating entities within the region and across the regional boundaries”. This requirement was originally proposed to be retired, however, after discussion with NERC legal staff the RCSDT proposed to retain the requirement and revise it as shown in the draft.

You do not have to answer all questions. Enter All Comments in Simple Text Format.

Insert a “check” mark in the appropriate boxes by double-clicking the gray areas.

- 1. Do you agree with COM-001 requirements for Interpersonal Communications capability and Alternative Interpersonal Communications capability (R1-R8)? If not, please explain in the comment area below.**

☐ Yes

☐ No

Comments:

- 2. The RCSDT believes that the requirements of TOP-001-1 obviate the need to develop additional requirements to address Xcel’s comment. Do you agree? If not, please explain in the comment area below.**

☐ Yes

☐ No

Comments:

- 3. Do you agree with the revision to IRO-001, R1 for certifying Reliability Coordinators? If not, please explain in the comment area below.**

☐ Yes

☐ No

Comments:

- 4. Do you agree with moving two requirements from IRO-001 back to IRO-002 relating to Analysis Tool outages? If not, please explain in the comment area below.**

☐ Yes

☐ No

Comments:

- 5. Do you agree with moving two requirements from IRO-001 back to IRO-005 relating to Reliability Coordinator notifications? If not, please explain in the comment area below.**

☐ Yes

☐ No

Comments:

- 6. Do you have any other comment, not expressed in questions above, for the RC SDT?**

Comments:



NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

Standards Announcement

Ballot Window Open February 25 – March 7, 2011

Project 2006-06 – Reliability Coordination

Available Friday, February 25th at: <https://standards.nerc.net/CurrentBallots.aspx>

Initial Ballot Window Open February 25th through 8 p.m. on March 7, 2011

An initial ballot for the following standards and associated implementation plans will be **open from 8:00 a.m. on Friday, February 25 through 8:00 p.m. on Monday, March 7, 2011.**

- COM-001-2 – Communications
- COM-002-3 – Communication and Coordination
- IRO-001-2 – Reliability Coordination – Responsibilities and Authorities
- IRO-002-2 – Reliability Coordination – Analysis Tools
- IRO-005-4 – Reliability Coordination – Current Day Operations
- IRO-014-2 – Procedures, Processes, or Plans to Support Coordination Between Reliability Coordinators
- IRO-015-1 – Notifications and Information Exchange Between Reliability Coordinators
- IRO-016-1 – Coordination of Real-time Activities Between Reliability Coordinators

During the initial ballot window, members of the ballot pool associated with this project may log in and submit their votes from the following page: <https://standards.nerc.net/CurrentBallots.aspx>

Background

The Reliability Coordination Standards Drafting Team was tasked with 1) ensuring that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique, and enforceable; 2) ensuring that this set of requirements is sufficient to maintain reliability of the Bulk Electric System; and 3) revising the group of standards based on FERC Order 693.

During the course of this project, the Reliability Coordination Standards Drafting Team incorporated changes due to the work of the IROL Standards Drafting Team. Two standards from the original Standards Authorization Request (PER-004 and PRC-001) were moved to other projects due to scope overlap. In addition, the scope of Project 2006-06 was expanded to incorporate directives from FERC Order 693 associated with standards IRO-003-2.

For more information review the project Web page:

http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html



Next Steps

The comments submitted during the formal comment period and the ballot results will be posted.

Standards Process

The [Standard Processes Manual](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate.

*For more information or assistance, please contact Monica Benson,
Standards Process Administrator, at monica.benson@nerc.net or at 609.452.8060.*

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NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

Standards Announcement

Ballot Pool Open January 25–February 25, 2011

Formal Comment Period Extended to March 7, 2011

Project 2006-06 – Reliability Coordination

Now available at: <https://standards.nerc.net/BallotPool.aspx>

Ballot Pool Open through 8 a.m. on February 25, 2011

A ballot pool is being formed during the next 30 days. The 45-day formal comment period is open from January 18 – March 7, 2011 with an initial ballot being conducted during the last 10 days of the comment period. Please review the Standards Under Development page for updated dates at:

http://www.nerc.com/filez/standards/Reliability_Standards_Under_Development.html

Registered Ballot Body members may join the ballot pool to be eligible to vote in the upcoming ballot at the following page: <https://standards.nerc.net/BallotPool.aspx>

During the pre-ballot window, members of the ballot pool may communicate with one another by using their “ballot pool list server.” (Once the balloting begins, ballot pool members are prohibited from using the ballot pool list servers.) The list server for this ballot pool is: bp-2006-06_RC_in@nerc.com

Formal 45-day Comment Period Extended through 8 p.m. Eastern on Monday, March 7, 2011 and Additional Documents Posted

Last week the Reliability Coordination drafting team posted its Consideration of Comments and revised drafts of the following standards to incorporate input from comments submitted during the January 4–February 18, 2010 comment period and comments provided by a Quality Review team:

- COM-001-2 – Communications
- COM-002-3 – Communication and Coordination
- IRO-001-2 – Reliability Coordination – Responsibilities and Authorities
- IRO-005-4 – Reliability Coordination – Current Day Operations
- IRO-014-2 – Procedures, Processes, or Plans to Support Coordination Between Reliability Coordinators

Three additional standards were inadvertently omitted from last week’s posting and have now been posted:

- IRO-002-2 – Reliability Coordination – Analysis Tools
- IRO-015-1 – Notifications and Information Exchange Between Reliability Coordinators
- IRO-016-1 – Coordination of Real-time Activities Between Reliability Coordinators

The Standards Committee has authorized posting the standards and associated implementation plan for a 45-day comment period, with a parallel ballot during the last 10 days of the comment period. **To provide sufficient time for review of the newly posted standards, the comment period has been extended through 8 p.m. Eastern on Monday, March 7, 2011.**

Instructions

Please use this [electronic form](#) to submit comments. For convenience, a Word version of the comment form has been posted on the project page.

Background

The Reliability Coordination Standards Drafting Team was tasked with 1) ensuring that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique, and enforceable; 2) ensuring that this set of requirements is sufficient to maintain reliability of the Bulk Electric System; and 3) revising the group of standards based on FERC Order 693.

During the course of this project, the Reliability Coordination Standards Drafting Team incorporated changes due to the work of the IROL Standards Drafting Team. Two standards from the original Standards Authorization Request (PER-004 and PRC-001) were moved to other projects due to scope overlap. In addition, the scope of Project 2006-06 was expanded to incorporate directives from FERC Order 693 associated with standards IRO-003-2.

Next Steps

An initial ballot will be conducted during the last 10 days of the comment period. After the ballot, the drafting team will consider all comments (those submitted with a comment form and those submitted with a ballot) and determine whether further revisions to the standards and supporting documents are needed.

Standards Process

The [Standard Processes Manual](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate.

*For more information or assistance, please contact Monica Benson,
Standards Process Administrator, at monica.benson@nerc.net or at 609.452.8060.*

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Standards Announcement

Ballot Pool Open January 25–February 25, 2011

Formal Comment Period Extended to March 7, 2011

Project 2006-06 – Reliability Coordination

Now available at: <https://standards.nerc.net/BallotPool.aspx>

Ballot Pool Open through 8 a.m. on February 25, 2011

A ballot pool is being formed during the next 30 days. The 45-day formal comment period is open from January 18 – March 7, 2011 with an initial ballot being conducted during the last 10 days of the comment period. Please review the Standards Under Development page for updated dates at:

http://www.nerc.com/filez/standards/Reliability_Standards_Under_Development.html

Registered Ballot Body members may join the ballot pool to be eligible to vote in the upcoming ballot at the following page: <https://standards.nerc.net/BallotPool.aspx>

During the pre-ballot window, members of the ballot pool may communicate with one another by using their “ballot pool list server.” (Once the balloting begins, ballot pool members are prohibited from using the ballot pool list servers.) The list server for this ballot pool is: bp-2006-06_RC_in@nerc.com

Formal 45-day Comment Period Extended through 8 p.m. Eastern on Monday, March 7, 2011 and Additional Documents Posted

Last week the Reliability Coordination drafting team posted its Consideration of Comments and revised drafts of the following standards to incorporate input from comments submitted during the January 4-February 18, 2010 comment period and comments provided by a Quality Review team:

- COM-001-2 – Communications
- COM-002-3 – Communication and Coordination
- IRO-001-2 – Reliability Coordination – Responsibilities and Authorities
- IRO-005-4 – Reliability Coordination – Current Day Operations
- IRO-014-2 – Procedures, Processes, or Plans to Support Coordination Between Reliability Coordinators

Three additional standards were inadvertently omitted from last week’s posting and have now been posted:

- IRO-002-2 – Reliability Coordination – Analysis Tools
- IRO-015-1 – Notifications and Information Exchange Between Reliability Coordinators
- IRO-016-1 – Coordination of Real-time Activities Between Reliability Coordinators

The Standards Committee has authorized posting the standards and associated implementation plan for a 45-day comment period, with a parallel ballot during the last 10 days of the comment period. **To provide sufficient time for review of the newly posted standards, the comment period has been extended through 8 p.m. Eastern on Monday, March 7, 2011.**

Instructions

Please use this [electronic form](#) to submit comments. For convenience, a Word version of the comment form has been posted on the project page.

Background

The Reliability Coordination Standards Drafting Team was tasked with 1) ensuring that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique, and enforceable; 2) ensuring that this set of requirements is sufficient to maintain reliability of the Bulk Electric System; and 3) revising the group of standards based on FERC Order 693.

During the course of this project, the Reliability Coordination Standards Drafting Team incorporated changes due to the work of the IROL Standards Drafting Team. Two standards from the original Standards Authorization Request (PER-004 and PRC-001) were moved to other projects due to scope overlap. In addition, the scope of Project 2006-06 was expanded to incorporate directives from FERC Order 693 associated with standards IRO-003-2.

Next Steps

An initial ballot will be conducted during the last 10 days of the comment period. After the ballot, the drafting team will consider all comments (those submitted with a comment form and those submitted with a ballot) and determine whether further revisions to the standards and supporting documents are needed.

Standards Process

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NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

Standards Announcement

Formal Comment Period Open

Project 2006-06 – Reliability Coordination

January 18–March 4, 2011

Now available at: http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html

The Reliability Coordination drafting team has posted its Consideration of Comments and revised drafts of the following standards to incorporate input from comments submitted during the January 4-February 18, 2010 comment period and comments provided by a Quality Review team:

- COM-001-2 – Communications
- COM-002-3 – Communication and Coordination
- IRO-001-2 – Reliability Coordination - Responsibilities and Authorities
- IRO-005-4 – Reliability Coordination – Current Day Operations
- IRO-014-2 – Procedures, Processes, or Plans to Support Coordination Between Reliability Coordinators

The Standards Committee has authorized posting the standards and associated implementation plan for a 45-day comment period, with a parallel ballot during the last 10 days of the comment period.

Instructions

Please use this [electronic form](#) to submit comments. For convenience, a Word version of the comment form has been posted on the project page.

Background

The Reliability Coordination Standards Drafting Team was tasked with 1) ensuring that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique, and enforceable; 2) ensuring that this set of requirements is sufficient to maintain reliability of the Bulk Electric System; and 3) revising the group of standards based on FERC Order 693.

During the course of this project, the Reliability Coordination Standards Drafting Team incorporated changes due to the work of the IROL Standards Drafting Team. Two standards from the original Standards Authorization Request (PER-004 and PRC-001) were moved to other projects due to scope overlap. In addition, the scope of Project 2006-06 was expanded to incorporate directives from FERC Order 693 associated with standards IRO-003-2.

Next Steps

An initial ballot will be conducted during the last 10 days of the comment period. After the ballot, the drafting



team will consider all comments (those submitted with a comment form and those submitted with a ballot) and determine whether further revisions to the standards and supporting documents are needed.

Standards Process

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NORTH AMERICAN ELECTRIC
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Standards Announcement

Project 2006-06 – Reliability Coordination Initial Ballot Results

Now available at: <https://standards.nerc.net/Ballots.aspx>

An initial ballot of the following standards and their associated implementation plans ended on March 7, 2011:

- COM-001-2 – Communications
- COM-002-3 – Communication and Coordination
- IRO-001-2 – Reliability Coordination – Responsibilities and Authorities
- IRO-002-2 – Reliability Coordination – Analysis Tools
- IRO-005-4 – Reliability Coordination – Current Day Operations
- IRO-014-2 – Coordination Among Reliability Coordinators
- IRO-015-1 – Notifications and Information Exchange Between Reliability Coordinators
- IRO-016-1 – Coordination of Real-time Activities Between Reliability Coordinators

Voting statistics are listed below, and the [Ballot Results](#) Web page provides a link to the detailed results:

Quorum: 87.10%

Approval: 49.54%

Background:

The Reliability Coordination Standards Drafting Team was tasked with 1) ensuring that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique, and enforceable; 2) ensuring that this set of requirements is sufficient to maintain reliability of the Bulk Electric System; and 3) revising the group of standards based on FERC Order 693.

During the course of this project, the Reliability Coordination Standards Drafting Team incorporated changes due to the work of the IROL Standards Drafting Team. Two standards from the original Standards Authorization Request (PER-004 and PRC-001) were moved to other projects due to scope overlap. In addition, the scope of Project 2006-06 was expanded to incorporate directives from FERC Order 693 associated with standards IRO-003-2.

For more information review the project Web page:

http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html



Next Steps

The drafting team will consider all comments (those submitted with a comment form and those submitted with a ballot. Once the team has prepared its response to comments and made any changes to the standards and supporting documents, they will submit the revised documents for quality review prior to a successive ballot. Since a non-binding poll of VRFs and VSLs was not conducted concurrent with the initial ballot that concluded on March 7, 2011, a non-binding poll will be conducted in conjunction with the successive ballot.

Ballot Criteria

Approval requires both (1) a quorum, which is established by at least 75% of the members of the ballot pool submitting either an affirmative vote, a negative vote, or an abstention, and (2) a two-thirds majority of the weighted segment votes cast must be affirmative; the number of votes cast is the sum of affirmative and negative votes, excluding abstentions and non-responses.

Standards Process

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Ballot Results	
Ballot Name:	Project 2006-06: Reliability Coordination_in
Ballot Period:	2/25/2011 - 3/7/2011
Ballot Type:	Initial
Total # Votes:	297
Total Ballot Pool:	341
Quorum:	87.10 % The Quorum has been reached
Weighted Segment Vote:	49.54 %
Ballot Results:	The standard will proceed to recirculation ballot.

Summary of Ballot Results								
Segment	Ballot Pool	Segment Weight	Affirmative		Negative		Abstain	No Vote
			# Votes	Fraction	# Votes	Fraction	# Votes	
1 - Segment 1.	88	1	34	0.586	24	0.414	13	17
2 - Segment 2.	11	0.7	3	0.3	4	0.4	3	1
3 - Segment 3.	85	1	35	0.493	36	0.507	7	7
4 - Segment 4.	24	1	9	0.429	12	0.571	2	1
5 - Segment 5.	69	1	33	0.611	21	0.389	8	7
6 - Segment 6.	44	1	17	0.5	17	0.5	5	5
7 - Segment 7.	0	0	0	0	0	0	0	0
8 - Segment 8.	8	0.3	1	0.1	2	0.2	2	3
9 - Segment 9.	4	0.1	1	0.1	0	0	1	2
10 - Segment 10.	8	0.6	2	0.2	4	0.4	1	1
Totals	341	6.7	135	3.319	120	3.381	42	44

Individual Ballot Pool Results				
Segment	Organization	Member	Ballot	Comments
1	Allegheny Power	Rodney Phillips	Affirmative	
1	Ameren Services	Kirit S. Shah	Negative	View
1	American Electric Power	Paul B. Johnson		
1	American Transmission Company, LLC	Andrew Z Pusztai	Affirmative	
1	Arizona Public Service Co.	Robert D Smith	Affirmative	
1	Avista Corp.	Scott Kinney		
1	Baltimore Gas & Electric Company	Gregory S Miller	Affirmative	View
1	BC Hydro and Power Authority	Patricia Robertson	Affirmative	

1	Beaches Energy Services	Joseph S. Stonecipher	Negative	View
1	Bonneville Power Administration	Donald S. Watkins	Affirmative	
1	Central Maine Power Company	Kevin L. Howes	Abstain	
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G. Choi	Affirmative	
1	City of Vero Beach	Randall McCamish	Negative	View
1	City Water, Light & Power of Springfield	Shaun Anders	Negative	View
1	Clark Public Utilities	Jack Stamper	Affirmative	
1	Cleco Power LLC	Danny McDaniel		
1	Colorado Springs Utilities	Paul Morland	Abstain	
1	Consolidated Edison Co. of New York	Christopher L. de Graffenried	Abstain	View
1	Dayton Power & Light Co.	Hertzel Shamash	Affirmative	
1	Dominion Virginia Power	Michael S. Crowley	Abstain	
1	Duke Energy Carolina	Douglas E. Hils		
1	East Kentucky Power Coop.	George S. Carruba	Negative	View
1	Empire District Electric Co.	Ralph Frederick Meyer	Affirmative	
1	Entergy Corporation	George R. Bartlett		
1	FirstEnergy Energy Delivery	Robert Martinko	Affirmative	View
1	Florida Keys Electric Cooperative Assoc.	Dennis Minton	Affirmative	
1	Great River Energy	Gordon Pietsch	Negative	View
1	Hoosier Energy Rural Electric Cooperative, Inc.	Robert Solomon	Affirmative	
1	Hydro One Networks, Inc.	Ajay Garg	Affirmative	
1	Hydro-Quebec TransEnergie	Bernard Pelletier		
1	Idaho Power Company	Ronald D. Schellberg	Affirmative	
1	International Transmission Company Holdings Corp	Michael Moltane	Negative	View
1	Kansas City Power & Light Co.	Michael Gammon		
1	Keys Energy Services	Stan T. Rzaad	Negative	
1	Lake Worth Utilities	Walt Gill	Negative	
1	Lakeland Electric	Larry E. Watt	Affirmative	
1	Lee County Electric Cooperative	John W. Delucca	Abstain	
1	Long Island Power Authority	Robert Ganley	Negative	
1	Manitoba Hydro	Joe D. Petaski	Negative	View
1	MEAG Power	Danny Dees	Abstain	
1	MidAmerican Energy Co.	Terry Harbour	Affirmative	
1	Minnkota Power Coop. Inc.	Richard Burt	Negative	View
1	National Grid	Saurabh Saksena		
1	Nebraska Public Power District	Richard L. Koch	Abstain	
1	New Brunswick Power Transmission Corporation	Randy MacDonald	Abstain	
1	New York Power Authority	Arnold J. Schuff		
1	Northeast Utilities	David H. Boguslawski	Affirmative	
1	Northern Indiana Public Service Co.	Kevin M. Largura	Negative	
1	NorthWestern Energy	John Canavan	Abstain	
1	Oklahoma Gas and Electric Co.	Marvin E. VanBebber	Abstain	
1	Omaha Public Power District	Douglas G. Peterchuck	Affirmative	
1	Oncor Electric Delivery	Michael T. Quinn	Abstain	
1	Orlando Utilities Commission	Brad Chase		
1	Otter Tail Power Company	Daryl Hanson		
1	PacifiCorp	Colt Norrish	Affirmative	
1	PECO Energy	Ronald Schloendorn	Negative	
1	Platte River Power Authority	John C. Collins	Affirmative	
1	Portland General Electric Co.	Frank F. Afranji	Affirmative	
1	Potomac Electric Power Co.	David Thorne	Affirmative	
1	PowerSouth Energy Cooperative	Larry D. Avery	Negative	
1	PPL Electric Utilities Corp.	Brenda L. Truhe	Negative	View
1	Public Service Company of New Mexico	Laurie Williams		
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Negative	View
1	Public Utility District No. 1 of Okanogan County	Dale Dunckel	Abstain	
1	Puget Sound Energy, Inc.	Catherine Koch		
1	Rochester Gas and Electric Corp.	John C. Allen	Abstain	
1	Sacramento Municipal Utility District	Tim Kelley	Affirmative	
1	Salt River Project	Robert Kondziolka	Affirmative	
1	Santee Cooper	Terry L. Blackwell	Affirmative	
1	SCE&G	Henry Delk, Jr.		
1	Seattle City Light	Pawel Krupa	Affirmative	

1	Sierra Pacific Power Co.	Rich Salgo	Affirmative	
1	South Texas Electric Cooperative	Richard McLeon	Affirmative	
1	Southern California Edison Co.	Dana Cabbell		
1	Southern Company Services, Inc.	Robert A Schaffeld	Affirmative	View
1	Southern Illinois Power Coop.	William G. Hutchison	Negative	
1	Southwest Transmission Cooperative, Inc.	James L. Jones	Affirmative	
1	Southwestern Power Administration	Gary W Cox	Affirmative	
1	Sunflower Electric Power Corporation	Noman Lee Williams		
1	Tampa Electric Co.	Beth Young	Negative	
1	Tennessee Valley Authority	Larry Akens	Negative	
1	Tri-State G & T Association, Inc.	Tracy Sliman	Affirmative	
1	Tucson Electric Power Co.	John Tolo		
1	United Illuminating Co.	Jonathan Appelbaum	Negative	View
1	Westar Energy	Allen Klassen	Negative	View
1	Western Area Power Administration	Brandy A Dunn	Affirmative	
1	Western Farmers Electric Coop.	Forrest Brock	Negative	View
1	Xcel Energy, Inc.	Gregory L Pieper	Negative	
2	Alberta Electric System Operator	Mark B Thompson	Affirmative	
2	BC Hydro	Venkataramakrishnan Vinnakota	Affirmative	
2	California ISO	Gregory Van Pelt	Abstain	View
2	Electric Reliability Council of Texas, Inc.	Chuck B Manning	Negative	View
2	Independent Electricity System Operator	Kim Warren	Negative	View
2	ISO New England, Inc.	Kathleen Goodman	Negative	View
2	Midwest ISO, Inc.	Jason L Marshall	Negative	View
2	New Brunswick System Operator	Alden Briggs	Abstain	
2	New York Independent System Operator	Gregory Campoli	Abstain	View
2	PJM Interconnection, L.L.C.	Tom Bowe	Affirmative	
2	Southwest Power Pool	Charles H Yeung		
3	Alabama Power Company	Richard J. Mandes	Affirmative	View
3	Allegheny Power	Bob Reeping		
3	Anaheim Public Utilities Dept.	Kelly Nguyen	Abstain	
3	APS	Steven Norris	Affirmative	
3	Atlantic City Electric Company	James V. Petrella	Affirmative	
3	BC Hydro and Power Authority	Pat G. Harrington	Affirmative	
3	Blachly-Lane Electric Co-op	Bud Tracy	Negative	View
3	Bonneville Power Administration	Rebecca Berdahl	Affirmative	
3	Central Electric Cooperative, Inc. (Redmond, Oregon)	Dave Markham	Negative	View
3	Central Lincoln PUD	Steve Alexanderson	Negative	View
3	City of Bartow, Florida	Matt Culverhouse		
3	City of Clewiston	Lynne Mila	Negative	
3	City of Farmington	Linda R. Jacobson	Abstain	
3	City of Garland	Ronnie C Hoeinghaus	Affirmative	
3	City of Green Cove Springs	Gregg R Griffin	Negative	View
3	City of Leesburg	Phil Janik		
3	City of Redding	Bill Hughes	Affirmative	
3	Clearwater Power Co.	Dave Hagen	Negative	View
3	Cleco Corporation	Michelle A Corley		
3	ComEd	Bruce Krawczyk	Negative	View
3	Consolidated Edison Co. of New York	Peter T Yost	Abstain	
3	Constellation Energy	Carolyn Ingersoll	Affirmative	
3	Consumers Energy	David A. Lapinski	Abstain	
3	Consumers Power Inc.	Roman Gillen	Negative	View
3	Coos-Curry Electric Cooperative, Inc	Roger Meader	Negative	View
3	Cowlitz County PUD	Russell A Noble	Negative	View
3	Delmarva Power & Light Co.	Michael R. Mayer	Affirmative	
3	Detroit Edison Company	Kent Kujala	Affirmative	
3	Dominion Resources Services	Michael F Gildea	Abstain	
3	Douglas Electric Cooperative	Dave Sabala	Negative	View
3	Duke Energy Carolina	Henry Ernst-Jr	Negative	View
3	East Kentucky Power Coop.	Sally Witt	Negative	View
3	Entergy	Joel T Plessinger	Affirmative	
3	Fall River Rural Electric Cooperative	Bryan Case	Negative	View
3	FirstEnergy Solutions	Kevin Querry	Affirmative	View
3	Georgia Power Company	Anthony L Wilson	Affirmative	View
3	Georgia System Operations Corporation	R Scott S. Barfield-McGinnis	Affirmative	

3	Great River Energy	Sam Kokkinen	Negative	
3	Hydro One Networks, Inc.	David L Kiguel	Affirmative	
3	Idaho Power Company	Shaun Jensen	Negative	View
3	JEA	Garry Baker	Affirmative	
3	Kansas City Power & Light Co.	Charles Locke	Negative	View
3	Kissimmee Utility Authority	Gregory David Woessner	Negative	
3	Lakeland Electric	Mace Hunter	Affirmative	
3	Lane Electric Cooperative, Inc.	Rick Crinklaw	Negative	View
3	Lincoln Electric Cooperative, Inc.	Michael Henry	Negative	View
3	Lincoln Electric System	Bruce Merrill	Negative	View
3	Los Angeles Department of Water & Power	Daniel D Kurowski	Affirmative	
3	Lost River Electric Cooperative	Richard Reynolds	Negative	View
3	Louisville Gas and Electric Co.	Charles A. Freibert	Negative	View
3	Manitoba Hydro	Greg C. Parent	Negative	View
3	MidAmerican Energy Co.	Thomas C. Mielnik	Affirmative	
3	Mississippi Power	Don Horsley	Affirmative	View
3	Municipal Electric Authority of Georgia	Steven M. Jackson	Affirmative	
3	Muscatine Power & Water	John S Bos	Negative	View
3	Nebraska Public Power District	Tony Eddleman	Negative	View
3	New York Power Authority	Marilyn Brown	Affirmative	
3	Niagara Mohawk (National Grid Company)	Michael Schiavone	Affirmative	View
3	Northern Indiana Public Service Co.	William SeDoris	Negative	
3	Northern Lights Inc.	Jon Shelby	Negative	View
3	Okanogan County Electric Cooperative, Inc.	Ray Ellis	Negative	View
3	Orange and Rockland Utilities, Inc.	David Burke	Abstain	
3	Orlando Utilities Commission	Ballard Keith Muters	Abstain	
3	PacifiCorp	John Apperson	Affirmative	
3	Platte River Power Authority	Terry L Baker	Affirmative	
3	Potomac Electric Power Co.	Robert Reuter	Affirmative	
3	Public Service Electric and Gas Co.	Jeffrey Mueller	Negative	View
3	Public Utility District No. 2 of Grant County	Greg Lange	Affirmative	
3	Raft River Rural Electric Cooperative	Heber Carpenter	Negative	View
3	Sacramento Municipal Utility District	James Leigh-Kendall	Affirmative	
3	Salmon River Electric Cooperative	Ken Dizes	Negative	View
3	Salt River Project	John T. Underhill	Affirmative	
3	San Diego Gas & Electric	Scott Peterson		
3	Santee Cooper	Zack Dusenbury	Affirmative	
3	Seattle City Light	Dana Wheelock	Affirmative	
3	Seminole Electric Cooperative, Inc.	James R Frauen		
3	Southern California Edison Co.	David Schiada	Affirmative	
3	Tacoma Public Utilities	Travis Metcalfe	Affirmative	
3	Tampa Electric Co.	Ronald L Donahey	Negative	View
3	Tennessee Valley Authority	Ian S Grant	Negative	
3	Umatilla Electric Cooperative	Steve Eldrige	Negative	View
3	West Oregon Electric Cooperative, Inc.	Marc Farmer	Negative	
3	Wisconsin Electric Power Marketing	James R. Keller	Affirmative	
3	Wisconsin Public Service Corp.	Gregory J Le Grave		
3	Xcel Energy, Inc.	Michael Ibold	Affirmative	View
4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Negative	View
4	American Municipal Power - Ohio	Kevin Koloini	Negative	
4	Blue Ridge Power Agency	Duane S Dahlquist	Abstain	
4	Central Lincoln PUD	Shamus J Gamache	Negative	View
4	City of Clewiston	Kevin McCarthy	Negative	
4	City of New Smyrna Beach Utilities Commission	Timothy Beyrle	Negative	
4	City Utilities of Springfield, Missouri	John Allen	Negative	View
4	Consumers Energy	David Frank Ronk	Abstain	
4	Cowlitz County PUD	Rick Syring	Negative	View
4	Florida Municipal Power Agency	Frank Gaffney	Negative	View
4	Fort Pierce Utilities Authority	Thomas W. Richards	Negative	View
4	Georgia System Operations Corporation	Guy Andrews	Affirmative	
4	Illinois Municipal Electric Agency	Bob C. Thomas	Negative	View
4	Madison Gas and Electric Co.	Joseph G. DePoorter	Negative	View
4	Ohio Edison Company	Douglas Hohlbaugh	Affirmative	View
4	Pacific Northwest Generating Cooperative	Aleka K Scott	Negative	
4	Public Utility District No. 1 of Douglas County	Henry E. LuBean	Affirmative	
4	Public Utility District No. 1 of Snohomish	John D. Martinsen	Affirmative	

	County			
4	Sacramento Municipal Utility District	Mike Ramirez	Affirmative	
4	Seattle City Light	Hao Li	Affirmative	
4	Seminole Electric Cooperative, Inc.	Steven R Wallace		
4	Tacoma Public Utilities	Keith Morisette	Affirmative	
4	Tallahassee Electric	Allan Morales	Affirmative	
4	Wisconsin Energy Corp.	Anthony Jankowski	Affirmative	View
5	AEP Service Corp.	Brock Ondayko	Negative	View
5	AES Corporation	Leo Bernier	Affirmative	
5	Amerenue	Sam Dwyer	Negative	
5	Arizona Public Service Co.	Edward Cambridge	Affirmative	
5	Avista Corp.	Edward F. Groce	Abstain	
5	BC Hydro and Power Authority	Clement Ma	Affirmative	
5	Bonneville Power Administration	Francis J. Halpin	Affirmative	
5	City of Grand Island	Jeff Mead	Negative	
5	City of Redding	Paul A Cummings	Affirmative	
5	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Max Emrick	Affirmative	
5	City of Tallahassee	Alan Gale	Abstain	
5	Cleco Power	Stephanie Huffman		
5	Cogentrix Energy, Inc.	Mike D Hirst	Abstain	
5	Consolidated Edison Co. of New York	Willet (Jack) Ng	Abstain	
5	Constellation Power Source Generation, Inc.	Amir Y Hammad	Affirmative	
5	Consumers Energy	James B Lewis	Affirmative	
5	Cowlitz County PUD	Bob Essex	Negative	View
5	CPS Energy	Robert B Stevens		
5	Detroit Edison Company	Christy Wicke	Affirmative	
5	Dominion Resources, Inc.	Mike Garton	Abstain	
5	Duke Energy	Dale Q Goodwine	Negative	
5	Dynegy Inc.	Dan Roethemeyer	Affirmative	
5	Electric Power Supply Association	John R Cashin	Affirmative	View
5	Entergy Corporation	Stanley M Jaskot	Affirmative	
5	Exelon Nuclear	Michael Korchynsky	Negative	
5	ExxonMobil Research and Engineering	Martin Kaufman	Negative	View
5	FirstEnergy Solutions	Kenneth Dresner		
5	Florida Municipal Power Agency	David Schumann		
5	Great River Energy	Preston L Walsh	Negative	
5	Green Country Energy	Greg Froehling		
5	Indeck Energy Services, Inc.	Rex A Roehl	Negative	
5	Kansas City Power & Light Co.	Scott Heidtbrink	Negative	View
5	Kissimmee Utility Authority	Mike Blough	Negative	
5	Lakeland Electric	Jim M Howard	Negative	View
5	Liberty Electric Power LLC	Daniel Duff	Affirmative	
5	Lincoln Electric System	Dennis Florom	Negative	View
5	Los Angeles Department of Water & Power	Kenneth Silver	Affirmative	
5	Luminant Generation Company LLC	Mike Laney	Affirmative	
5	Manitoba Hydro	S N Fernando	Negative	View
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Abstain	
5	MEAG Power	Steven Grego	Affirmative	
5	MidAmerican Energy Co.	Christopher Schneider	Affirmative	
5	Muscatine Power & Water	Mike Avesing	Negative	View
5	Nebraska Public Power District	Don Schmit	Negative	View
5	New York Power Authority	Gerald Mannarino	Affirmative	
5	Occidental Chemical	Michelle DAntuono	Affirmative	
5	Omaha Public Power District	Mahmood Z. Safi	Affirmative	
5	Orlando Utilities Commission	Richard Kinass		
5	PacifiCorp	Sandra L. Shaffer	Affirmative	
5	Platte River Power Authority	Pete Ungerman	Affirmative	
5	Portland General Electric Co.	Gary L Tingley	Affirmative	
5	PPL Generation LLC	Annette M Bannon	Negative	View
5	Public Service Enterprise Group Incorporated	Dominick Grasso	Negative	View
5	Public Utility District No. 1 of Lewis County	Steven Grega	Negative	View
5	Sacramento Municipal Utility District	Bethany Hunter	Affirmative	
5	Salt River Project	Glen Reeves	Affirmative	
5	Santee Cooper	Lewis P Pierce	Affirmative	
5	Seattle City Light	Michael J. Haynes	Affirmative	

5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins		
5	Snohomish County PUD No. 1	Sam Nietfeld	Affirmative	
5	Southern Company Generation	William D Shultz	Affirmative	
5	Tampa Electric Co.	RJames Rocha	Negative	
5	Tenaska, Inc.	Scott M. Helyer	Abstain	
5	Tennessee Valley Authority	David Thompson	Negative	
5	Tri-State G & T Association, Inc.	Barry Ingold	Affirmative	
5	U.S. Army Corps of Engineers	Melissa Kurtz	Affirmative	
5	US Power Generating Company	Bohdan M Dackow	Affirmative	
5	Wisconsin Electric Power Co.	Linda Horn	Affirmative	
5	Wisconsin Public Service Corp.	Leonard Rentmeester	Abstain	
6	AEP Marketing	Edward P. Cox	Negative	View
6	Ameren Energy Marketing Co.	Jennifer Richardson	Negative	View
6	Arizona Public Service Co.	Justin Thompson	Affirmative	
6	Black Hills Power	andrew heinle	Abstain	
6	Bonneville Power Administration	Brenda S. Anderson	Affirmative	
6	City of Austin dba Austin Energy	Lisa L Martin	Abstain	
6	Cleco Power LLC	Robert Hirschak		
6	Consolidated Edison Co. of New York	Nickesha P Carrol	Abstain	
6	Constellation Energy Commodities Group	Brenda Powell	Affirmative	
6	Dominion Resources, Inc.	Louis S. Slade	Abstain	
6	Duke Energy Carolina	Walter Yeager	Negative	
6	Entergy Services, Inc.	Terri F Benoit	Affirmative	
6	Exelon Power Team	Pulin Shah	Negative	
6	FirstEnergy Solutions	Mark S Travaglianti	Affirmative	View
6	Florida Municipal Power Agency	Richard L. Montgomery		
6	Florida Municipal Power Pool	Thomas E Washburn	Negative	View
6	Florida Power & Light Co.	Silvia P. Mitchell	Negative	View
6	Great River Energy	Donna Stephenson		
6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Negative	View
6	Lakeland Electric	Paul Shipps	Negative	View
6	Lincoln Electric System	Eric Ruskamp		
6	Manitoba Hydro	Daniel Prowse	Negative	View
6	MidAmerican Energy Co.	Dennis Kimm	Affirmative	
6	Muscatine Power & Water	Brandy D Olson	Negative	View
6	New York Power Authority	William Palazzo	Affirmative	
6	Northern Indiana Public Service Co.	Joseph O'Brien	Negative	
6	Omaha Public Power District	David Ried	Affirmative	
6	PacifiCorp	Scott L Smith	Affirmative	
6	Platte River Power Authority	Carol Ballantine	Affirmative	
6	PPL EnergyPlus LLC	Mark A Heimbach	Negative	View
6	Progress Energy	John T Sturgeon	Negative	View
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Negative	View
6	Sacramento Municipal Utility District	Claire Warshaw	Affirmative	
6	Salt River Project	Steven J Hulet	Abstain	
6	Santee Cooper	Suzanne Ritter	Affirmative	
6	Seattle City Light	Dennis Sismaet	Affirmative	
6	Seminole Electric Cooperative, Inc.	Trudy S. Novak		
6	Shell Energy North America (US), L.P.	Paul Benjamin Kerr	Affirmative	View
6	South California Edison Company	Lujuanna Medina	Affirmative	
6	Tacoma Public Utilities	Michael C Hill	Affirmative	
6	Tampa Electric Co.	Benjamin F Smith II	Negative	
6	Tennessee Valley Authority	Marjorie S. Parsons	Negative	
6	Western Area Power Administration - UGP Marketing	Peter H Kinney	Affirmative	
6	Xcel Energy, Inc.	David F. Lemmons	Negative	
8		James A Maenner	Negative	View
8		Roger C Zaklukiewicz	Affirmative	
8		Edward C Stein		
8	JDRJC Associates	Jim D. Cyrulewski		
8	Pacific Northwest Generating Cooperative	Margaret Ryan	Negative	View
8	Power Energy Group LLC	Peggy Abbadini		
8	Utility Services, Inc.	Brian Evans-Mongeon	Abstain	
8	Volkman Consulting, Inc.	Terry Volkman	Abstain	
9	Commonwealth of Massachusetts Department of Public Utilities	Donald E. Nelson	Affirmative	
9	National Association of Regulatory Utility Commissioners	Diane J. Barney		



9	Oregon Public Utility Commission	Jerome Murray	Abstain	
9	Snohomish County PUD No. 1	William Moojen		
10	Florida Reliability Coordinating Council	Linda Campbell	Abstain	
10	Midwest Reliability Organization	James D Burley	Negative	
10	New York State Reliability Council	Alan Adamson	Affirmative	
10	Northeast Power Coordinating Council, Inc.	Guy V. Zito	Affirmative	
10	ReliabilityFirst Corporation	Anthony E Jablonski	Negative	View
10	SERC Reliability Corporation	Carter B. Edge	Negative	View
10	Texas Reliability Entity	Larry D. Grimm	Negative	
10	Western Electricity Coordinating Council	Louise McCarren		

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A New Jersey Nonprofit Corporation

Individual or group. (41 Responses)
Name (22 Responses)
Organization (22 Responses)
Group Name (19 Responses)
Lead Contact (19 Responses)
Question 1 (38 Responses)
Question 1 Comments (41 Responses)
Question 2 (32 Responses)
Question 2 Comments (41 Responses)
Question 3 (28 Responses)
Question 3 Comments (41 Responses)
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Question 4 Comments (41 Responses)
Question 5 (27 Responses)
Question 5 Comments (41 Responses)
Question 6 (0 Responses)
Question 6 Comments (41 Responses)

-
Group
Northeast Power Coordinating Council
Guy Zito
No
It was expressed in the last posting that the definition of Interpersonal Communications might inadvertently include data. The SDT responded that it does not by referring to Interpersonal in the wording of the definition. The word being defined shouldn't be in the definition. However, incorporating "allows two or more individuals to ..." is an option that may solve this problem. The next posting should clarify this. This standard does not comport with the informational filing that NERC submitted to FERC on August 10, 2009 regarding its discontinued use of sub-requirements in standards development activities. The sub-requirements should be modified into bulleted lists. Consider striking "to exchange Interconnection and operating information" in R1, R3, R5, R7, and R8. It is redundant to the use of Interpersonal Communications "to interact, consult, or exchange information" in the definition. Consider striking "to exchange Interconnection and operating information" in R2, R4, R6. It is redundant to the use of Alternative Interpersonal Communications which uses Interpersonal Communications in its definition. Interpersonal Communications includes "to interact, consult, or exchange information" in its definition. For R2, why is Interchange Coordinator excluded? It is included in the Requirement R1 which deals with the Interpersonal Communications. Communications would need to be maintained with the Interchange Coordinator in the event of a failure of the Interpersonal Communications. For R3, affected neighboring Transmission Operators should be included. For R4 and R6, the sub-requirement list is different from the associated Interpersonal Communications requirements R3 and R5 respectively. These should be duplicate. The sub-requirement list for R4 should match R3, and the sub-requirement list for R6 should match R5. In the event of a failure of the Interpersonal Communications, the Transmission Operator and Balancing Authority both would need to maintain communications to the same entities as in the requirement to have Interpersonal Communications. The sub-requirements should be bulleted lists. For R5, why are neighboring Balancing Authorities not included? Additionally, R5 should only read Contact with Interchange Coordinator within the same Interconnection. They need to be able to contact one another to identify discrepancies in scheduling and sources of meter error that could lead to deviations in ACE. Should R2, R4 and R6 be constructed parallel to R1, R3, and R5? In R1, R3 and R5, the requirement is "shall have" while in R2, R4, and R6, the requirement is "shall designate". Since one is for the Interpersonal Communications and the other is for the Alternative Interpersonal Communications, the same wording should be used. R2.2 and R1.2 should not be limited to Reliability Coordinators in the same Interconnection only. Modify "within the same Interconnection" to "within the same Interconnection, and, as appropriate, between a-synchronously connected RCs which are not precluded by law from scheduling interchange energy (for schedule changes, curtailments, etc.)" since reliability coordination may be required among the RCs on both sides of an Interconnection boundary. The VSLs for R1 through R8 should be expanded to include multiple levels based on the number of entities that the functional entity does not have Interpersonal Communications or Alternative Interpersonal Communications with. FERC specified their general preference for graduated in paragraph 27 of their June 19, 2008 order on VSLs. The second half of the Severe VSL for R9 is almost a duplicate of the Lower VSL. There are some small changes in the wording but both situations deal with the case where there is a problem that has been identified with the Interpersonal Communications system and it takes more than two hours to initiate repair.
No
If the requirement were going to remain. but the Project 2007-03 Real-Time Operations SDT proposed to retire that

requirement during their last posting. There needs to be better coordination with that SDT.
No
The language "to continuously assess transmission reliability" should be changed to "to continuously assess Bulk Electric System reliability" to reflect what the enforceability of the standards are meant to be. The requirement on the ERO should also be expanded similar to BAL-005-0.1b R1 to ensure that all operating entities and the entire BES are covered under a Reliability Coordinator. In R2, should "of" be "to"? Reliability Directives are issued to TOPs, BA, etc. The VSL for R1 is not consistent with the requirement. The requirement applies to the ERO but the VSL applies to the Regional Entity.
Yes
No
R1 states "When the results of an Operational Planning Analysis or Real-time Assessment indicate an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area." The word "notify" should be stuck.
The SDT did not address all concerns with COM-002-3 from the last posting. For entities registered as multiple functions, the combination of the definition of Reliability Directive and Requirement R1 could be confused to require a company to issue directives to itself. There are several organizations registered as a Reliability Coordinator, Transmission Operator and Balancing Authority. In these companies, it is not uncommon for those responsibilities to be distributed across multiple desks. Thus, for certain situations, a single System Operator may actually be the Reliability Coordinator and the Transmission Operator. In other situations, the System Operator serving the Reliability Coordinator function may be adjacent to the System Operator serving as the Transmission Operator or Balancing Authority. It should never be necessary for these System Operators to issue Reliability Directives to themselves in the first example or to their co-worker in the second example to demonstrate compliance to NERC standards. How the entity coordinates its actions among its Reliability Coordinator, Balancing Authority and Transmission Operator roles is a corporate governance issue that should not be confused or complicated by the NERC standards. Thus, standards should be made clear that the Reliability Directive is directed to another company. In place of requiring an operator, in real-time, to state "this is a Reliability Directive," there should be an allowance for an entity to develop procedures indicating, in advance, their expectations for three-part communications to their sub-operating entities. Therefore, we suggest modifying R1 to be "When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action, either verbally, when the communication is issued, or in advance through documented procedures, as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time.]" Also, the definition of Emergency as currently cited in these draft Standards and included in the existing NERC Glossary should be modified to include the NERC Glossary term Adverse Reliability Impact to make the Standards more crisp, clear and enforceable. Because the Project 2007-03 Real-Time Operations SDT proposed to utilize the definition of Adverse Reliability Impact in TOP-001-2 R5 during the last posting, the change to the definition should be coordinated with that team. There is a text box in IRO-005-4 that indicates this standard will be retired. Yet, there still remain requirements in the standard and various other associated documentation that indicates requirements are being move to this standard. Delete the text box. Strike IRO-014-2 Part 1.7. There is no need to have a weekly conference to discuss every Operating Procedure, Operating Process and Operating Plan. As this requirement is written, a conference call would be necessary for each. Furthermore, IRO-014-2 R4 already includes a requirement to have weekly conference calls that should suffice. IRO-014-2 R2 seems to recognize that these Operating Procedures, Processes and Plans likely will not need to be discussed weekly as it only requires an annual update. Requirement R2 in IRO-001 contains the words "which could include issuing Reliability Directives", but Reliability Directives are not referenced anywhere else in the standard. This inclusion seems unnecessary since without it, R2 already requires that the RC take actions or direct actions by others to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. Whether or not a Reliability Directive is issued is irrelevant in this requirement. These words should be removed. Note that COM-002 already stipulates the requirement for 3-part communication when a Reliability Directive is issued. The inclusion of "which could include issuing Reliability Directives" in IRO-001 is unnecessary.
Individual
Greg Froehling
Green Country Energy, Green Country Operating Services
No
COM-001 General question/comment. The reference to infrastructure should be removed and just keep the word "medium". Here's why What communication medium (infrastructure) does not use satellite at some point unless entities are within a close geographical proximity? How likely is it to have 2 different mediums? • Local phone and fax hard-wire likely. • Long distance phone and fax – satellite • Cell phone – satellite • Internet – satellite • Radio – antenna The reason for mentioning this is, if all we have is satellite then the reference to infrastructure should be removed and just keep the word "medium".
No Comment

No Comment
No Comment
No Comment
IRO-001-2 as proposed does not include the PSE in the applicability, nor does it require the PSE to respond to a directive. However, COM-002 requires them to repeat the directive back... If the directive is that important to repeat back should they not have to act upon the directive? I think the PSE should be included in IRO-001-2 this standard as they represent and direct generation facility deployment in many cases. Including the PSE in COM-001 may be a good idea too, just for the situations listed above.
Individual
Steve Alexanderson
Central Lincoln
No
See Q 6 below.
The stated purpose of COM-002 is: "To ensure emergency communications between operating personnel are effective." As written, the standard fails to meet this purpose because the three requirements only deal with communications at the entity level. There is no requirement for the directing entity to even try to reach operating personnel at the receiving entity. The directing entity may follow all the requirements of this standard by following R1 and R3 with the receiving entity's receptionist, answering service, janitor, night watchman, etc. The receiving entity only needs to meet R2, parroting the directive. Again this could be accomplished by anyone with no assurance the directive reaches the operating personnel who can implement it. When we stated a similar objection during the last comment period, The SDT's answer suggested this was a PER staffing issue, but none of the PER requirements even apply to DP/LSE directive recipients. We suggest the entity issuing the directive should be required to make an attempt to get it to those who are competent to understand and implement the directive. This is not a staffing, training, or credentials issue; it is a performance issue that falls squarely within the stated purpose of this standard. COM-001 R10 presents a paradoxical situation to an entity attempting to comply. Consider an interpersonal communication capability failure that lasts longer than 60 minutes past initial detection. At or before 60 minutes, the affected entity is expected to notify impacted entities. If it has no interpersonal communication capability, how shall it make this notification? And if the entity does manage to make such a notification, it has thereby proven that it does have interpersonal communication capability making such notification unnecessary. We again ask the SDT to consider that not all the entities in the applicability sections of COM-001 and 002 have 24/7 dispatch centers. These are typically smaller entities that were required to register because they exceed 25 MW or were asked in the past to voluntarily provide UFLS. They do not and do not need to continuously communicate with TOPs, BAs, RCs, etc; and a "reliability directive" is a theoretical thing that has never happened during the memories of thirty year employees. The directive issuing entities simply realize the limitations around the receiving entities and work around them. The financial burden on these small entities and their customers to go to 24/7 dispatch will not have a corresponding reliability benefit. And while the two COM standards do not explicitly state that entities must maintain 24/7 dispatch, when all the requirements and definitions and time horizons are taken together 24/7 continuous competent communication is implied. During the last comment period, the SDT suggested this was a registration issue beyond their control. We submit instead that this is a standard applicability question that the SDT does have control over, since it is right there in Section A.4 of the two COM standards. While we appreciate that the SDT is responding to FERC order 693 to include DPs, we note that FERC also stated: Paragraph 487: "We expect the telecommunication requirements for all applicable entities will vary according to their roles and that these requirements will be developed under the Reliability Standards development process." Paragraph 6: "A Reliability Standard may take into account the size of the entity that must comply and the costs of implementation" Paragraph 141: "...the Commission clarifies that it did not intend to ... impose new organizational structures..." Paragraph 31: "We emphasize that we are not, at this time, mandating a particular outcome by way of these directives, but we do expect the ERO to respond with an equivalent alternative and adequate support that fully explains how the alternative produces a result that is as effective as or more effective than the Commission's example or directive. We ask the SDT to exclude DPs, LSEs, and PSEs that do not have 24/7 dispatch centers from the applicability of these two standards in order to meet FERC order 693.
Group
Competitive Suppliers
Jack Cashin

EPSA is the trade association for competitive suppliers including both generators and marketers that represent over 700 entities in the NERC compliance registry. As such, the EPSA membership includes members registered as Purchasing Selling Entities (PSE) in each NERC region. Moreover, many of EPSA's members are also registered as LSEs in several regions. In general, EPSA supports the progress made in revising COM-001, COM-002 and IRO-001 in Project 2006-06, particularly the improvements made to the definition of Reliability Directive. However, EPSA also has concerns with some proposed changes to the applicability sections of the revised standards. In addition, EPSA requests that the implementation plans be changed so that they are consistent with the standard. Regarding applicability, EPSA agrees that COM-001 should continue to not apply to Purchasing Selling Entity (PSE) and Load Serving Entity (LSE) functions. However, the implementation plan for COM-001-2 still includes a reference that PSEs and LSEs must comply (page 11 of the implementation plan). Additionally, EPSA supports the removal of LSEs and PSEs from IRO-001-2. Much like the situation with COM-001-2, the implementation plan for IRO-001-2 still includes a reference that LSEs and PSEs must comply (page 11 of the implementation plan). In both the implementation plans for COM-001-2 and IRO-001-2 these references should be removed. For reasons similar to those underlying why COM-001-2 and IRO-001-2 do not apply to PSEs and LSEs, EPSA opposes the addition of PSEs to the COM-002-3 applicability. The purpose of the emergency communications in these standards is "To ensure emergency communications between operating personnel are effective." The removal would recognize that PSEs and LSEs do not play an active role in reliability coordination under this standard since they have no authority, nor ability to assume or perform responsibilities associated with reliability coordination. When a RC, TOP, or BA needs to address an Emergency they do not contact, consult, or direct a PSE to take action to address the Emergency. Reliability is neither improved nor degraded by having these Standards applicable to PSEs or LSEs; therefore, COM-001, COM-002 and IRO-001 need not be applicable to PSEs or LSEs. Thanks to the drafting team members for their effort on revising the Project 2006-06 standards.
Individual
Mace Hunter
Lakeland Electric
Yes
COM-002-3 R2. Each Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message can be confirmed by the originator. (Replace 'has been' with 'can be' and add 'by the originator' to better fit into the sequence with R3.)
Group
Exelon
John Bee
No
1. COM-001-2, 4.4 - Distribution Providers and 4.5, Generation Operators should be highlighted and communicated as a substantive change since entities may not be aware that they are being added to the applicability section of the standard. 2. COM-001-2, R10 - should have the following underlined clarifying text added, shall notify impacted entities within 60 minutes of the detection of a failure "of all primary and alternative " Interpersonal Communications capabilities that lasts 30 minutes or longer. Exelon believes that the intent of R10 is for complete loss of communication ability and should not be applied to facilities that have multiple backups. 3. COM-001-2, M1 thru 9 – Suggest that network diagrams and / or communications schematics be added as suggested evidence. 4. COM-001-2, VSL for R9 – Regarding failure to test the Alternative Interpersonal Communication, the Severity Level does not align with the potential impact to the BES. The Severity Level for simply missing a test should be revised to a High VSL.
Yes
No comment - only applicable to RC
Comments: No comment – only applicable to RC
Comments: No comment - only applicable to RC
1. COM-002-2, R2 – Remove the word "recapitulate", feel that "restate or rephrase" is adequate. The word "recapitulate" is not commonly used and is somewhat obscure. 2. COM-002-2, R3 – Suggest using the words "repeat back" rather than "state or respond that" to more clearly identify the expectation with more commonly used language. 3. IRO-001-2, R3 – While we appreciate that the SDT has defined the term "directive" as a much needed definition, IRC-001-2 R.3 now introduces a new term "direction". what is a "direction" and how does it differ from "directive"? If a new

term is going to be introduced it needs to be defined, if the intent was to use the word "directive" then "direction" should be replaced with "directive." 4. IRO-001-2, R4 – Again the term "as directed" is confusing, recommend that the text be changed to align with the term directive, "unable to perform the directive per Requirement R3."
Individual
Joe Petaski
Manitoba Hydro
Yes
Yes
Yes
Yes
Yes
-The current data retention requirement of 90 days is more than adequate. Increasing this period to 12 months would result in a significant amount of work with no benefit to reliability. -Clarification required on the VSL for R9 - there appears to be no difference in the description of the Lower VSL and second part of the Severe VSL following "or". - Clarification required - The existing version of COM-001 M1 indicates that maintenance records for communication facilities may be required but the proposed revision makes no mention of maintenance records. So evidence of maintenance is no longer required?
Group
PNGC Power member owners
Ron Sporseen
No
Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of Communication capabilities impacted entities will be notified of the past loss and current status of Communication." We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.

Individual
Brian J Murphy
NextEra Energy, Inc.
No
As drafted, COM-001 is not clear or complete. At this stage in the evolution of compliance with the mandatory Reliability Standards, it is important that any new or revised Reliability Standard clearly articulate all compliance obligations and tasks consistent with Sections 302 (6) and (8) of the NERC Rules of Procedure. Thus, NextEra Energy Inc. (NextEra) has numerous recommended corrections to provide clarity and completeness to COM-001. For example, the requirement to designate an Alternative Interpersonal Communication capability is not clear. Does the designator solely designate for the designator's knowledge or does the designator need to inform the entity on the other end of the connection. In R2, for instance, the Reliability Coordinator must designate, but it is also not clear whether the Reliability Coordinator must inform the Balancing Authorities or Transmission Operators. It is further unclear whether the designation must be documented, or if any informing of the Balancing Authorities or Transmission Operators must be documented. Thus, it is recommended that the drafters decide what was intended regarding the designation and clearly state the requirements. In R9 it states that "... on at least a monthly basis." There are two issues to consider here. If the sentence stays, grammatically it should read "... on, at least, a monthly basis. . . ." However, from a compliance and technical perspective, the term "at least" has no significance and should be deleted. The requirement is to test on a monthly basis – the phrase "at least" only introduces ambiguity and implies that the party should consider every two or three weeks. If the drafting team believes a best practice is less than a month, there are other NERC educational tools to explain a best practice. In R10, it states "... shall notify the impacted entity . . ." It would be clearer to state: "... shall notify the impacted Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider or Generator Operator . . ."
No
As stated in response to number 1, Reliability Standards are to be clear and complete. If a Transmission Operator is not responsible for a delay caused by a Reliability Coordinator, the Standard should specifically state that the Transmission Operator does not need to wait for an assessment or approval of a Reliability Coordinator to take actions pursuant to TOP-001-1 R3. Since the Reliability Coordinator is atop the reliability higherachy, such a statement provides clarity and completeness to understanding a Transmission Operators rights. Thus, TOP-001-1 R3 should be revised to lead with: "Without any obligation to first seek and obtain an assessment or approval from its Reliability Coordinator, each Transmission Operator . . ."
At this stage in evolution of compliance with the mandatory Reliability Standards, it is important that any new or revised Reliability Standard clearly articulate all compliance obligations and tasks consistent with Sections 302 (6) and (8) of the NERC Rules of Procedure. COM-002, IRO-001, IRO-002 and IRO-014 do not meet this threshold. Thus, NextEra has numerous recommended corrections to provide clarity and completeness to these Reliability Standards. COM-002 R1 The addition of defined terms for Reliability Directive and Emergency is a very good approach that helps provides clarity. Hence, it is also be appropriate to make the language in the requirement as clear as possible, and not add other implied or unexplained notions. Also, at times, in those regions with markets, it is not always clear whether a requirement to curtail for reliability reasons is being issued pursuant to market rules or from the Reliability Coordinator or Transmission Operator under the Reliability Standards. Therefore, it is also appropriate that the Reliability Coordinator, Transmission Operator, Balancing Authority be required to identify themselves;; and if they fail to identify themselves or fail to use the term Reliability Directive, the registered entity receiving the flawed issuance should not be consider in violation of a Reliability Standard for failing to act. Accordingly, R1 would be clearer and have the same intent, if it stated as follows: "A Reliability Coordinator, Transmission Operator or Balancing Authority have the authority to issue an oral or written Reliability Directive as authorized in [list the specific Reliability Standard requirements such as IRO-001 R8 and TOP-001 R3]. The issuance of an oral of written Reliability Directive, by a Reliability Coordinator, Transmission Operator or Balancing Authority shall: (1) use the term 'Reliability Directive;' and (2) identify the issuer of the Reliability Directive as a Reliability Coordinator, Transmission Operator or Balancing Authority. If a Reliability Coordinator, Transmission Operator or Balancing Authority issues an oral or writtern directive without using the term "Reliability Directive" or failing to indentify itself as a Reliability Coordinator, Transmission Operator or Balancing Authority, the registered entity receiving the directive cannot be considered in violation for its failure to act." IRO-001 The definition of Adverse Reliability Impacts uses the term "instability." It is important that this term be technically defined in the same way "Cascading" is defined, otherwise the new requirement is not adding clarity; rather, it is maintaining the ambiguous term "instability" that will likely lead to confusion and debate. R1 Similar to the comments set forth with respect to COM-001 (question #1), the term "at least" should be deleted from R1 – it serves no useful purpose from a technical or compliance perspective; instead, it will add unnecessary ambiguity to the requirement. R2, as drafted, states: "Each Reliability Coordinator shall take actions or direct actions, which could include issuing oral or written Reliability Directives, of Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. " This long sentence has several significant grammatical errors that result in the reader not being able to discern the meaning of the requirement. It also

unnecessarily adds verbiage that detracts from its primary focus. It is, therefore, recommended that R2 be revised as follows: "Each Reliability Coordinator shall take all necessary actions to prevent identified Emergencies or Adverse Reliability Impacts. These Reliability Coordinator actions shall include, to the extent necessary, the issuing of oral or written Reliability Directives to Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers located within its Reliability Coordinator Area. " R3, as drafted, is confusing and inconsistent with R2, and, thus, R3 should be revised to read as follows: "Upon receipt of a Reliability Directive issued pursuant to R2, a Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator and Distribution Provider shall comply with the Reliability Directive, unless compliance would violate safety, equipment, regulatory or statutory requirements. In the event that a Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator or Distribution Provider determines that compliance with a Reliability Directive would violate safety, equipment, regulatory or statutory requirements, the Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator or Distribution Provider shall, within 10 minutes after the determination, inform the Reliability Coordinator of its inability to comply." IRO-002 R1 and R2, as written, are confusing. It is recommended that R1 and R2 be combined to read as follows: "Pursuant to a written procedure to mitigate the impact of a Reliability Coordinator's analysis tool outage, a Reliability Coordinator's System Operator shall also have the authority to approve, deny or cancel a planned outage for its analysis tool." IRO-014 It is unclear why the terms Operating Procedure, Operating Process or Operating Plan needs to be plural, as currently written in the Standard. Hence, it is recommended that these terms be made singular, otherwise a violation may be inferred for not having more than one Procedure, Process or Plan. 1.1 Insert the word "applicable" before "Reliability Coordinator." 2.1, as written, is confusing. Recommend that 2.1 read as follows: "Review and update, if an update is necessary, on an annual basis. Annual basis means the review shall be within one month plus or minus that date of the last review." R3 This requirement uses a very vague term "reliability-related information," which, also, does not track the language used in R1 -- "information." It is recommended that R1 and R3 use the same terms and read " . . . information, as defined by the Reliability Coordinator, . . ." R4 As stated above, "at least" does not add value, and, therefore, should be deleted. R5, as written, is confusing. The recommended fix is to delete "all other" and replace with "impacted".

Group

PacifiCorp

Sandra Shaffer

Yes

Yes

Yes

Yes

Yes

Individual

Jonathan Appelbaum

United Illuminating Company

No

COM-001-2 does not specify the amount of time a DP has to reestablish the Interpersonal Communication Capability after the capability fails before it is assessed non-compliance for not having the communication. Is an entity non-compliant the minute the communication capability is unavailable If so, then to be compliant a tertiary (or secondary capability for DP) must be installed by the entity. Something similar was discussed with EOP-008 R3: "To avoid requiring a tertiary facility, a backup facility is not required during: • Planned outages of the primary or backup facilities of two weeks or less • Unplanned outages of the primary or backup facilities" UI suggests the drafting team incorporate something similar. The VSL for R7 is severe only and states: "The Distribution Provider failed to have Interpersonal Communications capability with one or more of the entities listed in Parts 7.1 or 7.2.". I believe there should be a time component to the VSL and the VSL staged. For example, failure to have communication established for less than 60 minutes would be Lower, anything over 1 hour severe Also needed is a phrase to state when the violation begins. Does the violation begin when the loss of Communication Capability is detected or when it occurred? In other words, does the violation start when the operator attempts to use the phone and it is not functional, or did it occur when the phone line functionality failed but was not yet detected because no attempt to use the phone was made. So the VSL for R7 would follow a format of: "The Distribution Provider failed to have Interpersonal Communication Capability with one or more entities listed in Parts 7.1 or 7.2 for a continual 60 minutes period as measured from the time the ICC failure was detected". An alternative remedy is to alter the language of R7 to allow for unplanned outage. NERC does not have a Reliability Requirement for a DP to staff a control room 24/7. COM-0001 can be interpreted to imply that a DP needs to be staffed 24/7 to facilitate interpersonal communications. If NERC wants to extend the requirement for a 24/7 staffed

operating position at the DP then the appropriate method is thru a SAR to PER-002. COM-001 R7 should have a sub-requirement added recognizing that DP's are not required to staff 24/7 and many do not staff overnight. UI suggests adding R7.3: DP's will notify their TOP and/or BA when it is not staffing an operating desk. R7: Should address the instance if the DP is not required to have communication with the BA, because the BA communicates thru the TOP.
Yes
Yes
Yes
Yes
Comments: 1. COM-002 R2 seems awkwardly worded. R2. Each [Entity] that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message has been confirmed. " R2 as it is written says the repeat is confirming the accuracy of the message itself. I think it is agreed that the repeat back in R2 is to allow the issuer of the Directive to confirm that the message was received accurately understood by the recipient. I suggest: R2. Each [Entity] that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details to allow the Issuer to confirm that the directive recipient accurately understands the Directive" 2. The VSL for R2 is severe and states "The responsible entity that was the recipient of a Reliability Directive failed to repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message was confirmed." The purpose of the R2 repeat-back is to allow the Issuer verify the message was accurately received. This VSL penalizes the responsible entity for not accurately receiving the message. The VSL should penalize the refusal of the registered entity to repeat back the message not for receiving the message incorrectly. Suggested rewording: "The responsible entity that was the recipient of a Reliability Directive failed to repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message can be evaluated by the entity issuing the Reliability Directive" 3. United Illuminating does agree with the definition of Reliability Directive and Emergency.
Group
Bonneville Power Administration
Denise Koehn
Yes
Yes
Yes
Yes
Yes
Group
PPL
Brenda Truhe
Yes
Yes
Yes
Yes
Yes
We are providing the following comments for the Standards Drafting Team to consider. 1) Consider changing R1 to "Each RC shall have the capability for Interpersonal Communications with the following entities to exchange

Interconnection and operating information...' for clarity as Interpersonal Communications and capability are both nouns. 2) We feel changing the applicability of the standard is important to the accuracy of the standard. The purpose of COM-002 is 'To ensure emergency communications between operating personnel are effective'. Since operating personnel are covered by the applicability of RC, BA, TOP and GOP, we suggest the applicability to TSP, LSE, and PSE be removed from COM-002-3. 3) Additionally, we would like to bring to the attention of the Standards Drafting Team, that the implementation plan for COM-001-2 and IRO-001-2 still includes TSP, LSE, and PSE although the revised standard does not include these entities in the Applicability Section. For COM-001-2 refer to the implementation plan, page 1. For IRO-001-2 refer to the implementation plan for new R2, new R3, new R4 and the chart on the last page. Thank you for your consideration in addressing these comments.

Individual

Paul Kerr

Shell Energy North America (US), L.P.

The introduction of the definition of "Reliability Directive" and its connection to the definition of "Emergency" within this Project brings much needed clarity for the sector and will promote consistency between Regional Entities and within the audits of Registered Entities. Shell Energy supports the removal of Purchasing Selling Entities as a function to which IRO-001 applies. This removal recognizes that PSEs do not play a role in reliability coordination under this standard since they have no authorities and no abilities to assume or perform responsibilities associated with reliability coordination. This conclusion is reinforced by the adoption of the defined term "Reliability Directive". Where a RC, TOP, or BA needs to address an Emergency they do not contact, consult, or direct a PSE to take action that would address the Emergency. Rather, where the PSE is a user of the grid to perform or execute transactions, it is subject to the actions of these other entities that have the authority to stop, curtail, or alter the submitted transactions of the PSE in a way that aids in resolving the problem. With the fitting adoption of "Reliability Directive" into COM-002 as well, Shell Energy does not believe it is necessary or appropriate for the applicability of this standard to include Purchasing Selling Entities, as is contained in the current draft proposal. This standard does not apply to PSEs today, however, during the progression of Project 2006-06 this applicability was added to an early draft version that preceded the discussions and clarification that comes from the definition of a Reliability Directive in the standard. Shell Energy does not support the inclusion of PSEs in the current draft version of COM-002, and feels that it should be removed. The purpose of this standard is, "To ensure Emergency communications between operating personnel are effective" and relates directly to the capabilities and authorities established for the RC, TOP, or BA that requires actions to be taken by a recipient of a Reliability Directive. As noted previously, PSEs are acted upon by the entities with the necessary authority, and are not in a role that would initiate or fulfil the required actions. As additional matters related to the clarification and cleanup of the standards in this project, the implementation plans for both IRO-001 and COM-001 erroneously contain references to PSEs in the sections "Functions that Must Comply with the Requirements". These references need to be removed.

Individual

Thad Ness

American Electric Power

No

The applicability of COM-001 and COM-002 appear to be at odds with each other. The requirements may need to be re-written so that they are in sync.

Yes

No

This is out of scope with the standard, as it is currently addressed through the NERC certification process that the NERC reliability coordinators are subject to.

The language used in COM-002-3 R2 including "with enough details that the accuracy of the message has been confirmed" is subjective and ambiguous. IRO-001 R2, R3, and R4 have replaced "Directives" with the word direction in lower case (while it appears that "Directives" is a subset of "directions"). We believe that this muddies the waters and could bring numerous conversations and dialog into scope unnecessarily. The end result is that the RC has the right to issue and use "Directives" and anything short of this could just be communications. For example, a number of entities that are Reliability Coordinators also facilitate energy markets. There are many communications related to markets that probably should be out of scope with respect to the standards. Furthermore, it might not be clear what role (eg Reliability Coordinator, market operator, etc) the staff at these entities are fulfilling.

Group

PSEG
Patricia Hervochon
No
Com-001-2 implementation plan lists that this is applicable to PSE's and LSE's however, PSE's and LSE's were removed from the actual standard. The implementation plan should be revised.
IRO Com-002-3 standard continues to include PSE. PSE's do not play an active role and have no authority or ability to perform reliability coordination. PSE's should be removed from the standard. -001-2 references PSE's in the implementation for R2, R3, R4 and "Functions that must comply with the requirements in this standard" table. PSE's were removed from the standard and should be removed from the implementation plan.
Group
Dominion
Louis Slade
No
The monthly testing requirement for Alternative Interpersonal Communications is overly burdensome without any evidence to support that it is necessary to insure reliability. We believe that an entity will take necessary steps to insure the Alternative Interpersonal Communications is functioning properly, especially if it experiences problems with its Interpersonal Communications, it. We can support quarterly testing as we believe it strikes a reasonable balance.
Yes
We do not agree with the addition of weekly conference calls as required in R4. We believe that RCs should schedule calls as needed but do not agree that a weekly scheduled call improves reliability.
Individual
David Thorne
Pepco Holdings Inc
Yes
Yes
Yes
Yes
Yes
Group
SERC OC Standards Review Group
Jim Case
No
Each sub-requirement should not have an "R" in front of the number in order to be consistent with NERC's August 10, 2009 filing at FERC on this subject. Requirement R3 and R4 should include adjacent TOPs as a sub-requirement. Requirements R5 and R6 should include adjacent BAs as a sub-requirement. "to exchange Interconnection and operating information" should be deleted from requirements R1 through R8 as it is redundant with the definition of Interpersonal Communications The last page of the Implementation Plan includes LSEs, PSE, and TSPs as being responsible entities under this standard, yet the standard does not include them. Please correct the implementation plan.
No
Top-001-1, Requirement R3, which is what the SDT appears to be using as its justification for not adding a requirement here is proposed to be deleted by the RTO-SDT on Project 2007-03.

No
We think you are attempting to create a requirement similar to BAL-005, R1. That language copied here is clear and concise - All generation, transmission, and load operating within an Interconnection must be included within the metered boundaries of a Balancing Authority Area.
Yes
Yes
Please remove the yellow box on page 1 indicating this standard will be retired.
Reliability Directives may be issued by blast calls from Reliability Coordinators. It is inefficient and may be a hindrance to reliability to require 3-part communications in these instances. There are several organizations registered as BAs, RCs and TOPs. It is not uncommon for those entities to be distributed across multiple desks in the same control room without regard to how an entity is registered. Thus, a single System Operator may perform functions that are categorized under two or more of those functional entities. The drafting team should clarify that under no circumstances should that System Operator be required to issue a Reliability Directive to himself. This is a corporate governance issue. In IRO-014, R1, delete sub-requirement 1.7. The requirement for weekly conference calls related to operating procedures is duplicative to R4 and could be burdensome while adding very little value under certain circumstances. In IRO-014, R4, delete the phrase "(per Requirement 1, Part 1.7)" as a conforming change. In IRO-014, Requirements R6-R8 allow at least the theoretical possibility that an RC may determine an Adverse Reliability Impact in another RC's area that the other RC neither can see nor believes that any action should be taken. R7 puts the burden on the first RC to develop a plan that it cannot implement because it has no agreement with the BAs and TOPs in the other RC area. As such, this requirement is unenforceable. Please review all the implementation plans to be sure the applicable entities match those in the standards. "The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Standards Review group only and should not be construed as the position of SERC Reliability Corporation, its board or its officers."
Individual
Andrew Pusztai
American Transmission Company
Yes
ATC agrees with the understanding that the line of demarcation is up to the point where ATC owns the equipment.
Yes
Yes
Yes
Yes
None
Group
Arizona Public Service Company
Janet Smith
Yes
Yes
Yes
Yes
Group
LG&E and KU Energy
Brent Ingebrigtsen

1) LG&E/KU suggests that the definitions and related Reliability Standards be edited to provide a clearer understanding of what is required. When used in the requirements of COM-001, the proposed definitions for Interpersonal Communication and Alternative Interpersonal Communication read improperly (i.e., a “medium capability”). This may cause confusion as to what is required by the Applicable entities. Any further use of these terms may cause greater confusion. Suggested Alternative: Interpersonal Communication: Any instance where two or more individuals interact, consult, or exchange information. The definition of “Alternative Interpersonal Communication” would not have to be changed since it is dependent upon the definition of “Interpersonal Communication.” The change of the definitions of Interpersonal Communication and Alternative Interpersonal Communication shifts their focus to the communication itself—the event. This makes the Requirements themselves much clearer since the Requirements focus on the need that entities have the capabilities—the medium. It appears the SDT’s intent is to ensure that the event takes place by requiring that the medium for those events are in place. This is much clearer if there is a distinction between the two (the event and the medium) than if they have similar definitions (a medium and a “medium capability”). 2) LG&E/KU question the consistency of the Applicability sections as they pertain to the TSP, LSE and PSE functions between COM-001 and COM-002. The deletion of the TSP, LSE and PSE from COM-001 is supported, but if these entities are not required to establish Interpersonal Communication (or Alternative Interpersonal Communication) capability with reliability entities (RC, BA, TOP), should they still be required to follow the reliability directive process of COM-002? If the probability of issuing a Reliability Directive to a TSP, LSE or PSE is so low that Interpersonal Communications capabilities with reliability entities is not justified under COM-001, why are the TSP, LSE and PSE still held to the 3 way communication requirements of COM-002? Suggest the Applicability of COM-002 to TSP, LSE and PSE and associated requirements be deleted.
Group
IRC Standards Review Committee
Albert DiCaprio
No
We expressed in the last posting that we felt the definition of Interpersonal Communications might inadvertently include data. The SDT responded that it does not by referring to Interpersonal in the name of the definition. Clearly, you can't refer to the word you are defining in order to define it. However, it is possible “allows two or more individuals to ...” may solve this problem. Clarity should be sought in the next posting, if possible. This standard does not comport with the informational filing that NERC submitted to FERC on August 10, 2009 regarding its discontinued use of sub-requirements in standards development activities. We request the sub-requirements be modified into bulleted lists. Consider striking “to exchange Interconnection and operating information” in R1, R3, R5, R7, and R8. It is redundant to the use of Interpersonal Communications “to interact, consult, or exchange information” in the definition. Consider striking “to exchange Interconnection and operating information” in R2, R4, R6. It is redundant to the use of Alternative Interpersonal Communications which uses Interpersonal Communications in its definition. Interpersonal Communications includes “to interact, consult, or exchange information” in its definition. For R2, why is Interchange Coordinator excluded? It is included in the Requirement R1 which deals with the Interpersonal Communications. Communications would need to be maintained with the Interchange Coordinator in the event of a failure of the Interpersonal Communications. For R3, affected neighboring Transmission Operators should be included. For R4 and R6, the sub-requirement list is different than for than for the associated Interpersonal Communications requirements R3 and R5 respectively. We believe these should be duplicate. That is the sub-requirement list for R4 should match R3 and the R6 should match R5. In the event of a failure of the Interpersonal Communications, the Transmission Operator and Balancing Authority both would need to maintain communications to the same entities as in the requirement to have Interpersonal Communications. Again, we would suggest replacing sub-requirements with bulleted lists. For R5, why are neighboring Balancing Authorities not included? Additionally R5 should only read Contact with Interchange Coordinator within same Interconnection. They certainly need to be able to contact one another to identify discrepancies in scheduling and sources of meter error that could lead to deviations in ACE. Should R2, R4 and R6 be constructed parallel to R1, R3, and R5? In R1, R3 and R5, the requirement is “shall have” while in R2, R4, and R6, the requirement is “shall designate”. Since one is for the Interpersonal Communications and the other is for the Alternative Interpersonal Communications, it seems the same wording should be used. We do not believe R2.2 and R1.2 should be limited to Reliability Coordinators in the same Interconnection only. We suggest modifying “within the same Interconnection” to “within the same Interconnection, and, as appropriate, between a-synchronously connected RCs which are not precluded by law from scheduling interchange energy (for schedule changes, curtailments, etc.)” since reliability coordination may be required among the RCs on both sides of an Interconnection boundary. The VSLs for R1 through R8 should be expanded to include multiple levels based on the number of entities that the functional entity does not have Interpersonal Communications or Alternative Interpersonal Communications. FERC specified their general preference for gradated in paragraph 27 of their June 19, 2008 order on VSLs. The second half of the Severe VSL for R9 is almost a duplicate to the Lower VSL. There are some small changes in the wording but both situations deal with the case where there is a problem that has been identified with the Interpersonal Communications system and it takes more than two hours to initiate repair.
No

It might if the requirement were going to remain but the Project 2007-03 Real-Time Operations SDT proposed to retire that requirement during their last posting. We believe there needs to be better coordination with that SDT.
No
The language "to continuously assess transmission reliability" should be changed to "to continuously assess Bulk Electric System reliability" to reflect what the enforceability of the standards are meant to be. The requirement on the ERO should also be expanded similar to BAL-005-0.1b R1 to ensure that all operating entities and the entire BES is covered under a Reliability Coordinator. In R2, should "of" be "to"? Reliability Directives are issued to TOPs, BA, etc. The VSL for R1 is not consistent with the requirement. The requirement applies to the ERO but the VSL applies to the Regional Entity.
Yes
Yes
R1 states "When the results of an Operational Planning Analysis or Real-time Assessment indicate an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area." The word "notify" should be stuck.
The SDT did not address all of our concerns with COM-002-3 from the last posting. For entities registered as multiple functions, the combination of the definition of Reliability Directive and Requirement R1 could be confused to require a company to issue directives to itself. There are several organizations registered as a Reliability Coordinator, Transmission Operator and Balancing Authority. In these companies, it is not uncommon for those responsibilities to be distributed across multiple desks. Thus, for certain situations, a single System Operator may actually be the Reliability Coordinator and the Transmission Operator. In other situations, the System Operator serving the Reliability Coordinator function may be adjacent to the System Operator serving the as the Transmission Operator or Balancing Authority. We believe that it should never be necessary for these System Operators to issue Reliability Directives to themselves in the first example or to their co-worker in the second example to demonstrate compliance to NERC standards. How the entity coordinates its actions among its Reliability Coordinator, Balancing Authority and Transmission Operator roles is a corporate governance issue that should not be confused or complicated by the NERC standards. Thus, we believe that standards should be made clear that the Reliability Directive is directed to another company. We believe that, in place of requiring an operator, in real-time, to state "this is a Reliability Directive," there should be an allowance for an entity to develop procedures indicating, in advance, their expectations of three-part to their sub-operating entities. Therefore, we suggest modifying R1 to be "When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action, either verbally, when the communication is issued, or in advance through documented procedures, as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time.]" Also, we believe that the definition of Emergency, as currently cited in these draft Standards and included in the existing NERC Glossary should be modified to include the NERC Glossary term Adverse Reliability Impact to make the Standards more crisp, clear and enforceable. Because the Project 2007-03 Real-Time Operations SDT proposed to utilize the definition of Adverse Reliability Impact in TOP-001-2 R5 during the last posting, the change to the definition should be coordinated with that team. There is a text box in IRO-005-4 that indicates this standard will be retired. Yet, there still remain requirements in the standard and various other associated documentation indicates requirements are being move to this standard. Please delete the text box. IRO-014-2 R4 already includes a requirement to have weekly conference calls that should suffice. IRO-014-2 R2 seems to recognize that these Operating Procedures, Processes and Plans likely will not need to be discussed weekly as it only requires an annual update. In the definition of Reliability Directive, we suggest changing "to address an Emergency" to "to address a reliability constraint or a declared Emergency". Further, Requirement R2 in IRO-001 contains the words "which could include issuing Reliability Directives" but Reliability Directives are not referenced anywhere else in the standard. This inclusion seems unnecessary since without it, R2 already requires that the RC take actions or direct actions by others to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. Whether or not a Reliability Directive is issued is irrelevant in this requirement. We suggest that these words be removed. Note that COM-002 already stipulates the requirement for 3-part communication when a Reliability Directive is issued. The inclusion of "which could include issuing Reliability Directives" in IRO-001 is unnecessary.
Individual
Kathleen Goodman
ISO New England
No
We expressed in the last posting that we felt the definition of Interpersonal Communications might inadvertently include data. The SDT responded that it does not by referring to Interpersonal in the name of the definition. Clearly, you can't refer to the word you are defining in order to define it. However, it is possible "allows two or more individuals to ..." may solve this problem. Clarity should be sought in the next posting, if possible. This standard does not comport with the informational filing that NERC submitted to FERC on August 10, 2009 regarding its discontinued use of sub-requirements in standards development activities. We request the sub-requirements be modified into bulleted lists. Consider striking "to exchange Interconnection and operating information" in R1. R3. R5. R7. and R8. It is redundant to

the use of Interpersonal Communications “to interact, consult, or exchange information” in the definition. Consider striking “to exchange Interconnection and operating information” in R2, R4, R6. It is redundant to the use of Alternative Interpersonal Communications which uses Interpersonal Communications in its definition. Interpersonal Communications includes “to interact, consult, or exchange information” in its definition. For R2, why is Interchange Coordinator excluded? It is included in the Requirement R1 which deals with the Interpersonal Communications. Communications would need to be maintained with the Interchange Coordinator in the event of a failure of the Interpersonal Communications. For R3, affected neighboring Transmission Operators should be included. For R4 and R6, the sub-requirement list is different than for the associated Interpersonal Communications requirements R3 and R5 respectively. We believe these should be duplicate. That is the sub-requirement list for R4 should match R3 and the R6 should match R5. In the event of a failure of the Interpersonal Communications, the Transmission Operator and Balancing Authority both would need to maintain communications to the same entities as in the requirement to have Interpersonal Communications. Again, we would suggest replacing sub-requirements with bulleted lists. For R5, why are neighboring Balancing Authorities not included? Additionally R5 should only read Contact with Interchange Coordinator within same Interconnection. They certainly need to be able to contact one another to identify discrepancies in scheduling and sources of meter error that could lead to deviations in ACE. Should R2, R4 and R6 be constructed parallel to R1, R3, and R5? In R1, R3 and R5, the requirement is “shall have” while in R2, R4, and R6, the requirement is “shall designate”. Since one is for the Interpersonal Communications and the other is for the Alternative Interpersonal Communications, it seems the same wording should be used. We do not believe R2.2 and R1.2 should be limited to Reliability Coordinators in the same Interconnection only. We suggest modifying “within the same Interconnection” to “within the same Interconnection, and, as appropriate, between a-synchronously connected RCs which are not precluded by law from scheduling interchange energy (for schedule changes, curtailments, etc.)” since reliability coordination may be required among the RCs on both sides of an Interconnection boundary. The VSLs for R1 through R8 should be expanded to include multiple levels based on the number of entities that the functional entity does not have Interpersonal Communications or Alternative Interpersonal Communications. FERC specified their general preference for graduated in paragraph 27 of their June 19, 2008 order on VSLs. The second half of the Severe VSL for R9 is almost a duplicate to the Lower VSL. There are some small changes in the wording but both situations deal with the case where there is a problem that has been identified with the Interpersonal Communications system and it takes more than two hours to initiate repair.

No

It might if the requirement were going to remain but the Project 2007-03 Real-Time Operations SDT proposed to retire that requirement during their last posting. We believe there needs to be better coordination with that SDT.

No

The language “to continuously assess transmission reliability” should be changed to “to continuously assess Bulk Electric System reliability” to reflect what the enforceability of the standards are meant to be. The requirement on the ERO should also be expanded similar to BAL-005-0.1b R1 to ensure that all operating entities and the entire BES is covered under a Reliability Coordinator. In R2, should “of” be “to”? Reliability Directives are issued to TOPs, BA, etc. The VSL for R1 is not consistent with the requirement. The requirement applies to the ERO but the VSL applies to the Regional Entity.

Yes

Yes

R1 states “When the results of an Operational Planning Analysis or Real-time Assessment indicate an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.” The word “notify” should be stuck.

The SDT did not address all of our concerns with COM-002-3 from the last posting. For entities registered as multiple functions, the combination of the definition of Reliability Directive and Requirement R1 could be confused to require a company to issue directives to itself. There are several organizations registered as a Reliability Coordinator, Transmission Operator and Balancing Authority. In these companies, it is not uncommon for those responsibilities to be distributed across multiple desks. Thus, for certain situations, a single System Operator may actually be the Reliability Coordinator and the Transmission Operator. In other situations, the System Operator serving the Reliability Coordinator function may be adjacent to the System Operator serving the as the Transmission Operator or Balancing Authority. We believe that it should never be necessary for these System Operators to issue Reliability Directives to themselves in the first example or to their co-worker in the second example to demonstrate compliance to NERC standards. How the entity coordinates its actions among its Reliability Coordinator, Balancing Authority and Transmission Operator roles is a corporate governance issue that should not be confused or complicated by the NERC standards. Thus, we believe that standards should be made clear that the Reliability Directive is directed to another company. We believe that, in place of requiring an operator, in real-time, to state “this is a Reliability Directive,” there should be an allowance for an entity to develop procedures indicating, in advance, their expectations of three-part to their sub-operating entities. Therefore, we suggest modifying R1 to be “When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action, either verbally, when the communication is issued, or in advance through documented procedures, as a Reliability Directive to the recipient. [Violation Risk Factor: High] [Time Horizon:

Real-Time.]” Also, we believe that the definition of Emergency, as currently cited in these draft Standards and included in the existing NERC Glossary should be modified to include the NERC Glossary term Adverse Reliability Impact to make the Standards more crisp, clear and enforceable. Because the Project 2007-03 Real-Time Operations SDT proposed to utilize the definition of Adverse Reliability Impact in TOP-001-2 R5 during the last posting, the change to the definition should be coordinated with that team. There is a text box in IRO-005-4 that indicates this standard will be retired. Yet, there still remain requirements in the standard and various other associated documentation indicates requirements are being move to this standard. Please delete the text box. IRO-014-2 R4 already includes a requirement to have weekly conference calls that should suffice. IRO-014-2 R2 seems to recognize that these Operating Procedures, Processes and Plans likely will not need to be discussed weekly as it only requires an annual update. In the definition of Reliability Directive, we suggest changing “to address an Emergency” to “to address a reliability constraint or a declared Emergency”. Further, Requirement R2 in IRO-001 contains the words “which could include issuing Reliability Directives” but Reliability Directives are not referenced anywhere else in the standard. This inclusion seems unnecessary since without it, R2 already requires that the RC take actions or direct actions by others to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. Whether or not a Reliability Directive is issued is irrelevant in this requirement. We suggest that these words be removed. Note that COM-002 already stipulates the requirement for 3-part communication when a Reliability Directive is issued. The inclusion of “which could include issuing Reliability Directives” in IRO-001 is unnecessary.

Individual

Steve Myers

ERCOT ISO

No

We expressed in the last posting that we felt the definition of Interpersonal Communications might inadvertently include data. The SDT responded that it does not by referring to Interpersonal in the name of the definition. Clearly, you can't refer to the word you are defining in order to define it. However, it is possible “allows two or more individuals to ...” may solve this problem. Clarity should be sought in the next posting, if possible. This standard does not comport with the informational filing that NERC submitted to FERC on August 10, 2009 regarding its discontinued use of sub-requirements in standards development activities. We request the sub-requirements be modified into bulleted lists. Consider striking “to exchange Interconnection and operating information” in R1, R3, R5, R7, and R8. It is redundant to the use of Interpersonal Communications “to interact, consult, or exchange information” in the definition. Consider striking “to exchange Interconnection and operating information” in R2, R4, R6. It is redundant to the use of Alternative Interpersonal Communications which uses Interpersonal Communications in its definition. Interpersonal Communications includes “to interact, consult, or exchange information” in its definition. For R2, why is Interchange Coordinator excluded? It is included in the Requirement R1 which deals with the Interpersonal Communications. Communications would need to be maintained with the Interchange Coordinator in the event of a failure of the Interpersonal Communications. For R3, affected neighboring Transmission Operators should be included. For R4 and R6, the sub-requirement list is different than for than for the associated Interpersonal Communications requirements R3 and R5 respectively. We believe these should be duplicate. That is the sub-requirement list for R4 should match R3 and the R6 should match R5. In the event of a failure of the Interpersonal Communications, the Transmission Operator and Balancing Authority both would need to maintain communications to the same entities as in the requirement to have Interpersonal Communications. Again, we would suggest replacing sub-requirements with bulleted lists. For R5, why are neighboring Balancing Authorities not included? Additionally R5 should only read Contact with Interchange Coordinator within same Interconnection. They certainly need to be able to contact one another to identify discrepancies in scheduling and sources of meter error that could lead to deviations in ACE. Should R2, R4 and R6 be constructed parallel to R1, R3, and R5? In R1, R3 and R5, the requirement is “shall have” while in R2, R4, and R6, the requirement is “shall designate”. Since one is for the Interpersonal Communications and the other is for the Alternative Interpersonal Communications, it seems the same wording should be used. We do not believe R2.2 and R1.2 should be limited to Reliability Coordinators in the same Interconnection only. We suggest modifying “within the same Interconnection” to “within the same Interconnection, and, as appropriate, between a-synchronously connected RCs which are not precluded by law from scheduling interchange energy (for schedule changes, curtailments, etc.)” since reliability coordination may be required among the RCs on both sides of an Interconnection boundary. The VSLs for R1 through R8 should be expanded to include multiple levels based on the number of entities that the functional entity does not have Interpersonal Communications or Alternative Interpersonal Communications. FERC specified their general preference for gradated in paragraph 27 of their June 19, 2008 order on VSLs. The second half of the Severe VSL for R9 is almost a duplicate to the Lower VSL. There are some small changes in the wording but both situations deal with the case where there is a problem that has been identified with the Interpersonal Communications system and it takes more than two hours to initiate repair.

No

It might if the requirement were going to remain but the Project 2007-03 Real-Time Operations SDT proposed to retire that requirement during their last posting. We believe there needs to be better coordination with that SDT.

No

The language “to continuously assess transmission reliability” should be changed to “to continuously assess Bulk Electric System reliability” to reflect what the enforceability of the standards are meant to be. The requirement on the ERO should also be expanded similar to BAL-005-0.1b R1 to ensure that all operating entities and the entire BES is

covered under a Reliability Coordinator. In R2, should "of" be "to"? Reliability Directives are issued to TOPs, BA, etc. The VSL for R1 is not consistent with the requirement. The requirement applies to the ERO but the VSL applies to the Regional Entity.
Yes
Yes
R1 states "When the results of an Operational Planning Analysis or Real-time Assessment indicate an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area." The word "notify" should be stuck.
The SDT did not address all of our concerns with COM-002-3 from the last posting. For entities registered as multiple functions, the combination of the definition of Reliability Directive and Requirement R1 could be confused to require a company to issue directives to itself. There are several organizations registered as a Reliability Coordinator, Transmission Operator and Balancing Authority. In these companies, it is not uncommon for those responsibilities to be distributed across multiple desks. Thus, for certain situations, a single System Operator may actually be the Reliability Coordinator and the Transmission Operator. In other situations, the System Operator serving the Reliability Coordinator function may be adjacent to the System Operator serving the as the Transmission Operator or Balancing Authority. We believe that it should never be necessary for these System Operators to issue Reliability Directives to themselves in the first example or to their co-worker in the second example to demonstrate compliance to NERC standards. How the entity coordinates its actions among its Reliability Coordinator, Balancing Authority and Transmission Operator roles is a corporate governance issue that should not be confused or complicated by the NERC standards. Thus, we believe that standards should be made clear that the Reliability Directive is directed to another company. We believe that, in place of requiring an operator, in real-time, to state "this is a Reliability Directive," there should be an allowance for an entity to develop procedures indicating, in advance, their expectations of three-part to their sub-operating entities. Therefore, we suggest modifying R1 to be "When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action, either verbally, when the communication is issued, or in advance through documented procedures, as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time.]" Also, we believe that the definition of Emergency, as currently cited in these draft Standards and included in the existing NERC Glossary should be modified to include the NERC Glossary term Adverse Reliability Impact to make the Standards more crisp, clear and enforceable. Because the Project 2007-03 Real-Time Operations SDT proposed to utilize the definition of Adverse Reliability Impact in TOP-001-2 R5 during the last posting, the change to the definition should be coordinated with that team. There is a text box in IRO-005-4 that indicates this standard will be retired. Yet, there still remain requirements in the standard and various other associated documentation indicates requirements are being move to this standard. Please delete the text box. IRO-014-2 R4 already includes a requirement to have weekly conference calls that should suffice. IRO-014-2 R2 seems to recognize that these Operating Procedures, Processes and Plans likely will not need to be discussed weekly as it only requires an annual update. In the definition of Reliability Directive, we suggest changing "to address an Emergency" to "to address a reliability constraint or a declared Emergency". Further, Requirement R2 in IRO-001 contains the words "which could include issuing Reliability Directives" but Reliability Directives are not referenced anywhere else in the standard. This inclusion seems unnecessary since without it, R2 already requires that the RC take actions or direct actions by others to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. Whether or not a Reliability Directive is issued is irrelevant in this requirement. We suggest that these words be removed. Note that COM-002 already stipulates the requirement for 3-part communication when a Reliability Directive is issued. The inclusion of "which could include issuing Reliability Directives" in IRO-001 is unnecessary.
Individual
Steve Rueckert
WECC
Yes
Yes
Yes
Yes
Yes
Yes
Suggested minor revision to the definition of Reliability Directive as follows (change in caps) A communication, IDENTIFIED AS A RELIABILITY DIRECTIVE, initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where action by the recipient is necessary to address an Emergency. Clearly identifying a

communication as a Reliability Directive provides immediate information to the recipient as the the nature of the communications.
Individual
Bill Keagle
BGE
Yes
BGE has no additional comments.
Yes
BGE has no additional comments.
Yes
BGE has no additional comments.
Yes
BGE has no additional comments.
Yes
BGE has no additional comments.
BGE has no additional comments.
Group
MRO's NERC Standards Review Subcommittee
Carol Gerou
No
A. R5.5 states a BA shall have Interpersonal Communications with each Interchange Coordinator within its BA area and adjacent Interchange Coordinators. NERC Registry Criteria (v5) uses the term "Interchange Authority" not Interchange Coordinator, please clarify. B. Upon review of the NERC Compliance Registry, there are only 56 BA's that are also registered as an IA but 138 total BA's within the registry. R5.5 is not clearly written because many BA's do not have an IA within their BA area. Though a BA will use an IA to schedule interchange, a possible rewrite of R5.5 may be "Each Interchange Authority that the BA actively uses to arrange Interchange". C. R10 states that the RC, TOP, BA, DP and GOP shall notify "impacted entities" within 60 minutes... Please clarify if the SDT means the entities within the applicability section or is this to be determined by the entity. A possible rewrite may be; "Each RC shall notify TOP's, BA's, and IA's within its RC area along with adjacent RC's within the same Interconnection". This break down would need to be required for each affected entity and would provide clarity to the industry. D. We do not agree with a DP and GOP need to be held to the same level of compliance as a RC, BA or TOP. FERC Order 693 (paragraph 487) directed the DP and GOP to be included in this standard by stating;" We expect the telecommunication requirements for all applicable entities will vary according to their roles and that these requirements will be developed under the Reliability Standards development process". A DP and GOP may not be staffed 24 hours a day like a BA or TOP and the SDT did not take this into consideration. E. We understand that the DP and GOP need a means of communicating with their BA and TOP (R7 and R8) but would this not be the same Interpersonal Communications capability that as stated in R3 and R5 for the TOP and BA? Example: If the BA uses a phone line as their Interpersonal Communication medium to contact the DP wouldn't the DP also use the same medium to communicate with their BA? Yes, there could be different mediums but 99% of the time it will be the same medium. F. R10 could mean that if there is a logging system that detects an Interpersonal Communication failure, then all applicable entities will need to monitor that monitoring device. Since this requirement applies to all applicable entities, and Interpersonal Communication mediums will most likely be the same, there will always be two entities found non compliant if the 60 minute threshold is passed.
No
A. Agree that a receiving entity should not be held accountable until such time that they are required to take such action. B. It might if the requirement were going to remain but the Project 2007-03 ("Real-Time Operations SDT") proposed to retire that requirement during their last posting. This needs to be coordinated with that SDT.
No
A. R1, As written it is unclear what level of certification this will entail? Presently written within the NERC Reliability Standards, responsibility is given to RC's to manage the reliability of their areas. Recommend deleting this requirement. The ERO has pushed back in other Standards to having a responsibility for any NERC Requirements, since they are not a user, owner, or operator of the BES (see EOP-004-2). If this does move forward and an RC is certified by the ERO and then the RC is found non-compliant by a Regional Entity, for an associated certified item, will the ERO be held responsible, too? If the SDT selects to keep R1, there are some issues with how the requirement is written. The requirement places emphasis on regions and regional boundaries when no emphasis should be placed there. There are multiple Reliability Coordinators the span multiple regions. The language "to continuously assess transmission reliability" should be changed to "to continuously assess Bulk Electric System reliability" to reflect on what the standards are enforceable. The requirement on the ERO should also be expanded similar to BAL-005-0.1b R1 to ensure that all operating entities and the entire BES is covered under a Reliability Coordinator. B. In R2, should "of" be "to". Reliability Directives are issued to TOPs, BA, etc. C. The VSL for R1 is not consistent with the requirement. The requirement applies to the ERO but the VSL applies to the Regional Entity.

Yes
Yes
A. COM-002-3, R2 As stated in FERC Order 693, section 512, it is essential that RCs, BA's and TOP's have communications with DPs. R2 also applies to TSPs, LSEs and PSEs. There is no directive for this and it is going to be almost impossible to communicate with a DP since DPs are usually not operated 24 hours per day as like a RC, TOP, or BA. Many DPs have answering services that will relay a message once they receive it and then pass it along to someone. An answering company could repeat the directive word for word but this will not add to any reliability level. The SDT should reconsider the applicability section of this Standard to only apply to a RC, TOP and BA for the issuance of a Reliability Directive. BA's should have the responsibility to have an Interpersonal Communication medium with DPs in their BA area per COM-001-2. B. IRO-002-2, R1, Recommend that "System Operators" be replaced with "system operators" since NERC has defined System Operator to be an individual at a control center (BA, TOP, GOP, or RC). The lower cased system operator will only point to the RC system operator that will have this R1 authority. C. The SDT did not address all of our concerns with COM-002-3 from the last posting. For entities registered as multiple functions, the combination of the definition of Reliability Directive and Requirement R1 could be confused to require a company to issue directives to itself. There are several organizations registered as a Reliability Coordinator, Transmission Operator and Balancing Authority. In these companies, it is not uncommon for those responsibilities to be distributed across multiple desks. Thus, for certain situations, a single System Operator may actually be the Reliability Coordinator and the Transmission Operator. In other situations, the System Operator serving the Reliability Coordinator function may be adjacent to the System Operator serving the as the Transmission Operator or Balancing Authority. We believe that it should never be necessary for these System Operators to issue Reliability Directives to themselves in the first example or to their co-worker in the second example to demonstrate compliance to NERC standards. How the entity coordinates its actions among its Reliability Coordinator, Balancing Authority and Transmission Operator roles is a corporate governance issue that should not be confused or complicated by the NERC standards. Thus, we believe that standards should be made clear that the Reliability Directive is directed to another company. D. We also are concerned about the need to conduct three-part communications for a Reliability Directive issued through a blast call. Under these circumstances, the need for immediate action of multiple parties may require a blast call and there may not be time for all parties to complete three-part communications before initiating actions. Thus, we believe blast calls should be treated separately and that should be made clear. E. COM-002-3 R2 needs to be rewritten as it is too verbose. The point is for the recipient of the original message to get the issuer to confirm that the message was understood. We suggest rewording R2 to "Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive." Once the receiver has completed this requirement, the ball is in the issuer's court per Requirement R3. No additional words are necessary in the requirement. F. Per COM-002-3 R1, who decides that actions need to be issued as a Reliability Directive? Shouldn't it be the responsible entity? Thus, can we assume that if the responsible entity does not identify a communication as a Reliability Directive that it is not a Reliability Directive per the requirement? After all, why would an entity require actions but not issue a Reliability Directive. Following this logic, the VSL for R1 would never apply. Would a compliance auditor second guess if an action required a Reliability Directive? G. Because the Project 2007-03 ("Real-Time Operations SDT") proposed to utilize the definition of Adverse Reliability Impact in TOP-001-2 R5 during the last posting, the change to the definition should be coordinated with that team. H. There is a text box in IRO-005-4 that indicates this standard will be retired. Yet, there still remain requirements in the standard and various other associated documentation indicates requirements are being move to this standard. Please delete the text box. I. Please strike part IRO-014-2 Part 1.7. There is no need to have a weekly conference to discuss every Operating Procedure, Operating Process and Operating Plan. As this requirement is written, a conference call would be necessary for each. Furthermore, IRO-014-2 R4 already includes a requirement to have weekly conference calls that should suffice. IRO-014-2 R2 seems to recognize that these Operating Procedures, Processes and Plans likely will not need to be discussed weekly as it only requires an annual update. J. IRO-014-2 R4 is overly broad and would require Reliability Coordinators that will not impact one another to participate on conference calls with one another without any reliability benefit. The issue is created by the addition of the clause "within the same Interconnection" to the requirement. ISO-NE, FRCC, Midwest ISO, and SPP are all in the same Interconnection. It is hard to fathom there being reliability benefit to SPP and ISO-NE conversing weekly or Midwest ISO and FRCC conversing weekly. We suggest limiting the requirement to adjacent Reliability Coordinators. K. For IRO-014-2 R5, we suggest replacing "other" with "impacted" to limit the notification of Adverse Reliability Impacts to only those Reliability Coordinators that need to know. Because the definition of Adverse Reliability Impact includes "Bulk Electric System instability or Cascading", it is possible that the cascading of 138 kV lines serving a load pocket or generator outlet stability issues could require a Reliability Coordinator to notify all other Reliability Coordinators regardless of impact. This would include Reliability Coordinators outside of the Interconnection with the problem. It would also include Reliability Coordinators that are not impacted. For instance, an issue in New England that would not pose a threat outside the northeast would require ISO-NE to notify SPP and FRCC and Reliability Coordinators in the Western Interconnection. There is no reliability benefit to this notification. L. IRO-014-2 R6-R8 are problematic and need to be refined to make clear that the Reliability Coordinators shall operate to the most conservative limit. It should not require a Reliability Coordinator that disagrees with an action plan to implement the action plan. The Reliability Coordinator will

be disagreeing with the action plan for a reliability reasons. Assuming they are correct, the requirement to implement said action plan will actually put the Interconnection at greater risk. These requirements inappropriately attempt to codify the debate and analysis that occurs between and within Reliability Coordinators when there are differing results in reliability analysis. This is part of the problem with having a Wide Area view that results in Reliability Coordinators having a view into other Reliability Coordinator Area. Their results and conclusions may be different. There should be a hierarchical structure for whose results should be used. It should be the Reliability Coordinator with primary responsibility unless the other Reliability Coordinator has evidence to demonstrate that the Reliability Coordinator with primary responsibility is incorrect. What this should do is, to trigger both to review their models and data to assess the problem. None of this needs to be codified in the standards though. M. In the definition of Reliability Directive, we suggest changing "to address an Emergency" to "to address a declared Emergency". This would help limit second guessing for a situation where a System Operator took action because he truly believed he was in an Emergency but after the fact analysis demonstrates there really was not an Emergency. N. The drafting team should expand its rationale for deleting IRO-002-1 R3. Currently, TOP-005 R1 is referenced. The project 2007-03 ("Real-Time Operations SDT") proposed to retire TOP-005-2 R1 in its most recent posting. O. We disagree with deleting IRO-002-1 R5 and R7 which establishes tools and monitoring capabilities. There should be basic tool requirements established for Reliability Coordinators. The project 2009-02 ("Real-time Reliability Monitoring and Analysis Capabilities") will be addressing these issues in more detail. Thus, it does not make sense to delete these requirements until that drafting team completes its task.

Group

FirstEnergy

Sam Ciccone

No

It is not clear from the definition of Interpersonal Communications if certain communications "mediums" such as email, instant messaging, etc. are included. Furthermore, the Measures for these requirements all include "electronic communications" as acceptable evidence. If the drafting team does not intend these mediums be included, then it should be clarified in the definition. We suggest the following wording of the definition: Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information. This interaction consists of verbal, spoken words exchanged in Real-time.

Yes

Yes

Yes

Yes

FirstEnergy offers the following additional comments: 1. The effective dates of the standards indicate an effective date of the first day of the first calendar quarter following regulatory approval. The changes to these standards will require changes to existing compliance evidence, as well as the creation of compliance evidence for some entities such as the Generator Operator which is a new applicable entity in COM-001. Therefore, to give entities ample time to get their compliance evidence in place, we suggest the effective state "the first day of the second quarter after regulatory approval". 2. With regard to the requirements for Alternative Interpersonal Communications, we question why the Generator Operator or Distribution Provider is not required to have backup communication. It would be difficult for a Reliability Coordinator, for instance, to contact a Generator Operator whose primary communications have been disabled if that entity does not have a backup. We suggest that the drafting team consider adding the GOP and DP as applicable entities requiring alternative communications.

Group

Midwest ISO Standards Collaborators

Jason Marshall

No

We expressed in the last posting that we felt the definition of Interpersonal Communications might inadvertently include data. The drafting team responded that it does not by referring to Interpersonal in the name of the definition. Clearly, you can't refer the word you are defining to define it. However, it is possible "allows two or more individuals to ..." may solve this problem. What are the drafting team's thoughts on this issue? This standard does not comport with the informational filing that NERC submitted to FERC on August 10, 2009 regarding its discontinued use of sub-requirements in standards development activities. Consider striking "to exchange Interconnection and operating information" in R1, R3, R5, R7, and R8. It is redundant to the use of Interpersonal Communications "to interact, consult, or exchange information" in the definition. Consider striking "to exchange Interconnection and operating information" in R2, R4, R6. It is redundant to the use of Alternative Interpersonal Communications which uses Interpersonal Communications in its definition. Interpersonal Communications includes "to interact, consult, or exchange information" in its definition. For R2, why is Interchange Coordinator excluded? It is included in the Requirement R1 which deals

with the Interpersonal Communications. Communications would need to be maintained with the Interchange Coordinator in the event of a failure of the Interpersonal Communications. For R3, neighboring Transmission Operators should be included. For R4 and R6, the sub-requirement list is different than for the associated Interpersonal Communications requirements R3 and R5 respectively. They should be duplicate. That is the sub-requirement list for R4 should match R3 and the R6 should match R5. In the event of a failure of the Interpersonal Communications, the Transmission Operator and Balancing Authority both would need to maintain communications to the same entities as in the requirement to have Interpersonal Communications. For R5, why are neighboring Balancing Authorities not included? They certainly need to be able to contact one another to identify discrepancies in scheduling and sources of meter error that could lead to deviations in ACE. Should R2, R4 and R6 be constructed parallel to R1, R3, and R5? In R1, R3 and R5, the requirement is "shall have" while in R2, R4, and R6, the requirement is "shall designate". Since one is for the Interpersonal Communications and the other is for the Alternative Interpersonal Communications, it seems the same wording should be used. Should R2.2 and R1.2 be limited to Reliability Coordinators in the same Interconnection only? The VSLs for R1 through R8 should be expanded to include multiple levels based on the number of entities that the functional entity does not have Interpersonal Communications or Alternative Interpersonal Communications. FERC specified their general preference for gradated in paragraph 27 of their June 19, 2008 order on VSLs. The second half of the Severe VSL for R9 is almost duplicate to the Lower VSL. There are some small changes in the wording but both situations deal with the case where there is a problem that has been identified with the Interpersonal Communications system and it takes more than two hours to initiate repair.

No

It might if the requirement were going to remain but the Project 2007-03 Real-Time Operations SDT proposed to retire that requirement during their last posting. This needs to be coordinated with that SDT.

No

In general, we are not opposed to the concept of the ERO certifying the Reliability Coordinators; however, there are some issues with how the requirement is written. The requirement places emphasis on regions and regional boundaries when no emphasis should be placed there. There are multiple Reliability Coordinators that span multiple regions. The language "to continuously assess transmission reliability" should be changed to "to continuously assess Bulk Electric System reliability" to reflect on what the standards are enforceable. The requirement on the ERO should also be expanded similar to BAL-005-0.1b R1 to ensure that all operating entities and the entire BES is covered under a Reliability Coordinator Area. In R2, should "of" be "to". Reliability Directives are issued to TOPs, BA, etc. The VSL for R1 is not consistent with the requirement. The requirement applies to the ERO but the VSL applies to the Regional Entity.

Yes

Yes

The SDT did not address all of our concerns with COM-002-3 from the last posting. For entities registered as multiple functions, the combination of the definition of Reliability Directive and Requirement R1 could be confused to require a company to issue directives to itself. There are several organizations registered as a Reliability Coordinator, Transmission Operator and Balancing Authority. In these companies, it is not uncommon for those responsibilities to be distributed across multiple desks. Thus, for certain situations, a single System Operator may actually be the Reliability Coordinator and the Transmission Operator. In other situations, the System Operator serving the Reliability Coordinator function may be adjacent to the System Operator serving the as the Transmission Operator or Balancing Authority. We believe that it should never be necessary for these System Operators to issue Reliability Directives to themselves in the first example or to their co-worker in the second example to demonstrate compliance to NERC standards. How the entity coordinates its actions among its Reliability Coordinator, Balancing Authority and Transmission Operator roles is a corporate governance issue that should not be confused or complicated by the NERC standards. Thus, we believe that standards should be made clear that the Reliability Directive is directed to another company. We also are concerned about the need to conduct three-part communications for a Reliability Directive issued through a blast call. Under these circumstances, the need for immediate action of multiple parties may require a blast call and there may not be time for all parties to complete three-part communications before initiating actions. Thus, we believe blast calls should be treated separately and that should be made clear. COM-002-3 R2 needs to be rewritten as it is too verbose. The point is for the recipient of the original message to get the issuer to confirm that the message was understood. We suggest rewording R2 to "Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive." Once the receiver has completed this requirement, the ball is in the issuer's court per Requirement R3. No additional words are necessary in the requirement. Per COM-002-3 R1, who decides that actions need to be issued as a Reliability Directive? Shouldn't it be the responsible entity? Thus, can we assume that if the responsible entity does not identify a communication as a Reliability Directive that it is not a Reliability Directive per the requirement? After all, why would an entity require actions but not issue a Reliability Directive. Following this logic, the VSL for R1 would never apply. Would a compliance auditor second guess if an action required a Reliability Directive? Because the Project 2007-03 Real-Time Operations SDT proposed to utilize the definition of Adverse Reliability Impact in TOP-001-2 R5 during the last posting, the change to the definition should be coordinated with that team. There is a

text box in IRO-005-4 that indicates this standard will be retired. Yet, there still remain requirements in the standard and various other associated documentation indicates requirements are being move to this standard. Please delete the text box. Please strike part IRO-014-2 Part 1.7. There is no need to have a weekly conference to discuss every Operating Procedure, Operating Process and Operating Plan. As this requirement is written, a conference call would be necessary for each. Furthermore, IRO-014-2 R4 already includes a requirement to have weekly conference calls that should suffice. IRO-014-2 R2 seems to recognize that these Operating Procedures, Processes and Plans likely will not need to be discussed weekly as it only requires an annual update. IRO-014-2 R4 is overly broad and would require Reliability Coordinators that will not impact one another to participate on conference calls with one another without any reliability benefit. The issue is created by the addition of the clause "within the same Interconnection" to the requirement. ISO-NE, FRCC, Midwest ISO, and SPP are all in the same Interconnection. It is hard to fathom there being reliability benefit to SPP and ISO-NE conversing weekly or Midwest ISO and FRCC conversing weekly. We suggest limiting the requirement to adjacent Reliability Coordinators. For IRO-014-2 R5, we suggest replacing "other" with "impacted" to limit the notification of Adverse Reliability Impacts to only those Reliability Coordinators that need to know. Because the definition of Adverse Reliability Impact includes "Bulk Electric System instability or Cascading", it is possible that the cascading of 138 kV lines serving a load pocket or generator outlet stability issues could require a Reliability Coordinator to notify all other Reliability Coordinators regardless of impact. This would include Reliability Coordinators outside of the Interconnection with the problem. It would also include Reliability Coordinators that are not impacted. For instance, an issue in New England that would not pose a threat outside the northeast would require ISO-NE to notify SPP and FRCC and Reliability Coordinators in the Western Interconnection. There is no reliability benefit to this notification. IRO-014-2 R6-R8 are problematic and need to be refined to make clear that the Reliability Coordinators shall operate to the most conservative limit. It should not require a Reliability Coordinator that disagrees with an action plan to implement the action plan. The Reliability Coordinator will be disagreeing with the action plan for reliability reasons. Assuming they are correct, the requirement to implement said action plan will actually put the Interconnection at greater risk. These requirements inappropriately attempt to codify the debate and analysis that occurs between and within Reliability Coordinators when there are differing results in reliability analysis. This is part of the problem with having a Wide Area view that results in Reliability Coordinators having a view into other Reliability Coordinator Areas. Their results and conclusions may be different. There should be a hierarchical structure for whose results should be used. It should be the Reliability Coordinator with primary responsibility unless the other Reliability Coordinator has evidence to demonstrate that the Reliability Coordinator with primary responsibility is incorrect. What this should do is to trigger both to review their models and data to assess the problem. None of this needs to be codified in the standards though. In the definition of Reliability Directive, we suggest changing "to address an Emergency" to "to address a declared Emergency". This would help limit second guessing for a situation where a System Operator took action because he truly believed he was an Emergency but after the fact analysis demonstrates there really was not an Emergency. The drafting team should expand its rationale for deleting IRO-002-1 R3. Currently, TOP-005 R1 is referenced. The Real-Time Operations drafting team proposed to retire TOP-005-2 R1 in its most recent posting. We disagree with deleting IRO-002-1 R5 and R7 which establish tools and monitoring capabilities. There should be basic tools requirements established for Reliability Coordinators. Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities will be addressing these issues in more detail. Thus, it does not make sense to delete these requirements until that drafting team completes its task.

Individual
Brenda Powell
Constellation Energy Commodities Group
Yes
Yes
Yes
Yes
Yes
Group
Southern Company
Cindy Martin
No
Comments: Standard COM-001-2 R10. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider, and Generator Operator shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer. Comment: It is not clear whether the notification requirements identified in R10 apply to failure of ALL available Interpersonal Communications

or ANY Interpersonal Communications. We suggest that the existence of functioning Alternative Interpersonal Communications precludes the requirement for notification of impacted entities. D. Compliance 1. Compliance Monitoring Process 1.3 Data Retention Each Generator Operator shall keep the most recent twelve months of historical data (evidence) for Requirements R8 and R10, Measures M8 and M10. Comment: The data retention requirements specified for the Generator Operator in Para. 1.3 (above) are not consistent with the 3-year audit interval for the GOP. Question: When audited on this Standard is the expectation that the GOP will have 12 months of evidence or 36 months of evidence? Standard COM-002-3 R2. Each Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message has been confirmed. Comment: The term "Reliability Directive" is currently not defined in the NERC Glossary of Terms. However, in the Implementation Plan for COM-002-3 the RC SDT proposes a definition for Reliability Directive. It is implied in the standard that the Reliability Directive is issued as a voice command which precludes the use of our preferred method of Interpersonal Communication. However, this is not definitively stated in either the standard or the proposed definition. I think this needs to be made clearer if the Reliability Directive must be issued as a voice command. D. Compliance 1. Compliance Monitoring Process 1.3 Data Retention The Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity shall retain evidence of Requirement 2, Measure 2 for the most recent 3 months. Comment: The data retention requirements specified for the Generator Operator in Para. 1.3 (above) are not consistent with the 3-year audit interval for the GOP/PSE. Question: When audited on this Standard is the expectation that the GOP and PSE will have 3 months of evidence or 36 months of evidence?
No
Comments: I see no connection between XCEL's comment on COM-001-1. The requirements of COM-001-1 require the RCs, TOPs, and BAs to have a primary interpersonal communications method and to designate an alternative. I believe that if the requirements for the entity to have both primary and alternative methods of interpersonal communications this objection could be cleared. For example, R2 Each Reliability Coordinator shall designate have an Alternative Interpersonal Communications capability with the following entities to exchange Interconnection and operating information
No
Comments: This would allow NERC to designate one entity to be the Reliability Coordinator for an entire interconnection or the entire continent. This would reduce the Regional Reliability Organizations to compliance entities.
Yes
Yes
Comments: It appears that the requirements for entities designated in the IRO standards to have tools to access and/or monitor the system have been moved to pending standards that are not enforceable. It seems that if the newest revisions of the IRO standards are not implemented as a group there will be either missing requirements or duplicate requirements in the IRO standards.
Individual
Greg Rowland
Duke Energy
No
• We question how far the definition of Alternative Interpersonal Communication goes in requiring separate infrastructure from Interpersonal Communication. For example, wireless communications sometime utilize fiber optic networks. • We question why the requirements state that entities must "have" Interpersonal Communications capability, but must "designate" Alternative Interpersonal Communications capability? • R1.2 and R2.2 – Why is this limited to the same interconnection? • R3 – need to add neighboring TOPs. • R5 – need to add adjacent BAs. • Interchange Coordinator – Add IC to the Applicability Section, and add a requirement that the IC have Interpersonal Communication capability with its BA and adjacent BAs. • Requirements to "designate" Alternative Interpersonal Communication should carry a "Medium" VRF instead of "High", because they are a backup capability. The word "designate" carries the connotation that these are documentation requirements. • R9 requires a monthly test of Alternative Interpersonal Communications capability. This was quarterly in the last draft. We question how these requirements for "Alternative Interpersonal Communications" capability are related to requirements for "backup functionality" in EOP-008-1, which requires an annual test of backup functionality. Clarity on the relationship between "Interpersonal Communications", "Alternative Interpersonal Communications", "primary control center functionality" and "backup control center functionality" would be appreciated. • R11 – is this requirement being moved to COM-003? • Data Retention – Is data retention really going to be just 12 months? Most auditors seem to be asking for everything since the last audit.
No
Requirements of TOP-001-1 are being revised under Project 2007-03, which may not continue to adequately address Xcel's concern.

No
How is NERC going to certify the RCs? Also, we believe the word "all" should be inserted after the word "among", so that it's clear that all generation, transmission and load must be included.
Yes
Yes
• COM-002-3 contains the proposed definition "Reliability Directive". We continue to believe Requirement R1 should be deleted and that this definition should contain the phrase "identified as a Reliability Directive to the recipient". Otherwise, compliance controversies will arise when auditors second-guess the RC, TOP or BA's judgment regarding whether or not an abnormal system condition met the definition of "Emergency", and warranted a "Reliability Directive" with 3-part communication. A conforming change will need to be made to R2, since it refers to R1. This change in the definition of "Reliability Directive" is also needed because this term is used in other standards such as IRO-001-2, and without repeating a similar requirement to COM-002-3 requirement R1 in IRO-001-2, there is potential for confusion. • We disagree with the VSL for COM-002-3. This is clearly a requirement with two possible compliance failures: Failure to acknowledge a correct repeat-back, and failure to resolve an incorrect repeat-back. These failures have dramatically different consequences, which the drafting team should recognize via a graduated VSL. We think that the failure to acknowledge should either be "Lower" or "Medium". • Requirement R2 of IRO-001-2 is unclear and should be reworded as follows: "Each Reliability Coordinator shall take actions or direct actions (which could include issuing Reliability Directives to Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers within its Reliability Coordinator Area) to either prevent identified events that could result in an Adverse Reliability Impact, or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts." • Various changes have been made to the defined term "Adverse Reliability Impact" as this project has progressed. We believe the latest change should not be made, and the Phrase "uncontrolled separation" should be reinserted in the definition, because that phrase is part of the Epect 2005 legislation definition of "reliable operation". Here is the text from the legislation: "The term 'reliable operation' means operating the elements of the bulk-power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cybersecurity incident, or unanticipated failure of system elements."
Group
SPP Standards Development
Robert Rhodes
No
We would suggest that the applicability of COM-001-2 be expanded to that listed in COM-002-3. How can the directives to be issued in COM-002 be delivered and confirmed without having Interpersonal Communications capability? All of the functional entities listed in R1.1 should also be listed in R2.1. Similarly the sub-requirements of R3 should also be applied to R4. The same holds true for R5 and R6. If the SDT intends to exclude data communications from Interpersonal Communications and Alternative Interpersonal Communications, we suggest the SDT be more specific in the definition to specifically exclude data communications in the definition. It is not readily apparent that these terms do not apply to data communications and without a clarification, confusion exists.
Yes
In fact, we believe that R1, R2 and R5 more specifically put that requirement on the TOP. The TOP doesn't have to wait for the RC and any directive that may be associated with R3 prior to taking action to mitigate an emergency condition.
No
Is this more of a registry question than a standards issue? While we agree that there needs to be a requirement somewhere that establishes the need for Reliability Coordinators, isn't there also a similar need for other functional entities such as Transmission Operators, Balancing Authorities, etc? Should these be captured in standards or in the certification/registration process?
Yes
Yes
IRO-001-2, R2 implies that the RC could interrupt the normal chain of command from the TOP and/or BA to their respective GOPs, ICs and DPs thereby circumventing the coordinating process that currently exists. In fact, these entities may not even know their RCs nor be able to identify them and as such any directive from the RC may not be implemented in a timely manner. We would like to see a qualifier on this requirement that does not remove the normal coordination role from the TOP with his DP, etc. We would suggest that "with enough details that the accuracy of the message has been confirmed" be deleted from COM-002-3, R2. We would suggest the use of the term "instruction" and its derivatives rather than 'direct' in IRO-001-2. R2. R3 and R4. Delete 'issue an alert to' in IRO-005-4. R1. There are

yellow boxes in IRO-005-4, redline versions, which indicate that this standard is being retired, but it isn't because two requirements from IRO-001 are being returned to this standard.
Individual
CJ Ingersoll
CECD
No
Based on the drafting teams response that the definition of Interpersonal"clarifies the exclusion of media dedicated to Telemetry or other data exchange,the term Interpersonal Communication should be replaced with verbal communication capabilities. The term Alternative Interpersonal Communication should be replaced with alternative verbal communication capability that is able to serve as a substitute for and does not utilize the same infrastructure (medium) as verbal communications capabilities used for day-to-day operations.
Yes
Yes
Yes
1. COM-002 R2 states that "the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message has been confirmed." Recommend a change to "the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the desired outcome of the message is clear". 2. IRO-001 R2 states "Each Reliability Coordinator shall take actions or direct actions which could include issuing Reliability Directives of Transmission Operators, ..." Recommend a change to "Each Reliability Coordinator shall take actions or direct actions which could include issuing Reliability Directives [See COM-002] to Transmission Operators, ..." 3. IRO-001 R4 states entities "shall inform its Reliability Coordinator upon recognition of its inability to perform as directed per Requirement R3." Recommend a change to, entities "shall inform its Reliability Coordinator upon recognition of its inability to perform as directed."
Individual
Rex A Roehl
Indeck Energy Services
No
Yes
No
Yes
Yes
Individual
Shaun Anders
City of Springfield, IL - City Water Light and Power (CWLP)
No
The definition of "Interpersonal Communications" is overly broad and does not address the functional needs of reliability coordination. The definition should be limited to systems utilized for essential reliability functions. While the Purpose statement in the standard does address this intent, the explicit inclusion in the definition removes all ambiguity. Further, the definition of "Alternative Interpersonal Communications" without corresponding explicit definition of Primary Interpersonal Communications may lead to confusion and unnecessary duplication of efforts in testing and maintenance.
No
TOP-001 is in the process of being substantially modified by Project 2007-03. These changes may conflict with the matter addressed by Xcel's comment. Thus, Xcel's concern should be addressed independently but in the context of the TOP-001-2 revisions proposed by Project 2007-03.
Yes

CWLP generally concurs with and supports comments previously submitted by the SERC Operating Committee where those comments are not in conflict with the specific comments above.
Individual
RoLynda Shumpert
South Carolina Electric and Gas
No
Each sub-requirement should not have an "R" in front of the number in order to be consistent with NERC's August 10, 2009 filing at FERC on this subject. Requirement R3 and R4 should include adjacent TOPs as a sub-requirement. Requirements R5 and R6 should include adjacent BAs as a sub-requirement. "to exchange Interconnection and operating information" should be deleted from requirements R1 through R8 as it is redundant with the definition of Interpersonal Communications. The last page of the Implementation Plan includes LSEs, PSE, and TSPs as being responsible entities under this standard, yet the standard does not include them. Please correct the implementation plan.
No
Top-001-1, Requirement R3, which is what the SDT appears to be using as its justification for not adding a requirement here is proposed to be deleted by the RTO-SDT on Project 2007-03.
No
We think you are attempting to create a requirement similar to BAL-005, R1. That language copied here is clear and concise - All generation, transmission, and load operating within an Interconnection must be included within the metered boundaries of a Balancing Authority Area.
Yes
Yes
Reliability Directives may be issued by blast calls from Reliability Coordinators. It is inefficient and may be a hindrance to reliability to require 3-part communications in these instances. There are several organizations registered as BAs, RCs and TOPs. It is not uncommon for those entities to be distributed across multiple desks in the same control room without regard to how an entity is registered. Thus, a single System Operator may perform functions that are categorized under two or more of those functional entities. The drafting team should clarify that under no circumstances should that System Operator be required to issue a Reliability Directive to himself. This is a corporate governance issue. In IRO-014, R1, delete sub-requirement 1.7. The requirement for weekly conference calls related to operating procedures is duplicative to R4 and could be burdensome while adding very little value under certain circumstances. In IRO-014, R4, delete the phrase "(per Requirement 1, Part 1.7)" as a conforming change. In IRO-014, Requirements R6-R8 allow at least the theoretical possibility that an RC may determine an Adverse Reliability Impact in another RC's area that the other RC neither can see nor believes that any action should be taken. R7 puts the burden on the first RC to develop a plan that it cannot implement because it has no agreement with the BAs and TOPs in the other RC area. As such, this requirement is unenforceable. Please review all the implementation plans to be sure the applicable entities match those in the standards.
Individual
Dan Rochester
Independent Electricity System Operator
No
(1) NERC filed with FERC on August 10, 2009 indicating that it would discontinue the use of sub-requirements in standards. All draft standards posted since have the format of Part Numbers within each main Requirement. Please revise the standards in this project accordingly. (2) Having defined the terms Interpersonal Communication and Alternative Interpersonal Communication, the phrase "to exchange Interconnection and operating information" in a number of requirements is redundant and can be removed. Further, for R1, we suggest removing the phrase "within the same Interconnection since there RCs between two Interconnections still need to communication with each other for reliability coordination (e.g. curtailment of interchange transactions crossing Interconnection boundary, as stipulated in IRO-006). (3) R2: Suggest to add Purchasing-Selling Entity and Interchange Authority (INT-004 and INT-005 have requirements for communication between the RC and the PSE and IA), and remove the phrase "within the same Interconnection since there RCs between two Interconnections still need to communication with each other for reliability coordination (e.g. curtailment of interchange transactions crossing Interconnection boundary, as stipulated in IRO-006). (4) R3: Suggest to add adjacent Transmission Operator and Purchasing-Selling Entity (the latter needed for meeting INT-004 requirements). (5) The list of entities in R4 and R6 is different from those in R3 and R5. They should be the same for having Alternative Interpersonal Communication capability. (6) R5: Suggest to add adjacent Balancing Authority as adjoining BAs need to communication with each to check schedules and other balancing information. (7)

There are a number of parts in Requirements R1 to R8 each of which must be complied with. However, the VSLs for R1 to R8 are binary which do not provide any distinction in partial failure of each of these requirements. We suggest the SDT to apply the VSL guideline and re-establish the various levels of violation severity for these requirements.
No
TOP-001 is being revised and some of the requirements that fulfill this need may have been removed. We suggest the SDT check with the latest draft version of TOP-001 and coordinate with the Real-time Operation SDT to ensure there are not gaps.
No
1. R2: The word "of" before Transmission Operators should be "to". 2. The VSL for R1 should be revised to replace Regional Entities with ERO.
Yes
Yes
1. IRO-001: Reliability Directive: We do not agree with the proposed definition since it addresses Emergencies only. There are situations where a Reliability Directive is issued such that the directed action must be taken by the receiving entity to address a reliability constraint or any condition on the BES which if left unattended could, in the judgment of the issuing entity, lead to an Emergency. These conditions themselves do not constitute an Emergency which is defined as "Any abnormal system condition that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System." There could be no abnormal condition but the actions must nevertheless be taken promptly to prevent the bulk electric system from entering into an abnormal condition. We therefore suggest the term Reliability Directive be revised to: Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address a reliability constraint or an Emergency. 2. IRO-001, Requirement R2: This requirement contains the words "which could include issuing Reliability Directives" which is not referenced anywhere else in the standard. We do not think this inclusion is necessary since without it, R2 already requires that the RC take actions or direct actions by others to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. Whether or not a Reliability Directive is issued is irrelevant in this requirement. We suggest to remove these words. Note that COM-002 already stipulates the requirement for 3-part communication when a Reliability Directive is issued. The inclusion of "which could include issuing Reliability Directives" in IRO-001 is unnecessary. We suggest replacing "identified events" with "anticipated events". This requirement also lists Interchange Coordinators as one of the recipients of Reliability Directives which is not consistent with the implementation plan. 3. IRO-014: R4 as written creates unnecessary requirements for an RC to participate in conference calls for issues that may not affect the RC itself. We suggest to reinstate the original word "impacted" as opposed to "other", and remove the words "within the same Interconnection" since such calls and coordination may be required for RCs on both side of the Interconnection boundary. Same change suggested for R5, i.e. replace "other" with "impacted". 4. If an entity provides Interpersonal Communication for day-to-day communication using two different media, e.g. radio and telephone, the proposed definition of Alternative Interpersonal Communication suggests that it would not be possible for one medium to be used as the Alternative Interpersonal Communication for the other since the two media are both used every day. 5. COM-001-2 R10 suggests that the responsible entity must wait for at least 30 minutes before notifying other entities of the failure of its Interpersonal Communication capability. We recommend changing "that lasts 30 minutes" to "that lasts or is expected to last 30 minutes". This allows responsible entities to start notifying other entities earlier. 6. In IRO-005-4 R1: Delete "notify".
Individual
Alice Ireland
Xcel Energy
No
We feel that either the definitions, or the requirements, should make it clear whether data is included.
No
We are concerned that the drafting team may not have understood Xcel Energy's comments and FERC's directive in Order 693. FERC had asked that NERC consider Xcel Energy's suggestion. This consideration does not necessarily equate to the development of additional requirements, however that may be the solution. We recognize that R1 and R2 of TOP-001-1 give the TOP authority to take immediate actions necessary to alleviate operating emergencies. We were concerned with the potential situation where the RC's directive (R3 of IRO-001-2) may conflict with actions the TOP has ALREADY taken. In this situation, we do not feel the TOP should be held at fault for the actions it took prior to the RC's directive. (R3 of IRO-001-2 is currently in effect under TOP-001-1 R3.) Additionally, R1 and R2 of TOP-001-1 have been removed from the latest draft of version 2. So, if TOP-001-2 and IRO-001-2 are approved as drafted, it would appear that all rights and protections of the TOP to take immediate actions will be removed and our initial issue, as detailed in Order 693, still exists.

Group
Kansas City Power & Light
Michael Gammon
No
These requirements require TOP's, BA's, and GOP's to establish alternative means of "interpersonal" communications with other BA's, GOP's, and BA's respectively without regard to the reliability impact each TOP, BA or GOP has on the interconnection. Why would it be necessary for a TOP with one 161kv transmission line or a BA with 100 MW of total load, or one GOP with a 30MW unit to realize additional costs when the facilities they operate have little reliability impact? In addition, most RC's have established satellite telephone systems as back-up communication with TOP's. RC's may have to establish additional communication systems with BA's as these requirements impose to avoid Standards of Conduct issues. R9 – considering the reliability of communication systems, a 2 hour response to a problem with the alternative means of communication is over sensitive. Allowing for sometime in an operating shift would be more in line, such as 8 hours.
Yes
Yes
Yes
Yes
There are more requirements that are being removed in the IRO standards than are currently proposed. It would be helpful if the SDT would consider a mapping of each requirement that is being eliminated and whether the requirement is duplicated elsewhere, moved elsewhere and where, or is deemed not needed would be helpful in judging if the changes are appropriate. Without this mapping it is difficult to fully support all the proposed changes to all these Standards.

Individual or group. (41 Responses)
Name (22 Responses)
Organization (22 Responses)
Group Name (19 Responses)
Lead Contact (19 Responses)
Question 1 (38 Responses)
Question 1 Comments (41 Responses)
Question 2 (32 Responses)
Question 2 Comments (41 Responses)
Question 3 (28 Responses)
Question 3 Comments (41 Responses)
Question 4 (27 Responses)
Question 4 Comments (41 Responses)
Question 5 (27 Responses)
Question 5 Comments (41 Responses)
Question 6 (0 Responses)
Question 6 Comments (41 Responses)

-
Group
Northeast Power Coordinating Council
Guy Zito
No
It was expressed in the last posting that the definition of Interpersonal Communications might inadvertently include data. The SDT responded that it does not by referring to Interpersonal in the wording of the definition. The word being defined shouldn't be in the definition. However, incorporating "allows two or more individuals to ..." is an option that may solve this problem. The next posting should clarify this. This standard does not comport with the informational filing that NERC submitted to FERC on August 10, 2009 regarding its discontinued use of sub-requirements in standards development activities. The sub-requirements should be modified into bulleted lists. Consider striking "to exchange Interconnection and operating information" in R1, R3, R5, R7, and R8. It is redundant to the use of Interpersonal Communications "to interact, consult, or exchange information" in the definition. Consider striking "to exchange Interconnection and operating information" in R2, R4, R6. It is redundant to the use of Alternative Interpersonal Communications which uses Interpersonal Communications in its definition. Interpersonal Communications includes "to interact, consult, or exchange information" in its definition. For R2, why is Interchange Coordinator excluded? It is included in the Requirement R1 which deals with the Interpersonal Communications. Communications would need to be maintained with the Interchange Coordinator in the event of a failure of the Interpersonal Communications. For R3, affected neighboring Transmission Operators should be included. For R4 and R6, the sub-requirement list is different from the associated Interpersonal Communications requirements R3 and R5 respectively. These should be duplicate. The sub-requirement list for R4 should match R3, and the sub-requirement list for R6 should match R5. In the event of a failure of the Interpersonal Communications, the Transmission Operator and Balancing Authority both would need to maintain communications to the same entities as in the requirement to have Interpersonal Communications. The sub-requirements should be bulleted lists. For R5, why are neighboring Balancing Authorities not included? Additionally, R5 should only read Contact with Interchange Coordinator within the same Interconnection. They need to be able to contact one another to identify discrepancies in scheduling and sources of meter error that could lead to deviations in ACE. Should R2, R4 and R6 be constructed parallel to R1, R3, and R5? In R1, R3 and R5, the requirement is "shall have" while in R2, R4, and R6, the requirement is "shall designate". Since one is for the Interpersonal Communications and the other is for the Alternative Interpersonal Communications, the same wording should be used. R2.2 and R1.2 should not be limited to Reliability Coordinators in the same Interconnection only. Modify "within the same Interconnection" to "within the same Interconnection, and, as appropriate, between a-synchronously connected RCs which are not precluded by law from scheduling interchange energy (for schedule changes, curtailments, etc.)" since reliability coordination may be required among the RCs on both sides of an Interconnection boundary. The VSLs for R1 through R8 should be expanded to include multiple levels based on the number of entities that the functional entity does not have Interpersonal Communications or Alternative Interpersonal Communications with. FERC specified their general preference for graduated in paragraph 27 of their June 19, 2008 order on VSLs. The second half of the Severe VSL for R9 is almost a duplicate of the Lower VSL. There are some small changes in the wording but both situations deal with the case where there is a problem that has been identified with the Interpersonal Communications system and it takes more than two hours to initiate repair.
No
If the requirement were going to remain. but the Project 2007-03 Real-Time Operations SDT proposed to retire that

requirement during their last posting. There needs to be better coordination with that SDT.
No
The language "to continuously assess transmission reliability" should be changed to "to continuously assess Bulk Electric System reliability" to reflect what the enforceability of the standards are meant to be. The requirement on the ERO should also be expanded similar to BAL-005-0.1b R1 to ensure that all operating entities and the entire BES are covered under a Reliability Coordinator. In R2, should "of" be "to"? Reliability Directives are issued to TOPs, BA, etc. The VSL for R1 is not consistent with the requirement. The requirement applies to the ERO but the VSL applies to the Regional Entity.
Yes
No
R1 states "When the results of an Operational Planning Analysis or Real-time Assessment indicate an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area." The word "notify" should be stuck.
The SDT did not address all concerns with COM-002-3 from the last posting. For entities registered as multiple functions, the combination of the definition of Reliability Directive and Requirement R1 could be confused to require a company to issue directives to itself. There are several organizations registered as a Reliability Coordinator, Transmission Operator and Balancing Authority. In these companies, it is not uncommon for those responsibilities to be distributed across multiple desks. Thus, for certain situations, a single System Operator may actually be the Reliability Coordinator and the Transmission Operator. In other situations, the System Operator serving the Reliability Coordinator function may be adjacent to the System Operator serving as the Transmission Operator or Balancing Authority. It should never be necessary for these System Operators to issue Reliability Directives to themselves in the first example or to their co-worker in the second example to demonstrate compliance to NERC standards. How the entity coordinates its actions among its Reliability Coordinator, Balancing Authority and Transmission Operator roles is a corporate governance issue that should not be confused or complicated by the NERC standards. Thus, standards should be made clear that the Reliability Directive is directed to another company. In place of requiring an operator, in real-time, to state "this is a Reliability Directive," there should be an allowance for an entity to develop procedures indicating, in advance, their expectations for three-part communications to their sub-operating entities. Therefore, we suggest modifying R1 to be "When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action, either verbally, when the communication is issued, or in advance through documented procedures, as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time.]" Also, the definition of Emergency as currently cited in these draft Standards and included in the existing NERC Glossary should be modified to include the NERC Glossary term Adverse Reliability Impact to make the Standards more crisp, clear and enforceable. Because the Project 2007-03 Real-Time Operations SDT proposed to utilize the definition of Adverse Reliability Impact in TOP-001-2 R5 during the last posting, the change to the definition should be coordinated with that team. There is a text box in IRO-005-4 that indicates this standard will be retired. Yet, there still remain requirements in the standard and various other associated documentation that indicates requirements are being move to this standard. Delete the text box. Strike IRO-014-2 Part 1.7. There is no need to have a weekly conference to discuss every Operating Procedure, Operating Process and Operating Plan. As this requirement is written, a conference call would be necessary for each. Furthermore, IRO-014-2 R4 already includes a requirement to have weekly conference calls that should suffice. IRO-014-2 R2 seems to recognize that these Operating Procedures, Processes and Plans likely will not need to be discussed weekly as it only requires an annual update. Requirement R2 in IRO-001 contains the words "which could include issuing Reliability Directives", but Reliability Directives are not referenced anywhere else in the standard. This inclusion seems unnecessary since without it, R2 already requires that the RC take actions or direct actions by others to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. Whether or not a Reliability Directive is issued is irrelevant in this requirement. These words should be removed. Note that COM-002 already stipulates the requirement for 3-part communication when a Reliability Directive is issued. The inclusion of "which could include issuing Reliability Directives" in IRO-001 is unnecessary.
Individual
Greg Froehling
Green Country Energy, Green Country Operating Services
No
COM-001 General question/comment. The reference to infrastructure should be removed and just keep the word "medium". Here's why What communication medium (infrastructure) does not use satellite at some point unless entities are within a close geographical proximity? How likely is it to have 2 different mediums? • Local phone and fax hard-wire likely. • Long distance phone and fax – satellite • Cell phone – satellite • Internet – satellite • Radio – antenna The reason for mentioning this is, if all we have is satellite then the reference to infrastructure should be removed and just keep the word "medium".
No Comment

No Comment
No Comment
No Comment
IRO-001-2 as proposed does not include the PSE in the applicability, nor does it require the PSE to respond to a directive. However, COM-002 requires them to repeat the directive back... If the directive is that important to repeat back should they not have to act upon the directive? I think the PSE should be included in IRO-001-2 this standard as they represent and direct generation facility deployment in many cases. Including the PSE in COM-001 may be a good idea too, just for the situations listed above.
Individual
Steve Alexanderson
Central Lincoln
No
See Q 6 below.
The stated purpose of COM-002 is: "To ensure emergency communications between operating personnel are effective." As written, the standard fails to meet this purpose because the three requirements only deal with communications at the entity level. There is no requirement for the directing entity to even try to reach operating personnel at the receiving entity. The directing entity may follow all the requirements of this standard by following R1 and R3 with the receiving entity's receptionist, answering service, janitor, night watchman, etc. The receiving entity only needs to meet R2, parroting the directive. Again this could be accomplished by anyone with no assurance the directive reaches the operating personnel who can implement it. When we stated a similar objection during the last comment period, The SDT's answer suggested this was a PER staffing issue, but none of the PER requirements even apply to DP/LSE directive recipients. We suggest the entity issuing the directive should be required to make an attempt to get it to those who are competent to understand and implement the directive. This is not a staffing, training, or credentials issue; it is a performance issue that falls squarely within the stated purpose of this standard. COM-001 R10 presents a paradoxical situation to an entity attempting to comply. Consider an interpersonal communication capability failure that lasts longer than 60 minutes past initial detection. At or before 60 minutes, the affected entity is expected to notify impacted entities. If it has no interpersonal communication capability, how shall it make this notification? And if the entity does manage to make such a notification, it has thereby proven that it does have interpersonal communication capability making such notification unnecessary. We again ask the SDT to consider that not all the entities in the applicability sections of COM-001 and 002 have 24/7 dispatch centers. These are typically smaller entities that were required to register because they exceed 25 MW or were asked in the past to voluntarily provide UFLS. They do not and do not need to continuously communicate with TOPs, BAs, RCs, etc; and a "reliability directive" is a theoretical thing that has never happened during the memories of thirty year employees. The directive issuing entities simply realize the limitations around the receiving entities and work around them. The financial burden on these small entities and their customers to go to 24/7 dispatch will not have a corresponding reliability benefit. And while the two COM standards do not explicitly state that entities must maintain 24/7 dispatch, when all the requirements and definitions and time horizons are taken together 24/7 continuous competent communication is implied. During the last comment period, the SDT suggested this was a registration issue beyond their control. We submit instead that this is a standard applicability question that the SDT does have control over, since it is right there in Section A.4 of the two COM standards. While we appreciate that the SDT is responding to FERC order 693 to include DPs, we note that FERC also stated: Paragraph 487: "We expect the telecommunication requirements for all applicable entities will vary according to their roles and that these requirements will be developed under the Reliability Standards development process." Paragraph 6: "A Reliability Standard may take into account the size of the entity that must comply and the costs of implementation" Paragraph 141: "...the Commission clarifies that it did not intend to ... impose new organizational structures..." Paragraph 31: "We emphasize that we are not, at this time, mandating a particular outcome by way of these directives, but we do expect the ERO to respond with an equivalent alternative and adequate support that fully explains how the alternative produces a result that is as effective as or more effective than the Commission's example or directive. We ask the SDT to exclude DPs, LSEs, and PSEs that do not have 24/7 dispatch centers from the applicability of these two standards in order to meet FERC order 693.
Group
Competitive Suppliers
Jack Cashin

EPSA is the trade association for competitive suppliers including both generators and marketers that represent over 700 entities in the NERC compliance registry. As such, the EPSA membership includes members registered as Purchasing Selling Entities (PSE) in each NERC region. Moreover, many of EPSA's members are also registered as LSEs in several regions. In general, EPSA supports the progress made in revising COM-001, COM-002 and IRO-001 in Project 2006-06, particularly the improvements made to the definition of Reliability Directive. However, EPSA also has concerns with some proposed changes to the applicability sections of the revised standards. In addition, EPSA requests that the implementation plans be changed so that they are consistent with the standard. Regarding applicability, EPSA agrees that COM-001 should continue to not apply to Purchasing Selling Entity (PSE) and Load Serving Entity (LSE) functions. However, the implementation plan for COM-001-2 still includes a reference that PSEs and LSEs must comply (page 11 of the implementation plan). Additionally, EPSA supports the removal of LSEs and PSEs from IRO-001-2. Much like the situation with COM-001-2, the implementation plan for IRO-001-2 still includes a reference that LSEs and PSEs must comply (page 11 of the implementation plan). In both the implementation plans for COM-001-2 and IRO-001-2 these references should be removed. For reasons similar to those underlying why COM-001-2 and IRO-001-2 do not apply to PSEs and LSEs, EPSA opposes the addition of PSEs to the COM-002-3 applicability. The purpose of the emergency communications in these standards is "To ensure emergency communications between operating personnel are effective." The removal would recognize that PSEs and LSEs do not play an active role in reliability coordination under this standard since they have no authority, nor ability to assume or perform responsibilities associated with reliability coordination. When a RC, TOP, or BA needs to address an Emergency they do not contact, consult, or direct a PSE to take action to address the Emergency. Reliability is neither improved nor degraded by having these Standards applicable to PSEs or LSEs; therefore, COM-001, COM-002 and IRO-001 need not be applicable to PSEs or LSEs. Thanks to the drafting team members for their effort on revising the Project 2006-06 standards.
Individual
Mace Hunter
Lakeland Electric
Yes
COM-002-3 R2. Each Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message can be confirmed by the originator. (Replace 'has been' with 'can be' and add 'by the originator' to better fit into the sequence with R3.)
Group
Exelon
John Bee
No
1. COM-001-2, 4.4 - Distribution Providers and 4.5, Generation Operators should be highlighted and communicated as a substantive change since entities may not be aware that they are being added to the applicability section of the standard. 2. COM-001-2, R10 - should have the following underlined clarifying text added, shall notify impacted entities within 60 minutes of the detection of a failure "of all primary and alternative " Interpersonal Communications capabilities that lasts 30 minutes or longer. Exelon believes that the intent of R10 is for complete loss of communication ability and should not be applied to facilities that have multiple backups. 3. COM-001-2, M1 thru 9 – Suggest that network diagrams and / or communications schematics be added as suggested evidence. 4. COM-001-2, VSL for R9 – Regarding failure to test the Alternative Interpersonal Communication, the Severity Level does not align with the potential impact to the BES. The Severity Level for simply missing a test should be revised to a High VSL.
Yes
No comment - only applicable to RC
Comments: No comment – only applicable to RC
Comments: No comment - only applicable to RC
1. COM-002-2, R2 – Remove the word "recapitulate", feel that "restate or rephrase" is adequate. The word "recapitulate" is not commonly used and is somewhat obscure. 2. COM-002-2, R3 – Suggest using the words "repeat back" rather than "state or respond that" to more clearly identify the expectation with more commonly used language. 3. IRO-001-2, R3 – While we appreciate that the SDT has defined the term "directive" as a much needed definition, IRC-001-2 R.3 now introduces a new term "direction". what is a "direction" and how does it differ from "directive"? If a new

term is going to be introduced it needs to be defined, if the intent was to use the word "directive" then "direction" should be replaced with "directive." 4. IRO-001-2, R4 – Again the term "as directed" is confusing, recommend that the text be changed to align with the term directive, "unable to perform the directive per Requirement R3."
Individual
Joe Petaski
Manitoba Hydro
Yes
Yes
Yes
Yes
Yes
-The current data retention requirement of 90 days is more than adequate. Increasing this period to 12 months would result in a significant amount of work with no benefit to reliability. -Clarification required on the VSL for R9 - there appears to be no difference in the description of the Lower VSL and second part of the Severe VSL following "or". - Clarification required - The existing version of COM-001 M1 indicates that maintenance records for communication facilities may be required but the proposed revision makes no mention of maintenance records. So evidence of maintenance is no longer required?
Group
PNGC Power member owners
Ron Sporseen
No
Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of Communication capabilities impacted entities will be notified of the past loss and current status of Communication." We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.

Individual
Brian J Murphy
NextEra Energy, Inc.
No
As drafted, COM-001 is not clear or complete. At this stage in the evolution of compliance with the mandatory Reliability Standards, it is important that any new or revised Reliability Standard clearly articulate all compliance obligations and tasks consistent with Sections 302 (6) and (8) of the NERC Rules of Procedure. Thus, NextEra Energy Inc. (NextEra) has numerous recommended corrections to provide clarity and completeness to COM-001. For example, the requirement to designate an Alternative Interpersonal Communication capability is not clear. Does the designator solely designate for the designator's knowledge or does the designator need to inform the entity on the other end of the connection. In R2, for instance, the Reliability Coordinator must designate, but it is also not clear whether the Reliability Coordinator must inform the Balancing Authorities or Transmission Operators. It is further unclear whether the designation must be documented, or if any informing of the Balancing Authorities or Transmission Operators must be documented. Thus, it is recommended that the drafters decide what was intended regarding the designation and clearly state the requirements. In R9 it states that "... on at least a monthly basis." There are two issues to consider here. If the sentence stays, grammatically it should read "... on, at least, a monthly basis. . . ." However, from a compliance and technical perspective, the term "at least" has no significance and should be deleted. The requirement is to test on a monthly basis – the phrase "at least" only introduces ambiguity and implies that the party should consider every two or three weeks. If the drafting team believes a best practice is less than a month, there are other NERC educational tools to explain a best practice. In R10, it states "... shall notify the impacted entity . . ." It would be clearer to state: "... shall notify the impacted Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider or Generator Operator . . ."
No
As stated in response to number 1, Reliability Standards are to be clear and complete. If a Transmission Operator is not responsible for a delay caused by a Reliability Coordinator, the Standard should specifically state that the Transmission Operator does not need to wait for an assessment or approval of a Reliability Coordinator to take actions pursuant to TOP-001-1 R3. Since the Reliability Coordinator is atop the reliability higherachy, such a statement provides clarity and completeness to understanding a Transmission Operators rights. Thus, TOP-001-1 R3 should be revised to lead with: "Without any obligation to first seek and obtain an assessment or approval from its Reliability Coordinator, each Transmission Operator . . ."
At this stage in evolution of compliance with the mandatory Reliability Standards, it is important that any new or revised Reliability Standard clearly articulate all compliance obligations and tasks consistent with Sections 302 (6) and (8) of the NERC Rules of Procedure. COM-002, IRO-001, IRO-002 and IRO-014 do not meet this threshold. Thus, NextEra has numerous recommended corrections to provide clarity and completeness to these Reliability Standards. COM-002 R1 The addition of defined terms for Reliability Directive and Emergency is a very good approach that helps provides clarity. Hence, it is also be appropriate to make the language in the requirement as clear as possible, and not add other implied or unexplained notions. Also, at times, in those regions with markets, it is not always clear whether a requirement to curtail for reliability reasons is being issued pursuant to market rules or from the Reliability Coordinator or Transmission Operator under the Reliability Standards. Therefore, it is also appropriate that the Reliability Coordinator, Transmission Operator, Balancing Authority be required to identify themselves;, and if they fail to identify themselves or fail to use the term Reliability Directive, the registered entity receiving the flawed issuance should not be consider in violation of a Reliability Standard for failing to act. Accordingly, R1 would be clearer and have the same intent, if it stated as follows: "A Reliability Coordinator, Transmission Operator or Balancing Authority have the authority to issue an oral or written Reliability Directive as authorized in [list the specific Reliability Standard requirements such as IRO-001 R8 and TOP-001 R3]. The issuance of an oral of written Reliability Directive, by a Reliability Coordinator, Transmission Operator or Balancing Authority shall: (1) use the term 'Reliability Directive;' and (2) identify the issuer of the Reliability Directive as a Reliability Coordinator, Transmission Operator or Balancing Authority. If a Reliability Coordinator, Transmission Operator or Balancing Authority issues an oral or writtern directive without using the term "Reliability Directive" or failing to indentify itself as a Reliability Coordinator, Transmission Operator or Balancing Authority, the registered entity receiving the directive cannot be considered in violation for its failure to act." IRO-001 The definition of Adverse Reliability Impacts uses the term "instability." It is important that this term be technically defined in the same way "Cascading" is defined, otherwise the new requirement is not adding clarity; rather, it is maintaining the ambiguous term "instability" that will likely lead to confusion and debate. R1 Similar to the comments set forth with respect to COM-001 (question #1), the term "at least" should be deleted from R1 – it serves no useful purpose from a technical or compliance perspective; instead, it will add unnecessary ambiguity to the requirement. R2, as drafted, states: "Each Reliability Coordinator shall take actions or direct actions, which could include issuing oral or written Reliability Directives, of Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. " This long sentence has several significant grammatical errors that result in the reader not being able to discern the meaning of the requirement. It also

unnecessarily adds verbiage that detracts from its primary focus. It is, therefore, recommended that R2 be revised as follows: "Each Reliability Coordinator shall take all necessary actions to prevent identified Emergencies or Adverse Reliability Impacts. These Reliability Coordinator actions shall include, to the extent necessary, the issuing of oral or written Reliability Directives to Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers located within its Reliability Coordinator Area. " R3, as drafted, is confusing and inconsistent with R2, and, thus, R3 should be revised to read as follows: "Upon receipt of a Reliability Directive issued pursuant to R2, a Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator and Distribution Provider shall comply with the Reliability Directive, unless compliance would violate safety, equipment, regulatory or statutory requirements. In the event that a Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator or Distribution Provider determines that compliance with a Reliability Directive would violate safety, equipment, regulatory or statutory requirements, the Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator or Distribution Provider shall, within 10 minutes after the determination, inform the Reliability Coordinator of its inability to comply." IRO-002 R1 and R2, as written, are confusing. It is recommended that R1 and R2 be combined to read as follows: "Pursuant to a written procedure to mitigate the impact of a Reliability Coordinator's analysis tool outage, a Reliability Coordinator's System Operator shall also have the authority to approve, deny or cancel a planned outage for its analysis tool." IRO-014 It is unclear why the terms Operating Procedure, Operating Process or Operating Plan needs to be plural, as currently written in the Standard. Hence, it is recommended that these terms be made singular, otherwise a violation may be inferred for not having more than one Procedure, Process or Plan. 1.1 Insert the word "applicable" before "Reliability Coordinator." 2.1, as written, is confusing. Recommend that 2.1 read as follows: "Review and update, if an update is necessary, on an annual basis. Annual basis means the review shall be within one month plus or minus that date of the last review." R3 This requirement uses a very vague term "reliability-related information," which, also, does not track the language used in R1 -- "information." It is recommended that R1 and R3 use the same terms and read " . . . information, as defined by the Reliability Coordinator, . . ." R4 As stated above, "at least" does not add value, and, therefore, should be deleted. R5, as written, is confusing. The recommended fix is to delete "all other" and replace with "impacted".

Group

PacifiCorp

Sandra Shaffer

Yes

Yes

Yes

Yes

Yes

Individual

Jonathan Appelbaum

United Illuminating Company

No

COM-001-2 does not specify the amount of time a DP has to reestablish the Interpersonal Communication Capability after the capability fails before it is assessed non-compliance for not having the communication. Is an entity non-compliant the minute the communication capability is unavailable If so, then to be compliant a tertiary (or secondary capability for DP) must be installed by the entity. Something similar was discussed with EOP-008 R3: "To avoid requiring a tertiary facility, a backup facility is not required during: • Planned outages of the primary or backup facilities of two weeks or less • Unplanned outages of the primary or backup facilities" UI suggests the drafting team incorporate something similar. The VSL for R7 is severe only and states: "The Distribution Provider failed to have Interpersonal Communications capability with one or more of the entities listed in Parts 7.1 or 7.2.". I believe there should be a time component to the VSL and the VSL staged. For example, failure to have communication established for less than 60 minutes would be Lower, anything over 1 hour severe Also needed is a phrase to state when the violation begins. Does the violation begin when the loss of Communication Capability is detected or when it occurred? In other words, does the violation start when the operator attempts to use the phone and it is not functional, or did it occur when the phone line functionality failed but was not yet detected because no attempt to use the phone was made. So the VSL for R7 would follow a format of: "The Distribution Provider failed to have Interpersonal Communication Capability with one or more entities listed in Parts 7.1 or 7.2 for a continual 60 minutes period as measured from the time the ICC failure was detected". An alternative remedy is to alter the language of R7 to allow for unplanned outage. NERC does not have a Reliability Requirement for a DP to staff a control room 24/7. COM-0001 can be interpreted to imply that a DP needs to be staffed 24/7 to facilitate interpersonal communications. If NERC wants to extend the requirement for a 24/7 staffed

operating position at the DP then the appropriate method is thru a SAR to PER-002. COM-001 R7 should have a sub-requirement added recognizing that DP's are not required to staff 24/7 and many do not staff overnight. UI suggests adding R7.3: DP's will notify their TOP and/or BA when it is not staffing an operating desk. R7: Should address the instance if the DP is not required to have communication with the BA, because the BA communicates thru the TOP.
Yes
Yes
Yes
Yes
Comments: 1. COM-002 R2 seems awkwardly worded. R2. Each [Entity] that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message has been confirmed. " R2 as it is written says the repeat is confirming the accuracy of the message itself. I think it is agreed that the repeat back in R2 is to allow the issuer of the Directive to confirm that the message was received accurately understood by the recipient. I suggest: R2. Each [Entity] that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details to allow the Issuer to confirm that the directive recipient accurately understands the Directive" 2. The VSL for R2 is severe and states "The responsible entity that was the recipient of a Reliability Directive failed to repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message was confirmed." The purpose of the R2 repeat-back is to allow the Issuer verify the message was accurately received. This VSL penalizes the responsible entity for not accurately receiving the message. The VSL should penalize the refusal of the registered entity to repeat back the message not for receiving the message incorrectly. Suggested rewording: "The responsible entity that was the recipient of a Reliability Directive failed to repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message can be evaluated by the entity issuing the Reliability Directive" 3. United Illuminating does agree with the definition of Reliability Directive and Emergency.
Group
Bonneville Power Administration
Denise Koehn
Yes
Yes
Yes
Yes
Yes
Group
PPL
Brenda Truhe
Yes
Yes
Yes
Yes
Yes
We are providing the following comments for the Standards Drafting Team to consider. 1) Consider changing R1 to "Each RC shall have the capability for Interpersonal Communications with the following entities to exchange

Interconnection and operating information...' for clarity as Interpersonal Communications and capability are both nouns. 2) We feel changing the applicability of the standard is important to the accuracy of the standard. The purpose of COM-002 is 'To ensure emergency communications between operating personnel are effective'. Since operating personnel are covered by the applicability of RC, BA, TOP and GOP, we suggest the applicability to TSP, LSE, and PSE be removed from COM-002-3. 3) Additionally, we would like to bring to the attention of the Standards Drafting Team, that the implementation plan for COM-001-2 and IRO-001-2 still includes TSP, LSE, and PSE although the revised standard does not include these entities in the Applicability Section. For COM-001-2 refer to the implementation plan, page 1. For IRO-001-2 refer to the implementation plan for new R2, new R3, new R4 and the chart on the last page. Thank you for your consideration in addressing these comments.

Individual

Paul Kerr

Shell Energy North America (US), L.P.

The introduction of the definition of "Reliability Directive" and its connection to the definition of "Emergency" within this Project brings much needed clarity for the sector and will promote consistency between Regional Entities and within the audits of Registered Entities. Shell Energy supports the removal of Purchasing Selling Entities as a function to which IRO-001 applies. This removal recognizes that PSEs do not play a role in reliability coordination under this standard since they have no authorities and no abilities to assume or perform responsibilities associated with reliability coordination. This conclusion is reinforced by the adoption of the defined term "Reliability Directive". Where a RC, TOP, or BA needs to address an Emergency they do not contact, consult, or direct a PSE to take action that would address the Emergency. Rather, where the PSE is a user of the grid to perform or execute transactions, it is subject to the actions of these other entities that have the authority to stop, curtail, or alter the submitted transactions of the PSE in a way that aids in resolving the problem. With the fitting adoption of "Reliability Directive" into COM-002 as well, Shell Energy does not believe it is necessary or appropriate for the applicability of this standard to include Purchasing Selling Entities, as is contained in the current draft proposal. This standard does not apply to PSEs today, however, during the progression of Project 2006-06 this applicability was added to an early draft version that preceded the discussions and clarification that comes from the definition of a Reliability Directive in the standard. Shell Energy does not support the inclusion of PSEs in the current draft version of COM-002, and feels that it should be removed. The purpose of this standard is, "To ensure Emergency communications between operating personnel are effective" and relates directly to the capabilities and authorities established for the RC, TOP, or BA that requires actions to be taken by a recipient of a Reliability Directive. As noted previously, PSEs are acted upon by the entities with the necessary authority, and are not in a role that would initiate or fulfil the required actions. As additional matters related to the clarification and cleanup of the standards in this project, the implementation plans for both IRO-001 and COM-001 erroneously contain references to PSEs in the sections "Functions that Must Comply with the Requirements". These references need to be removed.

Individual

Thad Ness

American Electric Power

No

The applicability of COM-001 and COM-002 appear to be at odds with each other. The requirements may need to be re-written so that they are in sync.

Yes

No

This is out of scope with the standard, as it is currently addressed through the NERC certification process that the NERC reliability coordinators are subject to.

The language used in COM-002-3 R2 including "with enough details that the accuracy of the message has been confirmed" is subjective and ambiguous. IRO-001 R2, R3, and R4 have replaced "Directives" with the word direction in lower case (while it appears that "Directives" is a subset of "directions"). We believe that this muddies the waters and could bring numerous conversations and dialog into scope unnecessarily. The end result is that the RC has the right to issue and use "Directives" and anything short of this could just be communications. For example, a number of entities that are Reliability Coordinators also facilitate energy markets. There are many communications related to markets that probably should be out of scope with respect to the standards. Furthermore, it might not be clear what role (eg Reliability Coordinator, market operator, etc) the staff at these entities are fulfilling.

Group

PSEG
Patricia Hervochon
No
Com-001-2 implementation plan lists that this is applicable to PSE's and LSE's however, PSE's and LSE's were removed from the actual standard. The implementation plan should be revised.
IRO Com-002-3 standard continues to include PSE. PSE's do not play an active role and have no authority or ability to perform reliability coordination. PSE's should be removed from the standard. -001-2 references PSE's in the implementation for R2, R3, R4 and "Functions that must comply with the requirements in this standard" table. PSE's were removed from the standard and should be removed from the implementation plan.
Group
Dominion
Louis Slade
No
The monthly testing requirement for Alternative Interpersonal Communications is overly burdensome without any evidence to support that it is necessary to insure reliability. We believe that an entity will take necessary steps to insure the Alternative Interpersonal Communications is functioning properly, especially if it experiences problems with its Interpersonal Communications, it. We can support quarterly testing as we believe it strikes a reasonable balance.
Yes
We do not agree with the addition of weekly conference calls as required in R4. We believe that RCs should schedule calls as needed but do not agree that a weekly scheduled call improves reliability.
Individual
David Thorne
Pepco Holdings Inc
Yes
Yes
Yes
Yes
Yes
Group
SERC OC Standards Review Group
Jim Case
No
Each sub-requirement should not have an "R" in front of the number in order to be consistent with NERC's August 10, 2009 filing at FERC on this subject. Requirement R3 and R4 should include adjacent TOPs as a sub-requirement. Requirements R5 and R6 should include adjacent BAs as a sub-requirement. "to exchange Interconnection and operating information" should be deleted from requirements R1 through R8 as it is redundant with the definition of Interpersonal Communications The last page of the Implementation Plan includes LSEs, PSE, and TSPs as being responsible entities under this standard, yet the standard does not include them. Please correct the implementation plan.
No
Top-001-1, Requirement R3, which is what the SDT appears to be using as its justification for not adding a requirement here is proposed to be deleted by the RTO-SDT on Project 2007-03.

No
We think you are attempting to create a requirement similar to BAL-005, R1. That language copied here is clear and concise - All generation, transmission, and load operating within an Interconnection must be included within the metered boundaries of a Balancing Authority Area.
Yes
Yes
Please remove the yellow box on page 1 indicating this standard will be retired.
Reliability Directives may be issued by blast calls from Reliability Coordinators. It is inefficient and may be a hindrance to reliability to require 3-part communications in these instances. There are several organizations registered as BAs, RCs and TOPs. It is not uncommon for those entities to be distributed across multiple desks in the same control room without regard to how an entity is registered. Thus, a single System Operator may perform functions that are categorized under two or more of those functional entities. The drafting team should clarify that under no circumstances should that System Operator be required to issue a Reliability Directive to himself. This is a corporate governance issue. In IRO-014, R1, delete sub-requirement 1.7. The requirement for weekly conference calls related to operating procedures is duplicative to R4 and could be burdensome while adding very little value under certain circumstances. In IRO-014, R4, delete the phrase "(per Requirement 1, Part 1.7)" as a conforming change. In IRO-014, Requirements R6-R8 allow at least the theoretical possibility that an RC may determine an Adverse Reliability Impact in another RC's area that the other RC neither can see nor believes that any action should be taken. R7 puts the burden on the first RC to develop a plan that it cannot implement because it has no agreement with the BAs and TOPs in the other RC area. As such, this requirement is unenforceable. Please review all the implementation plans to be sure the applicable entities match those in the standards. "The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Standards Review group only and should not be construed as the position of SERC Reliability Corporation, its board or its officers."
Individual
Andrew Pusztai
American Transmission Company
Yes
ATC agrees with the understanding that the line of demarcation is up to the point where ATC owns the equipment.
Yes
Yes
Yes
Yes
None
Group
Arizona Public Service Company
Janet Smith
Yes
Yes
Yes
Yes
Group
LG&E and KU Energy
Brent Ingebrigtsen

1) LG&E/KU suggests that the definitions and related Reliability Standards be edited to provide a clearer understanding of what is required. When used in the requirements of COM-001, the proposed definitions for Interpersonal Communication and Alternative Interpersonal Communication read improperly (i.e., a “medium capability”). This may cause confusion as to what is required by the Applicable entities. Any further use of these terms may cause greater confusion. Suggested Alternative: Interpersonal Communication: Any instance where two or more individuals interact, consult, or exchange information. The definition of “Alternative Interpersonal Communication” would not have to be changed since it is dependent upon the definition of “Interpersonal Communication.” The change of the definitions of Interpersonal Communication and Alternative Interpersonal Communication shifts their focus to the communication itself—the event. This makes the Requirements themselves much clearer since the Requirements focus on the need that entities have the capabilities—the medium. It appears the SDT’s intent is to ensure that the event takes place by requiring that the medium for those events are in place. This is much clearer if there is a distinction between the two (the event and the medium) than if they have similar definitions (a medium and a “medium capability”). 2) LG&E/KU question the consistency of the Applicability sections as they pertain to the TSP, LSE and PSE functions between COM-001 and COM-002. The deletion of the TSP, LSE and PSE from COM-001 is supported, but if these entities are not required to establish Interpersonal Communication (or Alternative Interpersonal Communication) capability with reliability entities (RC, BA, TOP), should they still be required to follow the reliability directive process of COM-002? If the probability of issuing a Reliability Directive to a TSP, LSE or PSE is so low that Interpersonal Communications capabilities with reliability entities is not justified under COM-001, why are the TSP, LSE and PSE still held to the 3 way communication requirements of COM-002? Suggest the Applicability of COM-002 to TSP, LSE and PSE and associated requirements be deleted.
Group
IRC Standards Review Committee
Albert DiCaprio
No
We expressed in the last posting that we felt the definition of Interpersonal Communications might inadvertently include data. The SDT responded that it does not by referring to Interpersonal in the name of the definition. Clearly, you can’t refer to the word you are defining in order to define it. However, it is possible “allows two or more individuals to ...” may solve this problem. Clarity should be sought in the next posting, if possible. This standard does not comport with the informational filing that NERC submitted to FERC on August 10, 2009 regarding its discontinued use of sub-requirements in standards development activities. We request the sub-requirements be modified into bulleted lists. Consider striking “to exchange Interconnection and operating information” in R1, R3, R5, R7, and R8. It is redundant to the use of Interpersonal Communications “to interact, consult, or exchange information” in the definition. Consider striking “to exchange Interconnection and operating information” in R2, R4, R6. It is redundant to the use of Alternative Interpersonal Communications which uses Interpersonal Communications in its definition. Interpersonal Communications includes “to interact, consult, or exchange information” in its definition. For R2, why is Interchange Coordinator excluded? It is included in the Requirement R1 which deals with the Interpersonal Communications. Communications would need to be maintained with the Interchange Coordinator in the event of a failure of the Interpersonal Communications. For R3, affected neighboring Transmission Operators should be included. For R4 and R6, the sub-requirement list is different than for than for the associated Interpersonal Communications requirements R3 and R5 respectively. We believe these should be duplicate. That is the sub-requirement list for R4 should match R3 and the R6 should match R5. In the event of a failure of the Interpersonal Communications, the Transmission Operator and Balancing Authority both would need to maintain communications to the same entities as in the requirement to have Interpersonal Communications. Again, we would suggest replacing sub-requirements with bulleted lists. For R5, why are neighboring Balancing Authorities not included? Additionally R5 should only read Contact with Interchange Coordinator within same Interconnection. They certainly need to be able to contact one another to identify discrepancies in scheduling and sources of meter error that could lead to deviations in ACE. Should R2, R4 and R6 be constructed parallel to R1, R3, and R5? In R1, R3 and R5, the requirement is “shall have” while in R2, R4, and R6, the requirement is “shall designate”. Since one is for the Interpersonal Communications and the other is for the Alternative Interpersonal Communications, it seems the same wording should be used. We do not believe R2.2 and R1.2 should be limited to Reliability Coordinators in the same Interconnection only. We suggest modifying “within the same Interconnection” to “within the same Interconnection, and, as appropriate, between a-synchronously connected RCs which are not precluded by law from scheduling interchange energy (for schedule changes, curtailments, etc.)” since reliability coordination may be required among the RCs on both sides of an Interconnection boundary. The VSLs for R1 through R8 should be expanded to include multiple levels based on the number of entities that the functional entity does not have Interpersonal Communications or Alternative Interpersonal Communications. FERC specified their general preference for graduated in paragraph 27 of their June 19, 2008 order on VSLs. The second half of the Severe VSL for R9 is almost a duplicate to the Lower VSL. There are some small changes in the wording but both situations deal with the case where there is a problem that has been identified with the Interpersonal Communications system and it takes more than two hours to initiate repair.
No

It might if the requirement were going to remain but the Project 2007-03 Real-Time Operations SDT proposed to retire that requirement during their last posting. We believe there needs to be better coordination with that SDT.
No
The language "to continuously assess transmission reliability" should be changed to "to continuously assess Bulk Electric System reliability" to reflect what the enforceability of the standards are meant to be. The requirement on the ERO should also be expanded similar to BAL-005-0.1b R1 to ensure that all operating entities and the entire BES is covered under a Reliability Coordinator. In R2, should "of" be "to"? Reliability Directives are issued to TOPs, BA, etc. The VSL for R1 is not consistent with the requirement. The requirement applies to the ERO but the VSL applies to the Regional Entity.
Yes
Yes
R1 states "When the results of an Operational Planning Analysis or Real-time Assessment indicate an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area." The word "notify" should be stuck.
The SDT did not address all of our concerns with COM-002-3 from the last posting. For entities registered as multiple functions, the combination of the definition of Reliability Directive and Requirement R1 could be confused to require a company to issue directives to itself. There are several organizations registered as a Reliability Coordinator, Transmission Operator and Balancing Authority. In these companies, it is not uncommon for those responsibilities to be distributed across multiple desks. Thus, for certain situations, a single System Operator may actually be the Reliability Coordinator and the Transmission Operator. In other situations, the System Operator serving the Reliability Coordinator function may be adjacent to the System Operator serving the as the Transmission Operator or Balancing Authority. We believe that it should never be necessary for these System Operators to issue Reliability Directives to themselves in the first example or to their co-worker in the second example to demonstrate compliance to NERC standards. How the entity coordinates its actions among its Reliability Coordinator, Balancing Authority and Transmission Operator roles is a corporate governance issue that should not be confused or complicated by the NERC standards. Thus, we believe that standards should be made clear that the Reliability Directive is directed to another company. We believe that, in place of requiring an operator, in real-time, to state "this is a Reliability Directive," there should be an allowance for an entity to develop procedures indicating, in advance, their expectations of three-part to their sub-operating entities. Therefore, we suggest modifying R1 to be "When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action, either verbally, when the communication is issued, or in advance through documented procedures, as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time.]" Also, we believe that the definition of Emergency, as currently cited in these draft Standards and included in the existing NERC Glossary should be modified to include the NERC Glossary term Adverse Reliability Impact to make the Standards more crisp, clear and enforceable. Because the Project 2007-03 Real-Time Operations SDT proposed to utilize the definition of Adverse Reliability Impact in TOP-001-2 R5 during the last posting, the change to the definition should be coordinated with that team. There is a text box in IRO-005-4 that indicates this standard will be retired. Yet, there still remain requirements in the standard and various other associated documentation indicates requirements are being move to this standard. Please delete the text box. IRO-014-2 R4 already includes a requirement to have weekly conference calls that should suffice. IRO-014-2 R2 seems to recognize that these Operating Procedures, Processes and Plans likely will not need to be discussed weekly as it only requires an annual update. In the definition of Reliability Directive, we suggest changing "to address an Emergency" to "to address a reliability constraint or a declared Emergency". Further, Requirement R2 in IRO-001 contains the words "which could include issuing Reliability Directives" but Reliability Directives are not referenced anywhere else in the standard. This inclusion seems unnecessary since without it, R2 already requires that the RC take actions or direct actions by others to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. Whether or not a Reliability Directive is issued is irrelevant in this requirement. We suggest that these words be removed. Note that COM-002 already stipulates the requirement for 3-part communication when a Reliability Directive is issued. The inclusion of "which could include issuing Reliability Directives" in IRO-001 is unnecessary.
Individual
Kathleen Goodman
ISO New England
No
We expressed in the last posting that we felt the definition of Interpersonal Communications might inadvertently include data. The SDT responded that it does not by referring to Interpersonal in the name of the definition. Clearly, you can't refer to the word you are defining in order to define it. However, it is possible "allows two or more individuals to ..." may solve this problem. Clarity should be sought in the next posting, if possible. This standard does not comport with the informational filing that NERC submitted to FERC on August 10, 2009 regarding its discontinued use of sub-requirements in standards development activities. We request the sub-requirements be modified into bulleted lists. Consider striking "to exchange Interconnection and operating information" in R1. R3. R5. R7. and R8. It is redundant to

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Yes

Yes

R1 states “When the results of an Operational Planning Analysis or Real-time Assessment indicate an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.” The word “notify” should be stuck.

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Individual

Steve Myers

ERCOT ISO

No

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covered under a Reliability Coordinator. In R2, should "of" be "to"? Reliability Directives are issued to TOPs, BA, etc. The VSL for R1 is not consistent with the requirement. The requirement applies to the ERO but the VSL applies to the Regional Entity.
Yes
Yes
R1 states "When the results of an Operational Planning Analysis or Real-time Assessment indicate an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area." The word "notify" should be stuck.
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Individual
Steve Rueckert
WECC
Yes
Yes
Yes
Yes
Yes
Yes
Suggested minor revision to the definition of Reliability Directive as follows (change in caps) A communication, IDENTIFIED AS A RELIABILITY DIRECTIVE, initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where action by the recipient is necessary to address an Emergency. Clearly identifying a

communication as a Reliability Directive provides immediate information to the recipient as the the nature of the communications.
Individual
Bill Keagle
BGE
Yes
BGE has no additional comments.
Yes
BGE has no additional comments.
Yes
BGE has no additional comments.
Yes
BGE has no additional comments.
Yes
BGE has no additional comments.
BGE has no additional comments.
Group
MRO's NERC Standards Review Subcommittee
Carol Gerou
No
A. R5.5 states a BA shall have Interpersonal Communications with each Interchange Coordinator within its BA area and adjacent Interchange Coordinators. NERC Registry Criteria (v5) uses the term "Interchange Authority" not Interchange Coordinator, please clarify. B. Upon review of the NERC Compliance Registry, there are only 56 BA's that are also registered as an IA but 138 total BA's within the registry. R5.5 is not clearly written because many BA's do not have an IA within their BA area. Though a BA will use an IA to schedule interchange, a possible rewrite of R5.5 may be "Each Interchange Authority that the BA actively uses to arrange Interchange". C. R10 states that the RC, TOP, BA, DP and GOP shall notify "impacted entities" within 60 minutes... Please clarify if the SDT means the entities within the applicability section or is this to be determined by the entity. A possible rewrite may be; "Each RC shall notify TOP's, BA's, and IA's within its RC area along with adjacent RC's within the same Interconnection". This break down would need to be required for each affected entity and would provide clarity to the industry. D. We do not agree with a DP and GOP need to be held to the same level of compliance as a RC, BA or TOP. FERC Order 693 (paragraph 487) directed the DP and GOP to be included in this standard by stating;" We expect the telecommunication requirements for all applicable entities will vary according to their roles and that these requirements will be developed under the Reliability Standards development process". A DP and GOP may not be staffed 24 hours a day like a BA or TOP and the SDT did not take this into consideration. E. We understand that the DP and GOP need a means of communicating with their BA and TOP (R7 and R8) but would this not be the same Interpersonal Communications capability that as stated in R3 and R5 for the TOP and BA? Example: If the BA uses a phone line as their Interpersonal Communication medium to contact the DP wouldn't the DP also use the same medium to communicate with their BA? Yes, there could be different mediums but 99% of the time it will be the same medium. F. R10 could mean that if there is a logging system that detects an Interpersonal Communication failure, then all applicable entities will need to monitor that monitoring device. Since this requirement applies to all applicable entities, and Interpersonal Communication mediums will most likely be the same, there will always be two entities found non compliant if the 60 minute threshold is passed.
No
A. Agree that a receiving entity should not be held accountable until such time that they are required to take such action. B. It might if the requirement were going to remain but the Project 2007-03 ("Real-Time Operations SDT") proposed to retire that requirement during their last posting. This needs to be coordinated with that SDT.
No
A. R1, As written it is unclear what level of certification this will entail? Presently written within the NERC Reliability Standards, responsibility is given to RC's to manage the reliability of their areas. Recommend deleting this requirement. The ERO has pushed back in other Standards to having a responsibility for any NERC Requirements, since they are not a user, owner, or operator of the BES (see EOP-004-2). If this does move forward and an RC is certified by the ERO and then the RC is found non-compliant by a Regional Entity, for an associated certified item, will the ERO be held responsible, too? If the SDT selects to keep R1, there are some issues with how the requirement is written. The requirement places emphasis on regions and regional boundaries when no emphasis should be placed there. There are multiple Reliability Coordinators the span multiple regions. The language "to continuously assess transmission reliability" should be changed to "to continuously assess Bulk Electric System reliability" to reflect on what the standards are enforceable. The requirement on the ERO should also be expanded similar to BAL-005-0.1b R1 to ensure that all operating entities and the entire BES is covered under a Reliability Coordinator. B. In R2, should "of" be "to". Reliability Directives are issued to TOPs, BA, etc. C. The VSL for R1 is not consistent with the requirement. The requirement applies to the ERO but the VSL applies to the Regional Entity.

Yes
Yes
A. COM-002-3, R2 As stated in FERC Order 693, section 512, it is essential that RCs, BA's and TOP's have communications with DPs. R2 also applies to TSPs, LSEs and PSEs. There is no directive for this and it is going to be almost impossible to communicate with a DP since DPs are usually not operated 24 hours per day as like a RC, TOP, or BA. Many DPs have answering services that will relay a message once they receive it and then pass it along to someone. An answering company could repeat the directive word for word but this will not add to any reliability level. The SDT should reconsider the applicability section of this Standard to only apply to a RC, TOP and BA for the issuance of a Reliability Directive. BA's should have the responsibility to have an Interpersonal Communication medium with DPs in their BA area per COM-001-2. B. IRO-002-2, R1, Recommend that "System Operators" be replaced with "system operators" since NERC has defined System Operator to be an individual at a control center (BA, TOP, GOP, or RC). The lower cased system operator will only point to the RC system operator that will have this R1 authority. C. The SDT did not address all of our concerns with COM-002-3 from the last posting. For entities registered as multiple functions, the combination of the definition of Reliability Directive and Requirement R1 could be confused to require a company to issue directives to itself. There are several organizations registered as a Reliability Coordinator, Transmission Operator and Balancing Authority. In these companies, it is not uncommon for those responsibilities to be distributed across multiple desks. Thus, for certain situations, a single System Operator may actually be the Reliability Coordinator and the Transmission Operator. In other situations, the System Operator serving the Reliability Coordinator function may be adjacent to the System Operator serving the as the Transmission Operator or Balancing Authority. We believe that it should never be necessary for these System Operators to issue Reliability Directives to themselves in the first example or to their co-worker in the second example to demonstrate compliance to NERC standards. How the entity coordinates its actions among its Reliability Coordinator, Balancing Authority and Transmission Operator roles is a corporate governance issue that should not be confused or complicated by the NERC standards. Thus, we believe that standards should be made clear that the Reliability Directive is directed to another company. D. We also are concerned about the need to conduct three-part communications for a Reliability Directive issued through a blast call. Under these circumstances, the need for immediate action of multiple parties may require a blast call and there may not be time for all parties to complete three-part communications before initiating actions. Thus, we believe blast calls should be treated separately and that should be made clear. E. COM-002-3 R2 needs to be rewritten as it is too verbose. The point is for the recipient of the original message to get the issuer to confirm that the message was understood. We suggest rewording R2 to "Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive." Once the receiver has completed this requirement, the ball is in the issuer's court per Requirement R3. No additional words are necessary in the requirement. F. Per COM-002-3 R1, who decides that actions need to be issued as a Reliability Directive? Shouldn't it be the responsible entity? Thus, can we assume that if the responsible entity does not identify a communication as a Reliability Directive that it is not a Reliability Directive per the requirement? After all, why would an entity require actions but not issue a Reliability Directive. Following this logic, the VSL for R1 would never apply. Would a compliance auditor second guess if an action required a Reliability Directive? G. Because the Project 2007-03 ("Real-Time Operations SDT") proposed to utilize the definition of Adverse Reliability Impact in TOP-001-2 R5 during the last posting, the change to the definition should be coordinated with that team. H. There is a text box in IRO-005-4 that indicates this standard will be retired. Yet, there still remain requirements in the standard and various other associated documentation indicates requirements are being move to this standard. Please delete the text box. I. Please strike part IRO-014-2 Part 1.7. There is no need to have a weekly conference to discuss every Operating Procedure, Operating Process and Operating Plan. As this requirement is written, a conference call would be necessary for each. Furthermore, IRO-014-2 R4 already includes a requirement to have weekly conference calls that should suffice. IRO-014-2 R2 seems to recognize that these Operating Procedures, Processes and Plans likely will not need to be discussed weekly as it only requires an annual update. J. IRO-014-2 R4 is overly broad and would require Reliability Coordinators that will not impact one another to participate on conference calls with one another without any reliability benefit. The issue is created by the addition of the clause "within the same Interconnection" to the requirement. ISO-NE, FRCC, Midwest ISO, and SPP are all in the same Interconnection. It is hard to fathom there being reliability benefit to SPP and ISO-NE conversing weekly or Midwest ISO and FRCC conversing weekly. We suggest limiting the requirement to adjacent Reliability Coordinators. K. For IRO-014-2 R5, we suggest replacing "other" with "impacted" to limit the notification of Adverse Reliability Impacts to only those Reliability Coordinators that need to know. Because the definition of Adverse Reliability Impact includes "Bulk Electric System instability or Cascading", it is possible that the cascading of 138 kV lines serving a load pocket or generator outlet stability issues could require a Reliability Coordinator to notify all other Reliability Coordinators regardless of impact. This would include Reliability Coordinators outside of the Interconnection with the problem. It would also include Reliability Coordinators that are not impacted. For instance, an issue in New England that would not pose a threat outside the northeast would require ISO-NE to notify SPP and FRCC and Reliability Coordinators in the Western Interconnection. There is no reliability benefit to this notification. L. IRO-014-2 R6-R8 are problematic and need to be refined to make clear that the Reliability Coordinators shall operate to the most conservative limit. It should not require a Reliability Coordinator that disagrees with an action plan to implement the action plan. The Reliability Coordinator will

be disagreeing with the action plan for a reliability reasons. Assuming they are correct, the requirement to implement said action plan will actually put the Interconnection at greater risk. These requirements inappropriately attempt to codify the debate and analysis that occurs between and within Reliability Coordinators when there are differing results in reliability analysis. This is part of the problem with having a Wide Area view that results in Reliability Coordinators having a view into other Reliability Coordinator Area. Their results and conclusions may be different. There should be a hierarchical structure for whose results should be used. It should be the Reliability Coordinator with primary responsibility unless the other Reliability Coordinator has evidence to demonstrate that the Reliability Coordinator with primary responsibility is incorrect. What this should do is, to trigger both to review their models and data to assess the problem. None of this needs to be codified in the standards though. M. In the definition of Reliability Directive, we suggest changing "to address an Emergency" to "to address a declared Emergency". This would help limit second guessing for a situation where a System Operator took action because he truly believed he was in an Emergency but after the fact analysis demonstrates there really was not an Emergency. N. The drafting team should expand its rationale for deleting IRO-002-1 R3. Currently, TOP-005 R1 is referenced. The project 2007-03 ("Real-Time Operations SDT") proposed to retire TOP-005-2 R1 in its most recent posting. O. We disagree with deleting IRO-002-1 R5 and R7 which establishes tools and monitoring capabilities. There should be basic tool requirements established for Reliability Coordinators. The project 2009-02 ("Real-time Reliability Monitoring and Analysis Capabilities") will be addressing these issues in more detail. Thus, it does not make sense to delete these requirements until that drafting team completes its task.

Group

FirstEnergy

Sam Ciccone

No

It is not clear from the definition of Interpersonal Communications if certain communications "mediums" such as email, instant messaging, etc. are included. Furthermore, the Measures for these requirements all include "electronic communications" as acceptable evidence. If the drafting team does not intend these mediums be included, then it should be clarified in the definition. We suggest the following wording of the definition: Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information. This interaction consists of verbal, spoken words exchanged in Real-time.

Yes

Yes

Yes

Yes

FirstEnergy offers the following additional comments: 1. The effective dates of the standards indicate an effective date of the first day of the first calendar quarter following regulatory approval. The changes to these standards will require changes to existing compliance evidence, as well as the creation of compliance evidence for some entities such as the Generator Operator which is a new applicable entity in COM-001. Therefore, to give entities ample time to get their compliance evidence in place, we suggest the effective state "the first day of the second quarter after regulatory approval". 2. With regard to the requirements for Alternative Interpersonal Communications, we question why the Generator Operator or Distribution Provider is not required to have backup communication. It would be difficult for a Reliability Coordinator, for instance, to contact a Generator Operator whose primary communications have been disabled if that entity does not have a backup. We suggest that the drafting team consider adding the GOP and DP as applicable entities requiring alternative communications.

Group

Midwest ISO Standards Collaborators

Jason Marshall

No

We expressed in the last posting that we felt the definition of Interpersonal Communications might inadvertently include data. The drafting team responded that it does not by referring to Interpersonal in the name of the definition. Clearly, you can't refer the word you are defining to define it. However, it is possible "allows two or more individuals to ..." may solve this problem. What are the drafting team's thoughts on this issue? This standard does not comport with the informational filing that NERC submitted to FERC on August 10, 2009 regarding its discontinued use of sub-requirements in standards development activities. Consider striking "to exchange Interconnection and operating information" in R1, R3, R5, R7, and R8. It is redundant to the use of Interpersonal Communications "to interact, consult, or exchange information" in the definition. Consider striking "to exchange Interconnection and operating information" in R2, R4, R6. It is redundant to the use of Alternative Interpersonal Communications which uses Interpersonal Communications in its definition. Interpersonal Communications includes "to interact, consult, or exchange information" in its definition. For R2, why is Interchange Coordinator excluded? It is included in the Requirement R1 which deals

with the Interpersonal Communications. Communications would need to be maintained with the Interchange Coordinator in the event of a failure of the Interpersonal Communications. For R3, neighboring Transmission Operators should be included. For R4 and R6, the sub-requirement list is different than for the associated Interpersonal Communications requirements R3 and R5 respectively. They should be duplicate. That is the sub-requirement list for R4 should match R3 and the R6 should match R5. In the event of a failure of the Interpersonal Communications, the Transmission Operator and Balancing Authority both would need to maintain communications to the same entities as in the requirement to have Interpersonal Communications. For R5, why are neighboring Balancing Authorities not included? They certainly need to be able to contact one another to identify discrepancies in scheduling and sources of meter error that could lead to deviations in ACE. Should R2, R4 and R6 be constructed parallel to R1, R3, and R5? In R1, R3 and R5, the requirement is "shall have" while in R2, R4, and R6, the requirement is "shall designate". Since one is for the Interpersonal Communications and the other is for the Alternative Interpersonal Communications, it seems the same wording should be used. Should R2.2 and R1.2 be limited to Reliability Coordinators in the same Interconnection only? The VSLs for R1 through R8 should be expanded to include multiple levels based on the number of entities that the functional entity does not have Interpersonal Communications or Alternative Interpersonal Communications. FERC specified their general preference for gradated in paragraph 27 of their June 19, 2008 order on VSLs. The second half of the Severe VSL for R9 is almost duplicate to the Lower VSL. There are some small changes in the wording but both situations deal with the case where there is a problem that has been identified with the Interpersonal Communications system and it takes more than two hours to initiate repair.

No

It might if the requirement were going to remain but the Project 2007-03 Real-Time Operations SDT proposed to retire that requirement during their last posting. This needs to be coordinated with that SDT.

No

In general, we are not opposed to the concept of the ERO certifying the Reliability Coordinators; however, there are some issues with how the requirement is written. The requirement places emphasis on regions and regional boundaries when no emphasis should be placed there. There are multiple Reliability Coordinators that span multiple regions. The language "to continuously assess transmission reliability" should be changed to "to continuously assess Bulk Electric System reliability" to reflect on what the standards are enforceable. The requirement on the ERO should also be expanded similar to BAL-005-0.1b R1 to ensure that all operating entities and the entire BES is covered under a Reliability Coordinator Area. In R2, should "of" be "to". Reliability Directives are issued to TOPs, BA, etc. The VSL for R1 is not consistent with the requirement. The requirement applies to the ERO but the VSL applies to the Regional Entity.

Yes

Yes

Yes

The SDT did not address all of our concerns with COM-002-3 from the last posting. For entities registered as multiple functions, the combination of the definition of Reliability Directive and Requirement R1 could be confused to require a company to issue directives to itself. There are several organizations registered as a Reliability Coordinator, Transmission Operator and Balancing Authority. In these companies, it is not uncommon for those responsibilities to be distributed across multiple desks. Thus, for certain situations, a single System Operator may actually be the Reliability Coordinator and the Transmission Operator. In other situations, the System Operator serving the Reliability Coordinator function may be adjacent to the System Operator serving the as the Transmission Operator or Balancing Authority. We believe that it should never be necessary for these System Operators to issue Reliability Directives to themselves in the first example or to their co-worker in the second example to demonstrate compliance to NERC standards. How the entity coordinates its actions among its Reliability Coordinator, Balancing Authority and Transmission Operator roles is a corporate governance issue that should not be confused or complicated by the NERC standards. Thus, we believe that standards should be made clear that the Reliability Directive is directed to another company. We also are concerned about the need to conduct three-part communications for a Reliability Directive issued through a blast call. Under these circumstances, the need for immediate action of multiple parties may require a blast call and there may not be time for all parties to complete three-part communications before initiating actions. Thus, we believe blast calls should be treated separately and that should be made clear. COM-002-3 R2 needs to be rewritten as it is too verbose. The point is for the recipient of the original message to get the issuer to confirm that the message was understood. We suggest rewording R2 to "Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive." Once the receiver has completed this requirement, the ball is in the issuer's court per Requirement R3. No additional words are necessary in the requirement. Per COM-002-3 R1, who decides that actions need to be issued as a Reliability Directive? Shouldn't it be the responsible entity? Thus, can we assume that if the responsible entity does not identify a communication as a Reliability Directive that it is not a Reliability Directive per the requirement? After all, why would an entity require actions but not issue a Reliability Directive. Following this logic, the VSL for R1 would never apply. Would a compliance auditor second guess if an action required a Reliability Directive? Because the Project 2007-03 Real-Time Operations SDT proposed to utilize the definition of Adverse Reliability Impact in TOP-001-2 R5 during the last posting, the change to the definition should be coordinated with that team. There is a

text box in IRO-005-4 that indicates this standard will be retired. Yet, there still remain requirements in the standard and various other associated documentation indicates requirements are being move to this standard. Please delete the text box. Please strike part IRO-014-2 Part 1.7. There is no need to have a weekly conference to discuss every Operating Procedure, Operating Process and Operating Plan. As this requirement is written, a conference call would be necessary for each. Furthermore, IRO-014-2 R4 already includes a requirement to have weekly conference calls that should suffice. IRO-014-2 R2 seems to recognize that these Operating Procedures, Processes and Plans likely will not need to be discussed weekly as it only requires an annual update. IRO-014-2 R4 is overly broad and would require Reliability Coordinators that will not impact one another to participate on conference calls with one another without any reliability benefit. The issue is created by the addition of the clause "within the same Interconnection" to the requirement. ISO-NE, FRCC, Midwest ISO, and SPP are all in the same Interconnection. It is hard to fathom there being reliability benefit to SPP and ISO-NE conversing weekly or Midwest ISO and FRCC conversing weekly. We suggest limiting the requirement to adjacent Reliability Coordinators. For IRO-014-2 R5, we suggest replacing "other" with "impacted" to limit the notification of Adverse Reliability Impacts to only those Reliability Coordinators that need to know. Because the definition of Adverse Reliability Impact includes "Bulk Electric System instability or Cascading", it is possible that the cascading of 138 kV lines serving a load pocket or generator outlet stability issues could require a Reliability Coordinator to notify all other Reliability Coordinators regardless of impact. This would include Reliability Coordinators outside of the Interconnection with the problem. It would also include Reliability Coordinators that are not impacted. For instance, an issue in New England that would not pose a threat outside the northeast would require ISO-NE to notify SPP and FRCC and Reliability Coordinators in the Western Interconnection. There is no reliability benefit to this notification. IRO-014-2 R6-R8 are problematic and need to be refined to make clear that the Reliability Coordinators shall operate to the most conservative limit. It should not require a Reliability Coordinator that disagrees with an action plan to implement the action plan. The Reliability Coordinator will be disagreeing with the action plan for reliability reasons. Assuming they are correct, the requirement to implement said action plan will actually put the Interconnection at greater risk. These requirements inappropriately attempt to codify the debate and analysis that occurs between and within Reliability Coordinators when there are differing results in reliability analysis. This is part of the problem with having a Wide Area view that results in Reliability Coordinators having a view into other Reliability Coordinator Areas. Their results and conclusions may be different. There should be a hierarchical structure for whose results should be used. It should be the Reliability Coordinator with primary responsibility unless the other Reliability Coordinator has evidence to demonstrate that the Reliability Coordinator with primary responsibility is incorrect. What this should do is to trigger both to review their models and data to assess the problem. None of this needs to be codified in the standards though. In the definition of Reliability Directive, we suggest changing "to address an Emergency" to "to address a declared Emergency". This would help limit second guessing for a situation where a System Operator took action because he truly believed he was an Emergency but after the fact analysis demonstrates there really was not an Emergency. The drafting team should expand its rationale for deleting IRO-002-1 R3. Currently, TOP-005 R1 is referenced. The Real-Time Operations drafting team proposed to retire TOP-005-2 R1 in its most recent posting. We disagree with deleting IRO-002-1 R5 and R7 which establish tools and monitoring capabilities. There should be basic tools requirements established for Reliability Coordinators. Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities will be addressing these issues in more detail. Thus, it does not make sense to delete these requirements until that drafting team completes its task.

Individual
Brenda Powell
Constellation Energy Commodities Group
Yes
Yes
Yes
Yes
Yes
Group
Southern Company
Cindy Martin
No
Comments: Standard COM-001-2 R10. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider, and Generator Operator shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer. Comment: It is not clear whether the notification requirements identified in R10 apply to failure of ALL available Interpersonal Communications

or ANY Interpersonal Communications. We suggest that the existence of functioning Alternative Interpersonal Communications precludes the requirement for notification of impacted entities. D. Compliance 1. Compliance Monitoring Process 1.3 Data Retention Each Generator Operator shall keep the most recent twelve months of historical data (evidence) for Requirements R8 and R10, Measures M8 and M10. Comment: The data retention requirements specified for the Generator Operator in Para. 1.3 (above) are not consistent with the 3-year audit interval for the GOP. Question: When audited on this Standard is the expectation that the GOP will have 12 months of evidence or 36 months of evidence? Standard COM-002-3 R2. Each Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message has been confirmed. Comment: The term "Reliability Directive" is currently not defined in the NERC Glossary of Terms. However, in the Implementation Plan for COM-002-3 the RC SDT proposes a definition for Reliability Directive. It is implied in the standard that the Reliability Directive is issued as a voice command which precludes the use of our preferred method of Interpersonal Communication. However, this is not definitively stated in either the standard or the proposed definition. I think this needs to be made clearer if the Reliability Directive must be issued as a voice command. D. Compliance 1. Compliance Monitoring Process 1.3 Data Retention The Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity shall retain evidence of Requirement 2, Measure 2 for the most recent 3 months. Comment: The data retention requirements specified for the Generator Operator in Para. 1.3 (above) are not consistent with the 3-year audit interval for the GOP/PSE. Question: When audited on this Standard is the expectation that the GOP and PSE will have 3 months of evidence or 36 months of evidence?
No
Comments: I see no connection between XCEL's comment on COM-001-1. The requirements of COM-001-1 require the RCs, TOPs, and BAs to have a primary interpersonal communications method and to designate an alternative. I believe that if the requirements for the entity to have both primary and alternative methods of interpersonal communications this objection could be cleared. For example, R2 Each Reliability Coordinator shall designate have an Alternative Interpersonal Communications capability with the following entities to exchange Interconnection and operating information
No
Comments: This would allow NERC to designate one entity to be the Reliability Coordinator for an entire interconnection or the entire continent. This would reduce the Regional Reliability Organizations to compliance entities.
Yes
Yes
Comments: It appears that the requirements for entities designated in the IRO standards to have tools to access and/or monitor the system have been moved to pending standards that are not enforceable. It seems that if the newest revisions of the IRO standards are not implemented as a group there will be either missing requirements or duplicate requirements in the IRO standards.
Individual
Greg Rowland
Duke Energy
No
• We question how far the definition of Alternative Interpersonal Communication goes in requiring separate infrastructure from Interpersonal Communication. For example, wireless communications sometime utilize fiber optic networks. • We question why the requirements state that entities must "have" Interpersonal Communications capability, but must "designate" Alternative Interpersonal Communications capability? • R1.2 and R2.2 – Why is this limited to the same interconnection? • R3 – need to add neighboring TOPs. • R5 – need to add adjacent BAs. • Interchange Coordinator – Add IC to the Applicability Section, and add a requirement that the IC have Interpersonal Communication capability with its BA and adjacent BAs. • Requirements to "designate" Alternative Interpersonal Communication should carry a "Medium" VRF instead of "High", because they are a backup capability. The word "designate" carries the connotation that these are documentation requirements. • R9 requires a monthly test of Alternative Interpersonal Communications capability. This was quarterly in the last draft. We question how these requirements for "Alternative Interpersonal Communications" capability are related to requirements for "backup functionality" in EOP-008-1, which requires an annual test of backup functionality. Clarity on the relationship between "Interpersonal Communications", "Alternative Interpersonal Communications", "primary control center functionality" and "backup control center functionality" would be appreciated. • R11 – is this requirement being moved to COM-003? • Data Retention – Is data retention really going to be just 12 months? Most auditors seem to be asking for everything since the last audit.
No
Requirements of TOP-001-1 are being revised under Project 2007-03, which may not continue to adequately address Xcel's concern.

No
How is NERC going to certify the RCs? Also, we believe the word "all" should be inserted after the word "among", so that it's clear that all generation, transmission and load must be included.
Yes
Yes
• COM-002-3 contains the proposed definition "Reliability Directive". We continue to believe Requirement R1 should be deleted and that this definition should contain the phrase "identified as a Reliability Directive to the recipient". Otherwise, compliance controversies will arise when auditors second-guess the RC, TOP or BA's judgment regarding whether or not an abnormal system condition met the definition of "Emergency", and warranted a "Reliability Directive" with 3-part communication. A conforming change will need to be made to R2, since it refers to R1. This change in the definition of "Reliability Directive" is also needed because this term is used in other standards such as IRO-001-2, and without repeating a similar requirement to COM-002-3 requirement R1 in IRO-001-2, there is potential for confusion. • We disagree with the VSL for COM-002-3. This is clearly a requirement with two possible compliance failures: Failure to acknowledge a correct repeat-back, and failure to resolve an incorrect repeat-back. These failures have dramatically different consequences, which the drafting team should recognize via a graduated VSL. We think that the failure to acknowledge should either be "Lower" or "Medium". • Requirement R2 of IRO-001-2 is unclear and should be reworded as follows: "Each Reliability Coordinator shall take actions or direct actions (which could include issuing Reliability Directives to Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers within its Reliability Coordinator Area) to either prevent identified events that could result in an Adverse Reliability Impact, or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts." • Various changes have been made to the defined term "Adverse Reliability Impact" as this project has progressed. We believe the latest change should not be made, and the Phrase "uncontrolled separation" should be reinserted in the definition, because that phrase is part of the Epect 2005 legislation definition of "reliable operation". Here is the text from the legislation: "The term 'reliable operation' means operating the elements of the bulk-power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cybersecurity incident, or unanticipated failure of system elements."
Group
SPP Standards Development
Robert Rhodes
No
We would suggest that the applicability of COM-001-2 be expanded to that listed in COM-002-3. How can the directives to be issued in COM-002 be delivered and confirmed without having Interpersonal Communications capability? All of the functional entities listed in R1.1 should also be listed in R2.1. Similarly the sub-requirements of R3 should also be applied to R4. The same holds true for R5 and R6. If the SDT intends to exclude data communications from Interpersonal Communications and Alternative Interpersonal Communications, we suggest the SDT be more specific in the definition to specifically exclude data communications in the definition. It is not readily apparent that these terms do not apply to data communications and without a clarification, confusion exists.
Yes
In fact, we believe that R1, R2 and R5 more specifically put that requirement on the TOP. The TOP doesn't have to wait for the RC and any directive that may be associated with R3 prior to taking action to mitigate an emergency condition.
No
Is this more of a registry question than a standards issue? While we agree that there needs to be a requirement somewhere that establishes the need for Reliability Coordinators, isn't there also a similar need for other functional entities such as Transmission Operators, Balancing Authorities, etc? Should these be captured in standards or in the certification/registration process?
Yes
Yes
IRO-001-2, R2 implies that the RC could interrupt the normal chain of command from the TOP and/or BA to their respective GOPs, ICs and DPs thereby circumventing the coordinating process that currently exists. In fact, these entities may not even know their RCs nor be able to identify them and as such any directive from the RC may not be implemented in a timely manner. We would like to see a qualifier on this requirement that does not remove the normal coordination role from the TOP with his DP, etc. We would suggest that "with enough details that the accuracy of the message has been confirmed" be deleted from COM-002-3, R2. We would suggest the use of the term "instruction" and its derivatives rather than 'direct' in IRO-001-2. R2. R3 and R4. Delete 'issue an alert to' in IRO-005-4. R1. There are

yellow boxes in IRO-005-4, redline versions, which indicate that this standard is being retired, but it isn't because two requirements from IRO-001 are being returned to this standard.
Individual
CJ Ingersoll
CECD
No
Based on the drafting teams response that the definition of Interpersonal"clarifies the exclusion of media dedicated to Telemetry or other data exchange,the term Interpersonal Communication should be replaced with verbal communication capabilities. The term Alternative Interpersonal Communication should be replaced with alternative verbal communication capability that is able to serve as a substitute for and does not utilize the same infrastructure (medium) as verbal communications capabilities used for day-to-day operations.
Yes
Yes
Yes
1. COM-002 R2 states that "the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message has been confirmed." Recommend a change to "the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the desired outcome of the message is clear". 2. IRO-001 R2 states "Each Reliability Coordinator shall take actions or direct actions which could include issuing Reliability Directives of Transmission Operators, ..." Recommend a change to "Each Reliability Coordinator shall take actions or direct actions which could include issuing Reliability Directives [See COM-002] to Transmission Operators, ..." 3. IRO-001 R4 states entities "shall inform its Reliability Coordinator upon recognition of its inability to perform as directed per Requirement R3." Recommend a change to, entities "shall inform its Reliability Coordinator upon recognition of its inability to perform as directed."
Individual
Rex A Roehl
Indeck Energy Services
No
Yes
No
Yes
Yes
Individual
Shaun Anders
City of Springfield, IL - City Water Light and Power (CWLP)
No
The definition of "Interpersonal Communications" is overly broad and does not address the functional needs of reliability coordination. The definition should be limited to systems utilized for essential reliability functions. While the Purpose statement in the standard does address this intent, the explicit inclusion in the definition removes all ambiguity. Further, the definition of "Alternative Interpersonal Communications" without corresponding explicit definition of Primary Interpersonal Communications may lead to confusion and unnecessary duplication of efforts in testing and maintenance.
No
TOP-001 is in the process of being substantially modified by Project 2007-03. These changes may conflict with the matter addressed by Xcel's comment. Thus, Xcel's concern should be addressed independently but in the context of the TOP-001-2 revisions proposed by Project 2007-03.
Yes

CWLP generally concurs with and supports comments previously submitted by the SERC Operating Committee where those comments are not in conflict with the specific comments above.
Individual
RoLynda Shumpert
South Carolina Electric and Gas
No
Each sub-requirement should not have an "R" in front of the number in order to be consistent with NERC's August 10, 2009 filing at FERC on this subject. Requirement R3 and R4 should include adjacent TOPs as a sub-requirement. Requirements R5 and R6 should include adjacent BAs as a sub-requirement. "to exchange Interconnection and operating information" should be deleted from requirements R1 through R8 as it is redundant with the definition of Interpersonal Communications. The last page of the Implementation Plan includes LSEs, PSE, and TSPs as being responsible entities under this standard, yet the standard does not include them. Please correct the implementation plan.
No
Top-001-1, Requirement R3, which is what the SDT appears to be using as its justification for not adding a requirement here is proposed to be deleted by the RTO-SDT on Project 2007-03.
No
We think you are attempting to create a requirement similar to BAL-005, R1. That language copied here is clear and concise - All generation, transmission, and load operating within an Interconnection must be included within the metered boundaries of a Balancing Authority Area.
Yes
Yes
Reliability Directives may be issued by blast calls from Reliability Coordinators. It is inefficient and may be a hindrance to reliability to require 3-part communications in these instances. There are several organizations registered as BAs, RCs and TOPs. It is not uncommon for those entities to be distributed across multiple desks in the same control room without regard to how an entity is registered. Thus, a single System Operator may perform functions that are categorized under two or more of those functional entities. The drafting team should clarify that under no circumstances should that System Operator be required to issue a Reliability Directive to himself. This is a corporate governance issue. In IRO-014, R1, delete sub-requirement 1.7. The requirement for weekly conference calls related to operating procedures is duplicative to R4 and could be burdensome while adding very little value under certain circumstances. In IRO-014, R4, delete the phrase "(per Requirement 1, Part 1.7)" as a conforming change. In IRO-014, Requirements R6-R8 allow at least the theoretical possibility that an RC may determine an Adverse Reliability Impact in another RC's area that the other RC neither can see nor believes that any action should be taken. R7 puts the burden on the first RC to develop a plan that it cannot implement because it has no agreement with the BAs and TOPs in the other RC area. As such, this requirement is unenforceable. Please review all the implementation plans to be sure the applicable entities match those in the standards.
Individual
Dan Rochester
Independent Electricity System Operator
No
(1) NERC filed with FERC on August 10, 2009 indicating that it would discontinue the use of sub-requirements in standards. All draft standards posted since have the format of Part Numbers within each main Requirement. Please revise the standards in this project accordingly. (2) Having defined the terms Interpersonal Communication and Alternative Interpersonal Communication, the phrase "to exchange Interconnection and operating information" in a number of requirements is redundant and can be removed. Further, for R1, we suggest removing the phrase "within the same Interconnection since there RCs between two Interconnections still need to communication with each other for reliability coordination (e.g. curtailment of interchange transactions crossing Interconnection boundary, as stipulated in IRO-006). (3) R2: Suggest to add Purchasing-Selling Entity and Interchange Authority (INT-004 and INT-005 have requirements for communication between the RC and the PSE and IA), and remove the phrase "within the same Interconnection since there RCs between two Interconnections still need to communication with each other for reliability coordination (e.g. curtailment of interchange transactions crossing Interconnection boundary, as stipulated in IRO-006). (4) R3: Suggest to add adjacent Transmission Operator and Purchasing-Selling Entity (the latter needed for meeting INT-004 requirements). (5) The list of entities in R4 and R6 is different from those in R3 and R5. They should be the same for having Alternative Interpersonal Communication capability. (6) R5: Suggest to add adjacent Balancing Authority as adjoining BAs need to communication with each to check schedules and other balancing information. (7)

There are a number of parts in Requirements R1 to R8 each of which must be complied with. However, the VSLs for R1 to R8 are binary which do not provide any distinction in partial failure of each of these requirements. We suggest the SDT to apply the VSL guideline and re-establish the various levels of violation severity for these requirements.
No
TOP-001 is being revised and some of the requirements that fulfill this need may have been removed. We suggest the SDT check with the latest draft version of TOP-001 and coordinate with the Real-time Operation SDT to ensure there are not gaps.
No
1. R2: The word "of" before Transmission Operators should be "to". 2. The VSL for R1 should be revised to replace Regional Entities with ERO.
Yes
Yes
1. IRO-001: Reliability Directive: We do not agree with the proposed definition since it addresses Emergencies only. There are situations where a Reliability Directive is issued such that the directed action must be taken by the receiving entity to address a reliability constraint or any condition on the BES which if left unattended could, in the judgment of the issuing entity, lead to an Emergency. These conditions themselves do not constitute an Emergency which is defined as "Any abnormal system condition that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System." There could be no abnormal condition but the actions must nevertheless be taken promptly to prevent the bulk electric system from entering into an abnormal condition. We therefore suggest the term Reliability Directive be revised to: Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address a reliability constraint or an Emergency. 2. IRO-001, Requirement R2: This requirement contains the words "which could include issuing Reliability Directives" which is not referenced anywhere else in the standard. We do not think this inclusion is necessary since without it, R2 already requires that the RC take actions or direct actions by others to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. Whether or not a Reliability Directive is issued is irrelevant in this requirement. We suggest to remove these words. Note that COM-002 already stipulates the requirement for 3-part communication when a Reliability Directive is issued. The inclusion of "which could include issuing Reliability Directives" in IRO-001 is unnecessary. We suggest replacing "identified events" with "anticipated events". This requirement also lists Interchange Coordinators as one of the recipients of Reliability Directives which is not consistent with the implementation plan. 3. IRO-014: R4 as written creates unnecessary requirements for an RC to participate in conference calls for issues that may not affect the RC itself. We suggest to reinstate the original word "impacted" as opposed to "other", and remove the words "within the same Interconnection" since such calls and coordination may be required for RCs on both side of the Interconnection boundary. Same change suggested for R5, i.e. replace "other" with "impacted". 4. If an entity provides Interpersonal Communication for day-to-day communication using two different media, e.g. radio and telephone, the proposed definition of Alternative Interpersonal Communication suggests that it would not be possible for one medium to be used as the Alternative Interpersonal Communication for the other since the two media are both used every day. 5. COM-001-2 R10 suggests that the responsible entity must wait for at least 30 minutes before notifying other entities of the failure of its Interpersonal Communication capability. We recommend changing "that lasts 30 minutes" to "that lasts or is expected to last 30 minutes". This allows responsible entities to start notifying other entities earlier. 6. In IRO-005-4 R1: Delete "notify".
Individual
Alice Ireland
Xcel Energy
No
We feel that either the definitions, or the requirements, should make it clear whether data is included.
No
We are concerned that the drafting team may not have understood Xcel Energy's comments and FERC's directive in Order 693. FERC had asked that NERC consider Xcel Energy's suggestion. This consideration does not necessarily equate to the development of additional requirements, however that may be the solution. We recognize that R1 and R2 of TOP-001-1 give the TOP authority to take immediate actions necessary to alleviate operating emergencies. We were concerned with the potential situation where the RC's directive (R3 of IRO-001-2) may conflict with actions the TOP has ALREADY taken. In this situation, we do not feel the TOP should be held at fault for the actions it took prior to the RC's directive. (R3 of IRO-001-2 is currently in effect under TOP-001-1 R3.) Additionally, R1 and R2 of TOP-001-1 have been removed from the latest draft of version 2. So, if TOP-001-2 and IRO-001-2 are approved as drafted, it would appear that all rights and protections of the TOP to take immediate actions will be removed and our initial issue, as detailed in Order 693, still exists.

Group
Kansas City Power & Light
Michael Gammon
No
These requirements require TOP's, BA's, and GOP's to establish alternative means of "interpersonal" communications with other BA's, GOP's, and BA's respectively without regard to the reliability impact each TOP, BA or GOP has on the interconnection. Why would it be necessary for a TOP with one 161kv transmission line or a BA with 100 MW of total load, or one GOP with a 30MW unit to realize additional costs when the facilities they operate have little reliability impact? In addition, most RC's have established satellite telephone systems as back-up communication with TOP's. RC's may have to establish additional communication systems with BA's as these requirements impose to avoid Standards of Conduct issues. R9 – considering the reliability of communication systems, a 2 hour response to a problem with the alternative means of communication is over sensitive. Allowing for sometime in an operating shift would be more in line, such as 8 hours.
Yes
Yes
Yes
Yes
There are more requirements that are being removed in the IRO standards than are currently proposed. It would be helpful if the SDT would consider a mapping of each requirement that is being eliminated and whether the requirement is duplicated elsewhere, moved elsewhere and where, or is deemed not needed would be helpful in judging if the changes are appropriate. Without this mapping it is difficult to fully support all the proposed changes to all these Standards.

Consideration of Comments on Initial Ballot — Reliability Coordination (Project 2006-06) Date of Initial Ballot: February 25 – March 7, 2011

If you feel that the drafting team overlooked your comments, please let us know immediately. Our goal is to give every comment serious consideration in this process. If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Herb Schrayshuen, at 609-452-8060 or at herb.schrayshuen@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.¹

Summary Consideration:

The RCSDT thanks all stakeholders for their comments. Many stakeholders provided comments suggesting revisions to the standards. Many of these suggestions were incorporated into the standards. As a result of the revisions, the RCSDT is moving COM-001-2, COM-002-3 and IRO-001-2 to a successive ballot. The RCSDT made a few clarifying edits to the remaining standards based on stakeholder comments. Therefore, IRO-002-3, IRO-005-4 and IRO-014-2 are being moved to recirculation ballot. Because of this approach, the SDT will be proposing an interim change to IRO-001: the elimination of Requirement R7, as it is duplicative of one of the requirements in IRO-014-2.

For the COM-001 standard, several commenters had suggestions for improvements to the requirement language and applicability. The RCSDT believes the standard correctly and adequately requires each applicable entity that would have capability to receive Interconnection and operating information to have Interpersonal Communications and Alternative Interpersonal Communications to be used when the Interpersonal Communication is not available. The RCSDT has addressed the applicability of the standards and implementation plans by aligning COM-001-2, and COM-002-3 to include the same entities and by removing LSE, PSE and TSP from the COM standards.

Many comments were concerned about both the medium (e.g. cellular, satellite, etc.) and media (e.g. voice, email, etc.) used for Interpersonal Communications. The current language avoids being prescriptive and allows each entity to determine what is suitable. Interpersonal Communication and Alternative Interpersonal Communication is between the applicable entities which may include multiple locations (e.g. a primary and back-up control center).

The RCSDT added the following Requirement Parts at the suggestion of stakeholders:

3.5 Adjacent Transmission Operators synchronously connected within the same Interconnection

4.3 Adjacent Transmission Operators synchronously connected within the same Interconnection

5.6 Adjacent Balancing Authorities

6.3 Adjacent Balancing Authorities

The RCSDT agrees with the many industry comments and removed the phrase "to exchange Interconnection and operating information" in requirements R1 through R8. This removal clarifies that the intent of this capability is NOT for the exchange of data.

A few commenters also expressed concerns about the frequency of testing Alternative Interpersonal Communications capability. The RCSDT believes that the proposed testing frequency is supported by the majority of stakeholders and is not overly burdensome.

¹ The appeals process is in the Reliability Standards Development Procedure: http://www.nerc.com/files/RSDP_V6_1_12Mar07.pdf.

Several commenters suggested that VSLs should be written based on the percent of entities rather than by an occurrence of a violation. VSLs must be written on a violation occurrence basis in accordance with FERC guidelines. The requirements specify which entities must be included in communications capabilities. If a single entity is missing, this is a violation of the requirement. According to VSL guidelines, if missing any part of the requirement could have the same reliability outcome as missing the entire requirement, the requirement is binary and the VSL must be severe.

A new requirement was added to COM-001 for clarity regarding responsibilities of the Distribution Provider and the Generator Operator when either entity experiences a failure of its Interpersonal Communication capability:

R11. Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities shall consult with its Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability. [Violation Risk Factor: Medium][Time Horizon: Real-time Operations]

This requirement requires collaboration between entities to restore a failed communications capability.

The RCSDT asked stakeholders if they believed that the requirements of TOP-001-1 obviate the need to develop additional requirements to address Xcel's comment as directed in FERC Order 693. The original justification that the RCSDT posited for not adding a requirement to directly address Xcel Energy's comments in paragraph 516 and FERC's related recommendation in paragraph 523 was that TOP-001-1 R3 was considered to address this concern. Since that time, the RTO SDT has proposed to retire TOP-001-1 R3. However, NERC has since retired IRO-004-1 R3 and R5 along with IRO-005-3 R5. Because these are retired, there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency. Therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered "would violate safety, equipment, regulatory, or statutory requirements," the TOP may respond to the RC that it cannot comply.

Stakeholders were asked if they agree with the revision to IRO-001, R1 for certifying Reliability Coordinators. Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.

A significant revision to IRO-001-2 was made by removing the Interchange Coordinator from the standard. The RCSDT made this revision because the Balancing Function is responsible for implementing interchange (see NERC Reliability Functional Model, version 5, page 32, item 7) and to operate the Balancing Authority Area to maintain load-interchange-generation balance (item 3). The RCSDT asked stakeholders if they agree with moving two requirements from IRO-001 back to IRO-002 relating to Analysis Tool outages. All stakeholders that responded agreed and there were no comments received.

The RCSDT asked stakeholders if they agree with moving two requirements from IRO-001 back to IRO-005 relating to Reliability Coordinator notifications. Several commenters noted a typographical error in R1 which was corrected to read:

When the results of an Operational Planning Analysis or Real-time Assessment indicate an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify ~~issue an alert to~~ all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]"

One commenter also asked that an errant yellow text box be removed from Page 1, which was also done.

The RCSDT received a number of comments regarding the applicability of COM-001, and COM-002. The RCSDT agrees with these comments and has removed PSE and LSE from the COM-001-2 implementation plan. The RCSDT also addressed minor issues involving typos, formatting and style.

The RCSDT received comments suggesting clarification of COM-002-3. The RCSDT intends the communication of Reliability Directives to be person-to-person and in such a manner that the Reliability Directive is understood and not necessarily repeated verbatim. COM-002-3 is not intended to be prescriptive on how the Reliability Directive is issued. Spoken or written communications are valid methods (i.e. using the telephone, radio, electronic texting, email, etc.). The purpose of COM-002-3 is to ensure emergency communications between operating personnel are effective. There is no proxy requirement for 24/7 operating personnel regarding small entities. Only “capability” as provided for in COM-001-2 is applicable. The RCSDT agrees that the use of Blast Calls to issue Reliability Directives, in mass, is efficient and effective. The RCSDT believes Reliability Directives issued in mass should be defined by procedure, and that the procedure would establish a method of affirmation and notice of implementation. As envisioned, communications protocols would be addressed in the COM-003 standard being developed in Project 2007-02.

Some commenters suggested revisions to IRO-014, requirement R8 to conform to similar requirements R6 and R7. The RCSDT made the suggested revision by re-ordering R8:

R8. During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, each Reliability Coordinator shall implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact unless such actions would violate safety, equipment, regulatory or statutory requirements. [Violation Risk Factor: High][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

IRO-014-2, requirement R4 is applicable to those Reliability Coordinators engaged in activities related to requirement R1 and part 1.7. It is unlikely that Reliability Coordinators geographically and electrically distant from one another will have mutually agreed upon operating procedures (per requirement R1), and therefore requirement R4 would not be applicable. The RCSDT believes IRO-014-2, requirement R4 (which requires weekly communication) provides reasonable contact and flexibility – and this requirement is in effect today.

The RCSDT coordinated the use of the NERC Glossary term “Adverse Reliability Impact” with the Real-Time Operations team and continues the practice of informing all RCs of Adverse Reliability Impacts in requirement R5.

The RCSDT has revised IRO-014-2, requirements R6-R8 to clarify that when one RC identified a problem and presents an action plan for another RC, the second RC is obligated to implement the action plan. The RCSDT will forward the concern about RC's identifying themselves and the receiver to establish authority to the Project 2007-02, Operating Personnel Communications Protocols SDT. The Project 2007-02 team is developing a standard that includes requirements for use of specific communications protocols.

Voter	Entity	Segment	Vote	Comment
Edward P. Cox	AEP Marketing	6	Negative	1) The applicability of COM-001 and COM-002 appear to be at odds with each other. The requirements may need to be re-written so that they are in sync. Response: The RCSDT has revised the applicability of COM-001 and COM-002 such that they contain the same functional entities. These are: RC, TOP, BA, GOP, and DP. 2) The revision to IRO-001, R1 is out of scope with the standard, as it is currently addressed through the NERC certification process that the NERC reliability coordinators are subject to.

Voter	Entity	Segment	Vote	Comment
				Response: Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2. 3) The language used in COM-002-3 R2 including “with enough details that the accuracy of the message has been confirmed” is subjective and ambiguous. Response: The RCSDT agrees with the intent of your comment and has modified COM-002-3, R2 as: R2. Each Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive. 4) IRO-001 R2, R3, and R4 have replaced “Directives” with the word direction in lower case (while it appears that “Directives” is a subset of “directions”). We believe that this muddies the waters and could bring numerous conversations and dialog into scope unnecessarily. The end result is that the RC has the right to issue and use “Directives” and anything short of this could just be communications. For example, a number of entities that are Reliability Coordinators also facilitate energy markets. There are many communications related to markets that probably should be out of scope with respect to the standards. Furthermore, it might not be clear what role (eg Reliability Coordinator, market operator, etc) the staff at these entities are fulfilling. Response: IRO-001 is written to cover both typical daily operating scenarios and also emergency scenarios. The required performance encompasses issuing and responding to Reliability Directives as well as other directions. The requirement language specifically ties back to Requirement R2 which states that the RC “shall take actions or direct actions, which could include issuing Reliability Directives, “. This is the “direction in accordance with Requirement R2” stated in R3 and the “direction in accordance with Requirement R3” stated in R4.
Response: The RCSDT thanks you for your comment. Please see responses above.				

Voter	Entity	Segment	Vote	Comment
Brock Ondayko	AEP Service Corp.	5	Negative	1) The applicability of COM-001 and COM-002 appear to be at odds with each other. The requirements may need to be re-written so that they are in sync. Response: The RCSDT has revised the applicability of COM-001, and COM-002 such that they contain the same functional entities. These are: RC, TOP, BA, GOP, and DP. 2) The revision to IRO-001, R1 is out of scope with the standard, as it is currently addressed through the NERC certification process that the NERC reliability coordinators are subject to. Response: Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2. 3) The language used in COM-002-3 R2 including “with enough details that the accuracy of the message has been confirmed” is subjective and ambiguous. Response: The RCSDT agrees with the intent of your comment and has modified COM-002-2, R2 as: R2. Each Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive. 4) IRO-001 R2, R3, and R4 have replaced “Directives” with the word direction in lower case (while it appears that “Directives” is a subset of “directions”). We believe that this muddies the waters and could bring numerous conversations and dialog into scope unnecessarily. The end result is that the RC has the right to issue and use “Directives” and anything short of this could just be communications. For example, a number of entities that are Reliability Coordinators also facilitate energy markets. There are many communications related to markets that probably should be out of scope with respect to the standards. Furthermore, it might not be clear what role (eg Reliability Coordinator, market operator, etc) the staff at these entities are fulfilling. Response: IRO-001 is written to cover both typical daily operating scenarios and also emergency scenarios. The required performance encompasses issuing and responding to Reliability Directives as well as other directions. The requirement language specifically ties back to Requirement R2 which

Voter	Entity	Segment	Vote	Comment
				states that the RC "shall take actions or direct actions, which could include issuing Reliability Directives." This is the "direction in accordance with Requirement R2" stated in R3 and the "direction in accordance with Requirement R3" stated in R4.
Response: The RCSDT thanks you for your comment. Please see responses above.				
Richard J. Mandes	Alabama Power Company	3	Affirmative	Please see comments
Response: The RCSDT thanks you for your comment. Please see response to posting comments for the SERC OC Standards Review Group; the RCSDT did not specifically find comments from Alabama Power Company and believes comments were included within this group.				
Kenneth Goldsmith	Alliant Energy Corp. Services, Inc.	4	Negative	While most of the changes recommended in the standards are acceptable to us, we do not believe multiple standards should be included in one ballot. You might ask for comments as a group, but each standard should be balloted separately. Response: The SDT has discussed this recommendation and has changed the way that these standards are being posting for ballot. Thank you for your suggestion. COM-001 R10 needs to be clarified that the "impacted entities" are within the same interconnection/area. It is not necessary to contact all entities as could be interpreted by the standard as currently written. We believe there may be differing levels of communication requirements, especially as it relates to smaller entities registered as DP's or LSE's that are not staffed 24 hours per day. We agree there is some responsibility of everyone to have some level of communications, the question is to what level. Response: R10 specifies only "impacted entities." That phrase is used to limit the scope of the requirement. If an entity has a failure of its Interpersonal Communications capability with only one entity, then <i>that</i> entity is the "impacted entity" and they should be notified of the failure.

Voter	Entity	Segment	Vote	Comment
Response: The RCSDT thanks you for your comment. Please see responses above.				
Jennifer Richardson	Ameren Energy Marketing Co.	6	Negative	Comment COM-001: (1) R2 is written with the onus on the Recipient to get repeat an accurate message. The Measure and VSL appear to attach to the Recipient to make a bad message into an accurate one. Response: The SDT assumes you intended to comment regarding COM-002-3 R2, as that is where the issuance, dialogue, and confirmation process is described, not COM-001. The SDT believes that it is the issuing entity which is required to decide whether the message has been received to its satisfaction. However, the SDT further believes the recipient of the original communications must be responsible for responding and participating in dialogue with the issuing entity. Without that, the issuing entity cannot decide whether the message has been received and understood. (2) R2 is too verbose. Response: Based on specific suggestions from other stakeholders, the team deleted the following phrase from R2: with enough details that the accuracy of the message has been confirmed The team revised the associated VSL to: The responsible entity that was the recipient of a Reliability Directive failed to repeat, restate, rephrase or recapitulate the Reliability Directive. ~~with enough details that the accuracy of the message was confirmed.~~ (3) We don't think Operations should rely on email, for instance, as an Interpersonal Communication capability. We should be explicit to exclude these kinds of medium. The medium must be near instantaneous like voice, cell, and satellite. Response: COM-002 does not preclude text or other forms of communication for issuing Reliability Directives.
Response: The RCSDT thanks you for your comment. Please see responses above.				

Voter	Entity	Segment	Vote	Comment
Kirit S. Shah	Ameren Services	1	Negative	Comment COM-001: (1) R2 is written with the onus on the Recipient to get repeat an accurate message. The Measure and VSL appear to attach to the Recipient to make a bad message into an accurate one. Response: The SDT assumes you intended to comment regarding COM-002-3 R2, as that is where the issuance, dialogue, and confirmation process is described, not COM-001. The SDT believes that it is the issuing entity which is required to decide whether the message has been received to its satisfaction. However, the SDT further believes the recipient of the original communications must be responsible for responding and participating in dialogue with the issuing entity. Without that, the issuing entity cannot decide whether the message has been received and understood. (2) R2 is too verbose. Response: COM-002-3 R2: Based on specific suggestions from other stakeholders, the team deleted the following phrase from R2: with enough details that the accuracy of the message has been confirmed The team revised the associated VSL to: The responsible entity that was the recipient of a Reliability Directive failed to repeat, restate, rephrase or recapitulate the Reliability Directive. ~~with enough details that the accuracy of the message was confirmed.~~ (3) We don't think Operations should rely on email, for instance, as an Interpersonal Communication capability. We should be explicit to exclude these kinds of medium. The medium must be near instantaneous like voice, cell, and satellite. Response: COM-002 does not preclude text or other forms of communication for issuing Reliability Directives.
Response: The RCSDT thanks you for your comment. Please see responses above.				
Gregory S Miller	Baltimore Gas & Electric Company	1	Affirmative	BGE is supportive of all 5 questions in the Comment Form.

Voter	Entity	Segment	Vote	Comment
Response: The RCSDT thanks you for your support.				
Joseph S. Stonecipher	Beaches Energy Services	1	Negative	From the last posting to this posting, for COM-002-3 R2, the phrase "the accuracy of the message has been confirmed" was added to the second step of three part communication. "Accuracy" is not the correct term here. "Understanding" is a better term. It would seem that "accuracy" is a term to be used in R3, the third part of the 3-part communication so that the issuer of the directive ensures the accuracy of the recipients understanding. I suggest changing COM-002-3 R2 to read: Each Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details to clearly communicate the recipient's understanding of the Reliability Directive. The term "accuracy" can be interpreted as requiring the recipient to second-guess the Reliability Directive of the RC to ensure the accuracy of the RC's directive in the first place. Under tight time constraints of Emergencies, this is not practical. We are sure that was not the intent of the drafting team. Response: The SDT, in drafting the proposed language, did indeed discuss using the word "understanding" rather than accuracy. However, the SDT was not able to identify a feasible measure for "understanding". A recipient can judge whether the response is accurate when compared with the communications issued, but cannot judge the understanding of anyone, even though the responder may have accurately responded. For IRO-001-2, I don't see a need for R1. Doesn't the ERO already have that authority to establish RC's through the registration process, and to certify system operators through the PER standards? Response: Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2. IRO-014-2 R5, "impacted" was replaced with "other". Wouldn't it be better to at

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				least limit the notification to within the same interconnection? Or is R5 truly to identify all NERC registered RC's? Response: This requirement continues the current practice of informing all RCs of Adverse Reliability Impacts (ARIs). Due to the nature of an ARI, this requirement is typically implemented as an RCIS message or a hotline call to all RCs. This is intended to make all RCs aware of ARIs and support situational awareness. More minor comments / suggestions for improvement: IRO-002 R2 can be improved by replacing "prevent identified events" with "prevent anticipated events". "Anticipated" aligns better with contingency analysis than "identified" Response: The SDT believes the commenter intended to be commenting upon IRO-001-2 R2 rather than IRO-002-2 R2. The SDT did indeed consider using the word "anticipated" rather than identified. However, the SDT believes that a decision cannot be made regarding whether to anticipate an event unless it is first identified through some method of assessment. Contingency analysis certainly can be one valid form useful in assessment. Since anything identified by such an assessment must be considered, the SDT believes the requirement should apply to what is identified, rather than the subjective decision of whether to expect or anticipate that which has been identified IRO-005-4 R1 and R2 can be improved by replacing "expected" with "anticipated". Contingencies are not necessarily "expected"; however, we do "anticipate" them. Response: The SDT agrees, and has revised the requirements per your suggestion.
Response: The RCSDT thanks you for your comment.				
Bud Tracy	Blachly-Lane Electric Co-op	3	Negative	Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a

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				small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of Communication capabilities impacted entities will be notified of the past loss and current status of Communication." We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.
Response: The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u>." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this				

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Gregory Van Pelt	California ISO	2	Abstain	The California ISO will be submitting comments Jointly as part of the ISO/RTO Council Standards Review Committee
Response: Thank you; please see responses to the comments submitted on the posting by the ISO/RTO Council Standards Review Committee.				
Dave Markham	Central Electric Cooperative, Inc. (Redmond, Oregon)	3	Negative	Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities

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Steve Alexanderson	Central Lincoln PUD	3	Negative	The stated purpose of COM-002 is: "To ensure emergency communications between operating personnel are effective." As written, the standard fails to meet this purpose because the three requirements only deal with communications at the entity level. There is no requirement for the directing entity to even try to reach operating personnel at the receiving entity. The directing entity may follow all the requirements of this standard by following R1 and R3 with the receiving entity's receptionist, answering service, janitor, night watchman, etc. The receiving entity only needs to meet R2, parroting the directive. Again this could be accomplished by anyone with no assurance the directive reaches the operating personnel who can implement it. When we stated a similar objection during the last comment period, The SDT's answer suggested this was a PER staffing issue, but none of the PER requirements even apply to DP/LSE directive recipients. We suggest the entity issuing the directive should be required to make an attempt to get it to those who are competent to understand and implement the directive. This is not a staffing, training, or credentials issue; it is a performance issue that falls squarely within the stated purpose of this standard. COM-001 R10 presents a paradoxical situation to an entity attempting to comply. Consider an interpersonal communication capability

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				failure that lasts longer than 60 minutes past initial detection. At or before 60 minutes, the affected entity is expected to notify impacted entities. If it has no interpersonal communication capability, how shall it make this notification? And if the entity does manage to make such a notification, it has thereby proven that it does have interpersonal communication capability making such notification unnecessary. We again ask the SDT to consider that not all the entities in the applicability sections of COM-001 and 002 have 24/7 dispatch centers. These are typically smaller entities that were required to register because they exceed 25 MW or were asked in the past to voluntarily provide UFLS. They do not and do not need to continuously communicate with TOPs, BAs, RCs, etc; and a “reliability directive” is a theoretical thing that has never happened during the memories of thirty year employees. The directive issuing entities simply realize the limitations around the receiving entities and work around them. The financial burden on these small entities and their customers to go to 24/7 dispatch will not have a corresponding reliability benefit. And while the two COM standards do not explicitly state that entities must maintain 24/7 dispatch, when all the requirements and definitions and time horizons are taken together 24/7 continuous competent communication is implied. During the last comment period, the SDT suggested this was a registration issue beyond their control. We submit instead that this is a standard applicability question that the SDT does have control over, since it is right there in Section A.4 of the two COM standards. While we appreciate that the SDT is responding to FERC order 693 to include DPs, we note that FERC also stated: Paragraph 487: “We expect the telecommunication requirements for all applicable entities will vary according to their roles and that these requirements will be developed under the Reliability Standards development process.” Paragraph 6: “A Reliability Standard may take into account the size of the entity that must comply and the costs of implementation” Paragraph 141: “...the Commission clarifies that it did not intend to ... impose new organizational structures...” Paragraph 31: “We emphasize that we are not, at this time, mandating a particular outcome by way of these directives, but we do expect the ERO to respond with an equivalent alternative and adequate support that fully explains how the alternative produces a result that is as effective as or more effective than the Commission’s example or directive. We ask the SDT to exclude DPs, LSEs, and PSEs that do not have 24/7 dispatch centers from the applicability of these two standards in order to meet FERC order 693.
Response: The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, “to ensure emergency communications between operating personnel are <u>effective</u>.” It’s not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a method of				

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Shamus J Gamache	Central Lincoln PUD	4	Negative	The stated purpose of COM-002 is: "To ensure emergency communications between operating personnel are effective." As written, the standard fails to meet this purpose because the three requirements only deal with communications at the entity level. There is no requirement for the directing entity to even try to reach operating personnel at the receiving entity. The directing entity may follow all the requirements of this standard by following R1 and R3 with the receiving entity's receptionist, answering service, janitor, night watchman, etc. The receiving entity only needs to meet R2, parroting the directive. Again this could be accomplished by anyone with no assurance the directive reaches the operating personnel who can implement it. When we stated a similar objection during the last comment period, The SDT's answer suggested this was a PER staffing issue, but none of the PER requirements even apply to DP/LSE directive recipients. We suggest the entity issuing the directive should be required to make an attempt to get it to those who are competent to understand and implement the directive. This is not a staffing, training, or credentials issue; it is a performance issue that falls squarely within the stated purpose of this standard. COM-001 R10 presents a paradoxical situation to an entity attempting to comply. Consider an interpersonal communication capability failure that lasts longer than 60 minutes past initial detection. At or before 60 minutes, the affected entity is expected to notify impacted entities. If it has no interpersonal communication capability, how shall it make this notification? And if the entity does manage to make such a notification, it has thereby proven that it does have interpersonal communication capability making such notification unnecessary. We again ask the SDT to consider that not all the entities in the applicability sections of COM-001 and 002 have 24/7 dispatch centers. These are typically smaller entities that were required to register because they exceed 25 MW or were asked in the past to voluntarily provide UFLS. They do not and do not need to continuously communicate with TOPs, BAs, RCs, etc; and a "reliability directive" is a theoretical thing that has never happened during the memories of thirty year employees. The directive issuing entities simply realize the limitations around the receiving entities and work around them. The financial burden on these small entities and their customers to go to 24/7 dispatch will not have a corresponding reliability benefit. And while the two COM standards do not explicitly state that entities must maintain 24/7 dispatch, when all the requirements and definitions and time horizons are taken together 24/7 continuous competent communication is

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Gregg R Griffin	City of Green Cove Springs	3	Negative	From the last posting to this posting, for COM-002-3 R2, the phrase "the accuracy of the message has been confirmed" was added to the second step of three part communication. "Accuracy" is not the correct term here. "Understanding" is a better term. It would seem that "accuracy" is a term to be used in R3, the third part of the 3-part communication so that the issuer of the directive ensures the accuracy of the recipients understanding. FMPA suggests changing COM-002-3 R2 to read: Each Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details to clearly communicate the recipient's understanding of the Reliability Directive.. The term "accuracy" can be interpreted as requiring the recipient to second-guess

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				the Reliability Directive of the RC to ensure the accuracy of the RC's directive in the first place. Under tight time constraints of Emergencies, this is not practical. We are sure that was not the intent of the drafting team. Response: The SDT, in drafting the proposed language, did indeed discuss using the word "understanding" rather than accuracy. However, the SDT was not able to identify a feasible measure for "understanding". A recipient can judge whether the response is accurate when compared with the communications issued, but cannot judge the understanding of anyone, even though the responder may have accurately responded. For IRO-001-2, FMPA does not see a need for R1. Doesn't the ERO already have that authority to establish RC's through the registration process, and to certify system operators through the PER standards? Response: Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCS DT concurs and has removed R1 from IRO-001-2. IRO-014-2 R5, "impacted" was replaced with "other". Wouldn't it be better to at least limit the notification to within the same interconnection? Or is R5 truly to identify all NERC registered RC's? Response: This requirement continues the current practice of informing all RCs of Adverse Reliability Impacts (ARIs). Due to the nature of an ARI, this requirement is typically implemented as an RCIS message or a hotline call to all RC's. This is intended to make all RCs aware of ARIs and support situational awareness. More minor comments / suggestions for improvement: IRO-002 R2 can be improved by replacing "prevent identified events" with "prevent anticipated events". "Anticipated" aligns better with contingency analysis than "identified" Response: The SDT believes the commenter intended to be commenting upon IRO-001-2 R2 rather than IRO-002-2 R2. The SDT did indeed consider using the word "anticipated" rather than identified. However, the SDT believes that a decision cannot be made regarding whether to anticipate an event unless it is first identified through some method of assessment. Contingency analysis certainly can be one valid form useful in assessment. Since anything identified by such an assessment must be considered, the SDT believes the requirement should apply to what is

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				identified, rather than the subjective decision of whether to expect or anticipate that which has been identified. IRO-005-4 R1 and R2 can be improved by replacing "expected" with "anticipated". Contingencies are not necessarily "expected"; however, we do "anticipate" them. Response: The SDT agrees and have revised the requirements per your suggestion.
Response: The RCSDT thanks you for your comment.				

Randall McCamish	City of Vero Beach	1	Negative	From the last posting to this posting, for COM-002-3 R2, the phrase "the accuracy of the message has been confirmed" was added to the second step of three part communication. "Accuracy" is not the correct term here. "Understanding" is a better term. It would seem that "accuracy" is a term to be used in R3, the third part of the 3-part communication so that the issuer of the directive ensures the accuracy of the recipients understanding. The City of Vero Beach (COVB) suggests changing COM-002-3 R2 to read: Each Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details to clearly communicate the recipient's understanding of the Reliability Directive. The term "accuracy" can be interpreted as requiring the recipient to second-guess the Reliability Directive of the RC to enure the accuracy of the RC's directive in the first place. Under tight time constraints of Emergencies, this is not practical. We are sure that was not the intent of the drafting team. Response: The SDT, in drafting the proposed language, did indeed discuss using the word "understanding" rather than accuracy. However, the SDT was not able to identify a feasible measure for "understanding". A recipient can judge whether the response is accurate when compared with the communications issued, but cannot judge the understanding of anyone, even though the responder may have accurately responded. For IRO-001-2, COVB does not see a need for R1. Doesn't the ERO already have that authority to establish RC's through the registration process, and to certify system operators through the PER standards? Response: Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2. IRO-014-2 R5, "impacted" was replaced with "other". Wouldn't it be better to at least limit the notification to within the same interconnection? Or is R5 truly to identify all NERC registered RC's? Response: This requirement continues the current practice of informing all RCs of Adverse Reliability Impacts (ARIs). Due to the nature of an ARI, this requirement is typically implemented as an RCIS message or a hotline call to all RC's. This is

				intended to make all RCs aware of ARIs and support situational awareness. More minor comments/suggestions for improvement: IRO-002 R2 can be improved by replacing "prevent identified events" with "prevent anticipated events". "Anticipated" aligns better with contingency analysis than "identified" Response: The SDT believes the commenter intended to be commenting upon IRO-001-2 R2 rather than IRO-002-2 R2. The SDT did indeed consider using the word "anticipated" rather than identified. However, the SDT believes that a decision cannot be made regarding whether to anticipate an event unless it is first identified through some method of assessment. Contingency analysis certainly can be one valid form useful in assessment. Since anything identified by such an assessment must be considered, the SDT believes the requirement should apply to what is identified, rather than the subjective decision of whether to expect or anticipate that which has been identified. IRO-005-4 R1 and R2 can be improved by replacing "expected" with "anticipated". Contingencies are not necessarily "expected"; however, we do "anticipate" them. Response: The SDT agrees and have revised the requirements per your suggestion.
Response: The RCSDT thanks you for your comment.				
John Allen	City Utilities of Springfield, Missouri	4	Negative	See comments from the SPP Standards Development group.
Response: The RCSDT thanks you for your comment. Please see response to those comments.				
Shaun Anders	City Water, Light & Power of Springfield	1	Negative	The definition of "Interpersonal Communications" is overly broad and does not address the functional needs of reliability coordination. The definition should be limited to systems utilized for essential reliability functions. While the Purpose statement in the standard does address this intent, the explicit inclusion in the definition removes all ambiguity. Further, the definition of "Alternative Interpersonal Communications" without corresponding explicit definition of Primary Interpersonal Communications may lead to confusion and unnecessary duplication of efforts in

				testing and maintenance.
Response: The RCSDT thanks you for your comment. The certification of an entity as a functional entity by the ERO through its certification process will not take place unless the entity has the needed communications capabilities. If the entity cannot perform, it will not be registered. Once an entity is certified as a functional entity, then that entity must comply with all requirements applicable to that functional entity. These standard revisions establish clear requirements for alternative interpersonal communications capability which may or may not be part of the entity certification process. Taken together, the certification process and the Reliability Standards clearly establish the requirements for both normal interpersonal communications capability and alternative interpersonal communications capability. The RCSDT has revised the applicability of COM-001, and COM-002 such that they contain the same functional entities. These are: RC, TOP, BA, GOP, and DP.				
Dave Hagen	Clearwater Power Co.	3	Negative	Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities

				that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of Communication capabilities impacted entities will be notified of the past loss and current status of Communication." We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.
Response: The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u> ." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.				
Bruce Krawczyk	ComEd	3	Negative	Exelon is voting negative based on our previously submitted comments.
Response: The RCSDT thanks you for your comment. Please see the response to those comments.				
Christopher L de Graffenried	Consolidated Edison Co. of New York	1	Abstain	o COM-002 assumes, but does not require, voice logs. This needs to be fixed. Otherwise the documentation could just be a paper log 'check box' entry which says "Yes, we used 3-part." This is not adequate, verifiable documentation for entity audits. Response: The standards establish "what" is required, not "how" to do it. The Measures identify methods which are examples of evidence that may be provided to demonstrate compliance, but requirements cannot be established in the measures. Further, valid requirements should not be established that preclude improvements that may arise through technological innovations or other equally effective alternatives. The state of the art at present would seem to indicate that the most prevalent evidence would likely come from a form of voice recordings or transcripts.

				o COM-002 only requires the entity maintain this documentation 3 months. This short retention time period expires long before most auditors check on the entity. So, why bother? This also needs to be fixed or clarified. Response: The retention time was established using the NERC Data Retention Guidelines and to recognize that vast amount of data which would have to be retained to present evidence. In addition, any event under investigation has likely been accompanied by a requirement to “freeze” data retention and keep all relevant information and date for a specified timeframe surrounding the event.
Response: The RCSDT thanks you for your comment.				
Roman Gillen	Consumers Power Inc.	3	Negative	Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be

				achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of Communication capabilities impacted entities will be notified of the past loss and current status of Communication." We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.
Response: The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u>." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.				
Roger Meader	Coos-Curry Electric Cooperative, Inc	3	Negative	Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers

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Russell A Noble	Cowlitz County PUD	3	Negative	COM-001 presents problems for smaller entities that do not have any other option for communications other than the failed communication line. The SDT should consider exempting such entities, requiring them to contact others to inform of their failed one and only communication option is a catch-22. COM-002 does not adequately provide for effective communication with smaller entities that do not have 24-7 control/dispatch functions. The directing entity issuing Reliability Directives must contact competent personnel. The SDT's reference to

				the PER requirements falls very short in addressing this problem as the DPs and LSEs are not even applicable to the suggested standards. Again, the SDT should consider certain exemptions for such entities. Please note that FERC itself noted that “a Reliability Standard may take into account the size of the entity that must comply and the costs of implementation...”...the Commission clarifies that it did not intend to ... impose new organizational structures...” and also “[w]e expect the communication requirements for all applicable entities will vary according to their roles and that these requirements will be developed under the Reliability Standards development process.” Although the STD did not include all applicable entities to have backup communications, it failed to see the limitations of such entities without backup communications impeding their ability to comply with other requirements.
Response: The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, “to ensure emergency communications between operating personnel are <u>effective</u>.” It’s not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.				
Rick Syring	Cowlitz County PUD	4	Negative	COM-001 presents problems for smaller entities that do not have any other option for communications other than the failed communication line. The SDT should consider exempting such entities, requiring them to contact others to inform of their failed one and only communication option is a catch-22. COM-002 does not adequately provide for effective communication with smaller entities that do not have 24-7 control/dispatch functions. The directing entity issuing Reliability Directives must contact competent personnel. The SDT’s reference to the PER requirements falls very short in addressing this problem as the DPs and LSEs are not even applicable to the suggested standards. Again, the SDT should consider certain exemptions for such entities. Please note that FERC itself noted that “a Reliability Standard may take into account the size of the entity that must comply and the costs of implementation...”...the Commission clarifies that it did not intend to ... impose new organizational structures...” and also “[w]e expect the communication requirements for all applicable entities will vary according to their roles and that these requirements will be developed under the Reliability Standards development process.” Although the STD did not include all applicable entities to have backup communications, it failed to see the limitations of such entities without backup communications impeding their ability to comply with other requirements.

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Bob Essex	Cowlitz County PUD	5	Negative	COM-001 presents problems for smaller entities that do not have any other option for communications other than the failed communication line. The SDT should consider exempting such entities, requiring them to contact others to inform of their failed one and only communication option is a catch-22. COM-002 does not adequately provide for effective communication with smaller entities that do not have 24-7 control/dispatch functions. The directing entity issuing Reliability Directives must contact competent personnel. The SDT’s reference to the PER requirements falls very short in addressing this problem as the DPs and LSEs are not even applicable to the suggested standards. Again, the SDT should consider certain exemptions for such entities. Please note that FERC itself noted that “a Reliability Standard may take into account the size of the entity that must comply and the costs of implementation...” “...the Commission clarifies that it did not intend to ... impose new organizational structures...” and also “[w]e expect the communication requirements for all applicable entities will vary according to their roles and that these requirements will be developed under the Reliability Standards development process.” Although the STD did not include all applicable entities to have backup communications, it failed to see the limitations of such entities without backup communications impeding their ability to comply with other requirements.
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Dave Sabala	Douglas Electric Cooperative	3	Negative	Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability

				directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of Communication capabilities impacted entities will be notified of the past loss and current status of Communication." We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.
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Henry Ernst-Jr	Duke Energy Carolina	3	Negative	o We question how far the definition of Alternative Interpersonal Communication goes in requiring separate infrastructure from Interpersonal Communication. For example, wireless communications sometime utilize fiber optic networks. Response: The definition requires the use of different infrastructure (medium) than the Interpersonal Communication used for day to day operations. The RCSDT does not believe it is appropriate to be prescriptive with respect to the specific medium employed. This is intended to apply to assets and access to media that is under your control. For example, the way cell phone signals are routed are not under your control. o We question why the requirements state that entities must “have” Interpersonal Communications capability, but must “designate” Alternative Interpersonal Communications capability? Response: Many entities have multiple Alternative Interpersonal Communication capabilities. Large entities may have a second land line, cell phone, satellite phone, etc. The purpose of “designating” the Alternative is so that other entities know which one is in use and is a reliable means of communications. Allowing them to designate which one they want to employ allows for flexibility in which one they use for AIC. o R1.2 and R2.2 - Why is this limited to the same interconnection? Response: The phrase “within the same interconnection” is added for the case of ERCOT which has only DC tie lines with the Eastern Interconnection and has minimal interchange. o R3 - need to add neighboring TOPs. Response: Agreed. The standard has been modified as suggested. o R5 - need to add adjacent BAs. Response: Agreed. The standard has been modified as suggested. o Interchange Coordinator - Add IC to the Applicability Section, and add a requirement that the IC have Interpersonal Communication capability with its BA and adjacent BAs. Response: We eliminated the Interchange Coordinator from COM-001-2 based

				on stakeholder feedback. o Requirements to “designate” Alternative Interpersonal Communication should carry a “Medium” VRF instead of “High”, because they are a backup capability. The word “designate” carries the connotation that these are documentation requirements. Response: While the requirement is phrased to focus on the documentation, the reliability objective is that the entity has an alternative communication capability with those functional entities most critical to its real-time operations. o R9 requires a monthly test of Alternative Interpersonal Communications capability. This was quarterly in the last draft. We question how these requirements for “Alternative Interpersonal Communications” capability are related to requirements for “backup functionality” in EOP-008-1, which requires an annual test of backup functionality. Clarity on the relationship between “Interpersonal Communications”, “Alternative Interpersonal Communications”, “primary control center functionality” and “backup control center functionality” would be appreciated. Response: Interpersonal Communication and Alternative Interpersonal Communication are not related to EOP-008. The provision to test may be performed through day to day use of the capability.
Response: The RCSDT thanks you for your comment. Please see responses above.				
George S. Carruba	East Kentucky Power Coop.	1	Negative	As currently written, IRO-014 could be interpreted that if a RC identifies an adverse reliability impact in another RC and the other RC does not agree with the findings, the RC who identified the adverse reliability impact would be responsible for creating a mitigation plan to address the issue. This may not be possible if the identifying RC does not have agreements in place with the TOPs/BAs in the other RC area.
Response: The RCSDT thanks you for your comment. IRO-014-2 requirement R6, requires all RCs to operate as if the problem exists even when they disagree with the RC that identified the problem. Even if there is a disagreement between RCs, R8 still requires that all RCs comply with the action plan developed by the RC that identified the adverse reliability impact unless compliance with the action plan would violate safety, equipment, regulatory or statutory requirements. As envisioned, the TOPs and BAs would receive operating instructions from their own RC, not from the RC in another Reliability Coordinator Area.				
Sally Witt	East Kentucky Power Coop.	3	Negative	As currently written it could be interpreted that if an RC identifies an Adverse reliability Impact in another RC Area and they do not agree with the findings, the

				RC who identified the adverse reliability Impact would be responsible for creating a mitigation plan to address the issue. This may not be feasible if the identifying RC does not have agreements in place with TOPs/BAs in the other RC Area.
Response: The RCSDT thanks you for your comment. IRO-014-2 requirement R6, requires all RCs to operate as if the problem exists even when they disagree with the RC that identified the problem. Even if there is a disagreement between RCs, R8 still requires that all RCs comply with the action plan developed by the RC that identified the adverse reliability impact unless compliance with the action plan would violate safety, equipment, regulatory or statutory requirements. As envisioned, the TOPs and BAs would receive operating instructions from their own RC, not from the RC in another Reliability Coordinator Area.				
John R Cashin	Electric Power Supply Association	5	Affirmative	I will be submitting comments in the regular form tomorrow.
Response: The RCSDT thanks you for your comment. Please see response to those comments.				
Chuck B Manning	Electric Reliability Council of Texas, Inc.	2	Negative	We agree with the comments submitted by the IRC SRC and we have submitted those same comments.
Response: The RCSDT thanks you for your comment. Please see response to those comments.				
Martin Kaufman	ExxonMobil Research and Engineering	5	Negative	The Measurement 2 of COM-002-3 has the potential to create numerous violations without any reliability impact to the Bulk Electric System. Specifically, for those facilities without voice recording equipment, the requirement to record in an operator log that the BA/GOP/TOP/TSP repeated the intent of a directive back to the RC provides no benefit to the reliability of the BES and adds a situation where an entity can be found non-compliant by an RE with zero impact to the reliability of the BES. In response to a directive from an RC, it's important for the reliability of the BES for a facility to identify an instruction as a directive, resolve whether the facility can comply with the directive, and inform the RC when it could not comply with the directive. Documentation requirements should reflect these three items.
Response: The RCSDT thanks you for your comment. Based on comments from other stakeholders, the SDT has removed the TSP, LSE and PSE from responsibility for any of the requirements in COM-002. As envisioned, in an emergency the RC would issue most Reliability Directives to its BAs and TOPs, and there may be times when the RC bypasses its TOPs and BAs and issues a Reliability Directive to its DPs				

and GOPS. The RC would not, however, issue a Reliability Directive to TSPs, LSEs, or PSEs.

Note that M2 only requires that the recipient document that it repeated the reliability directive. Collectively, the three measures do what you have proposed – they require that the applicable entities document that the three parts of the communication took place – original issuance; accurate repeat; confirmation. Operating logs are offered as one form of acceptable evidence – but other types of evidence could also be used to demonstrate compliance.

Bryan Case	Fall River Rural Electric Cooperative	3	Negative	Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of

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Robert Martinko	FirstEnergy Energy Delivery	1	Affirmative	FirstEnergy supports the proposed standards and would appreciate consideration of our comments submitted through the formal comment period.
Response: The RCSDT thanks you for your comment. Please see response to those comments.				
Kevin Querry	FirstEnergy Solutions	3	Affirmative	FirstEnergy supports the proposed standards and would appreciate consideration of our comments submitted through the formal comment period.
Response: The RCSDT thanks you for your comment. Please see response to those comments.				
Mark S Travaglianti	FirstEnergy Solutions	6	Affirmative	FirstEnergy supports the proposed standards and would appreciate consideration of our comments submitted through the formal comment period.
Response: The RCSDT thanks you for your comment. Please see response to those comments.				
Frank Gaffney	Florida Municipal	4	Negative	From the last posting to this posting, for COM-002-3 R2, the phrase "the accuracy of the message has been confirmed" was added to the second step of three part

	Power Agency		communication. "Accuracy" is not the correct term here. "Understanding" is a better term. It would seem that "accuracy" is a term to be used in R3, the third part of the 3-part communication so that the issuer of the directive ensures the accuracy of the recipients understanding. FMPA suggests changing COM-002-3 R2 to read: Each Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details to clearly communicate the recipient's understanding of the Reliability Directive. The term "accuracy" can be interpreted as requiring the recipient to second-guess the Reliability Directive of the RC to ensure the accuracy of the RC's directive in the first place. Under tight time constraints of Emergencies, this is not practical. We assume that was not the intent of the drafting team. Response: The SDT, in drafting the proposed language, did indeed discuss using the word "understanding" rather than accuracy. However, the SDT was not able to identify a feasible measure for "understanding". A recipient can judge whether the response is accurate when compared with the communications issued, but cannot judge the understanding of anyone, even though the responder may have accurately responded. For IRO-001-2, FMPA does not see a need for R1. Doesn't the ERO already have that authority to establish RC's through the registration process, and to certify system operators through the PER standards? Response: Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2. IRO-014-2 R5, "impacted" was replaced with "other". Wouldn't it be better to at least limit the notification to within the same interconnection? Or is R5 truly to identify all NERC registered RC's? Response: This requirement continues the current practice of informing all RCs of Adverse Reliability Impacts (ARIs). Due to the nature of an ARI, this requirement is typically implemented as an RCIS message or a hotline call to all RC's. This is intended to make all RCs aware of ARIs and support situational awareness. More minor comments / suggestions for improvement: IRO-002 R2 can be

				improved by replacing "prevent identified events" with "prevent anticipated events". "Anticipated" aligns better with contingency analysis than "identified" Response: The SDT believes the commenter intended to be commenting upon IRO-001-2 R2 rather than IRO-002-2 R2. The SDT did indeed consider using the word "anticipated" rather than identified. However, the SDT believes that a decision cannot be made regarding whether to anticipate an event unless it is first identified through some method of assessment. Contingency analysis certainly can be one valid form useful in assessment. Since anything identified by such an assessment must be considered, the SDT believes the requirement should apply to what is identified, rather than the subjective decision of whether to expect or anticipate that which has been identified. IRO-005-4 R1 and R2 can be improved by replacing "expected" with "anticipated". Contingencies are not necessarily "expected"; however, we do "anticipate" them. Response: The SDT agrees and have revised the requirements per your suggestion.
Response: The RCSDT thanks you for your comment.				
Thomas E Washburn	Florida Municipal Power Pool	6	Negative	From the last posting to this posting, for COM-002-3 R2, the phrase "the accuracy of the message has been confirmed" was added to the second step of three part communication. "Accuracy" is not the correct term here. "Understanding" is a better term. It would seem that "accuracy" is a term to be used in R3, the third part of the 3-part communication so that the issuer of the directive ensures the accuracy of the recipients understanding. FMPA suggests changing COM-002-3 R2 to read: Each Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details to clearly communicate the recipient's understanding of the Reliability Directive.. The term "accuracy" can be interpreted as requiring the recipient to second-guess the Reliability Directive of the RC to ensure the accuracy of the RC's directive in the first place. Under tight time constraints of Emergencies, this is not practical. We are sure that was not the intent of the drafting team. Response: The SDT, in drafting the proposed language, did indeed discuss using the word "understanding" rather than accuracy. However, the SDT was not able to identify a feasible measure for "understanding". A recipient can judge whether the

			response is accurate when compared with the communications issued, but cannot judge the understanding of anyone, even though the responder may have accurately responded. For IRO-001-2, do not see a need for R1. Doesn't the ERO already have that authority to establish RC's through the registration process, and to certify system operators through the PER standards? Response: Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2. IRO-014-2 R5, "impacted" was replaced with "other". Wouldn't it be better to at least limit the notification to within the same interconnection? Or is R5 truly to identify all NERC registered RC's? Response: IRO-014-2 R5: This requirement continues the current practice of informing all RCs of ARIs. Due to the nature of an ARI, this requirement is typically implemented as an RCIS message or a hotline call to all RC's. This is intended to make all RCs aware of ARIs and support situational awareness. More minor comments / suggestions for improvement: IRO-002 R2 can be improved by replacing "prevent identified events" with "prevent anticipated events". "Anticipated" aligns better with contingency analysis than "identified" Response: The SDT believes the commenter intended to be commenting upon IRO-001-2 R2 rather than IRO-002-2 R2. The SDT did indeed consider using the word "anticipated" rather than identified. However, the SDT believes that a decision cannot be made regarding whether to anticipate an event unless it is first identified through some method of assessment. Contingency analysis certainly can be one valid form useful in assessment. Since anything identified by such an assessment must be considered, the SDT believes the requirement should apply to what is identified, rather than the subjective decision of whether to expect or anticipate that which has been identified. IRO-005-4 R1 and R2 can be improved by replacing "expected" with "anticipated". Contingencies are not necessarily "expected"; however, we do "anticipate" them. Response: The SDT agrees, and has revised the requirements per your

				suggestion.
Response: The RCSDT thanks you for your comment.				
Silvia P. Mitchell	Florida Power & Light Co.	6	Negative	8) Question 1 1. Do you agree with COM-001 requirements for Interpersonal Communications capability and Alternative Interpersonal Communications capability (R1-R8)? If not, please explain in the comment area below. No 9) Question 1 Comments: As drafted, COM-001 is not clear or complete. At this stage in the evolution of compliance with the mandatory Reliability Standards, it is important that any new or revised Reliability Standard clearly articulate all compliance obligations and tasks consistent with Sections 302 (6) and (8) of the NERC Rules of Procedure. Thus, NextEra Energy Inc. (NextEra) has numerous recommended corrections to provide clarity and completeness to COM-001. For example, the requirement to designate an Alternative Interpersonal Communication capability is not clear. Does the designator solely designate for the designator's knowledge or does the designator need to inform the entity on the other end of the connection. In R2, for instance, the Reliability Coordinator must designate, but it is also not clear whether the Reliability Coordinator must inform the Balancing Authorities or Transmission Operators. It is further unclear whether the designation must be documented, or if any informing of the Balancing Authorities or Transmission Operators must be documented. Thus, it is recommended that the drafters decide what was intended regarding the designation and clearly state the requirements. In R9 it states that “. . . on at least a monthly basis.” There are two issues to consider here. If the sentence stays, grammatically it should read “. . . on, at least, a monthly basis. . . .” However, from a compliance and technical perspective, the term “at least” has no significance and should be deleted. The requirement is to test on a monthly basis - the phrase “at least” only introduces ambiguity and implies that the party should consider every two or three weeks. If the drafting team believes a best practice is less than a month, there are other NERC educational tools to explain a best practice. In R10, it states “. . . shall notify the impacted entity . . .” It would be clearer to state: “. . . shall notify the impacted Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider or Generator Operator . . .” Page 6

			Response: The Requirement R2 is for the RC to designate an AIC and inform the other entity (BA, TOP, etc.) as to what that AIC is. The Measure M2 provides examples of the types of evidence which may be used to prove compliance with the requirement. The RCSDT believes that stakeholders are satisfied with the wording of the requirements of this standard. The phrase “at least” was included to relay the intent – that the monthly requirement is a minimum, and some entities may wish to perform this more frequently. It does not add any compliance obligation to perform this activity more frequently than specified. For R10, the RCSDT believes that the existing language is sufficiently clear. 10) Question 2 2. The RCSDT believes that the requirements of TOP-001-1 obviate the need to develop additional requirements to address Xcel's comment. Do you agree? If not, please explain in the comment area below. No 11) Question 2 Comments: As stated in response to number 1, Reliability Standards are to be clear and complete. If a Transmission Operator is not responsible for a delay caused by a Reliability Coordinator, the Standard should specifically state that the Transmission Operator does not need to wait for an assessment or approval of a Reliability Coordinator to take actions pursuant to TOP-001-1 R3. Since the Reliability Coordinator is atop the reliability higherachy, such a statement provides clarity and completeness to understanding a Transmission Operators rights. Thus, TOP-001-1 R3 should be revised to lead with: “Without any obligation to first seek and obtain an assessment or approval from its Reliability Coordinator, each Transmission Operator” Page 10 Response: The SDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered “would violate safety, equipment, regulatory, or statutory requirements”, the TOP may respond to the RC that it cannot comply. 12) Question 6 Comments: At this stage in evolution of compliance with the mandatory Reliability Standards, it is important that any new or revised Reliability Standard clearly articulate all compliance obligations and tasks consistent with Sections 302 (6) and (8) of the NERC Rules of Procedure. COM-002, IRO-001, IRO-002 and IRO-014 do not meet this threshold. Thus, NextEra has numerous recommended corrections to provide clarity and completeness to these Reliability

			Standards. COM-002 R1 The addition of defined terms for Reliability Directive and Emergency is a very good approach that helps provides clarity. Hence, it is also be appropriate to make the language in the requirement as clear as possible, and not add other implied or unexplained notions. Also, at times, in those regions with markets, it is not always clear whether a requirement to curtail for reliability reasons is being issued pursuant to market rules or from the Reliability Coordinator or Transmission Operator under the Reliability Standards. Therefore, it is also appropriate that the Reliability Coordinator, Transmission Operator, Balancing Authority be required to identify themselves;, and if they fail to identify themselves or fail to use the term Reliability Directive, the registered entity receiving the flawed issuance should not be consider in violation of a Reliability Standard for failing to act. Accordingly, R1 would be clearer and have the same intent, if it stated as follows: “A Reliability Coordinator, Transmission Operator or Balancing Authority have the authority to issue an oral or written Reliability Directive as authorized in [list the specific Reliability Standard requirements such as IRO-001 R8 and TOP-001 R3]. The issuance of an oral of written Reliability Directive, by a Reliability Coordinator, Transmission Operator or Balancing Authority shall: (1) use the term ‘Reliability Directive;’ and (2) identify the issuer of the Reliability Directive as a Reliability Coordinator, Transmission Operator or Balancing Authority. If a Reliability Coordinator, Transmission Operator or Balancing Authority issues an oral or writtern directive without using the term “Reliability Directive” or failing to indentify itself as a Reliability Coordinator, Transmission Operator or Balancing Authority, the registered entity receiving the directive cannot be considered in violation for its failure to act.” Response: There is a new standard under development (COM-003) that is addressing a broader range of communications protocols, and has proposed a requirement for the Reliability Coordinator to announce his/her title when issuing alerts and other types of announcements. IRO-001 The definition of Adverse Reliability Impacts uses the term “instability.” It is important that this term be technically defined in the same way “Cascading” is defined, otherwise the new requirement is not adding clarity; rather, it is maintaining the ambiguous term “instability” that will likely lead to confusion and debate. Response: The term, ‘instability’ is already used in many reliability standards. R1 Similar to the comments set forth with respect to COM-001 (question #1), the term “at least” should be deleted from R1 - it serves no useful purpose from a technical or compliance perspective; instead, it will add unnecessary ambiguity to the requirement. Response: The phrase, “at least” was included to relay the intent – that the monthly requirement is a minimum, and some entities may wish to perform this

				more frequently. It does not add any compliance obligation to perform this activity more frequently than specified. R2, as drafted, states: “Each Reliability Coordinator shall take actions or direct actions, which could include issuing oral or written Reliability Directives, of Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. “ This long sentence has several significant grammatical errors that result in the reader not being able to discern the meaning of the requirement. It also unnecessarily adds verbiage that detracts from its primary focus. It is, therefore, recommended that R2 be revised as follows: “Each Reliability Coordinator shall take all necessary actions to prevent identified Emergencies or Adverse Reliability Impacts. These Reliability Coordinator actions shall include, to the extent necessary, the issuing of oral or written Reliability Directives to Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers located within its Reliability Coordinator Area. “ Response: The SDT has considered the alternative language proposed and finds that the— the phrase, ‘all necessary action’ is ambiguous. Who would decide that ‘all necessary action’ had been taken? R3, as drafted, is confusing and inconsistent with R2, and, thus, R3 should be revised to read as follows: “Upon receipt of a Reliability Directive issued pursuant to R2, a Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator and Distribution Provider shall comply with the Reliability Directive, unless compliance would violate safety, equipment, regulatory or statutory requirements. In the event that a Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator or Distribution Provider determines that compliance with a Reliability Directive would violate safety, equipment, regulatory or statutory requirements, the Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator or Distribution Provider shall, within 10 minutes after the determination, inform the Reliability Coordinator of its inability to comply.” Response: The team adopted the intent of part of this suggestion by replacing the word, ‘per’ with, ‘in accordance with’. The team elected not to add a time constraint because the proposed time constraint implies that it would be acceptable to delay up to 10 minutes before notifying the RC – and in some instances this time delay

				could result in and adverse impact to reliability. IRO-002R1 and R2, as written, are confusing. It is recommended that R1 and R2 be combined to read as follows: “Pursuant to a written procedure to mitigate the impact of a Reliability Coordinator’s analysis tool outage, a Reliability Coordinator’s System Operator shall also have the authority to approve, deny or cancel a planned outage for its analysis tool.” Response: The drafting team believes that the language in the proposed standard is clear as written. No reason has been provided for merging the two requirements, and the benefit of merging the requirements is not clear. IRO-014 It is unclear why the terms Operating Procedure, Operating Process or Operating Plan needs to be plural, as currently written in the Standard. Hence, it is recommended that these terms be made singular, otherwise a violation may be inferred for not having more than one Procedure, Process or Plan. Response: The range of activities that must be addressed by the documents is expected to require more than one document, thus the use of the plural versions of these terms. Insert the word “applicable” before “Reliability Coordinator.” Response: The benefit of adding the word ‘applicable’ is not clear. 2.1, as written, is confusing. Recommend that 2.1 read as follows: “Review and update, if an update is necessary, on an annual basis. Annual basis means the review shall be within one month plus or minus that date of the last review.” Response: The 15 month interval was recommended by the compliance program as the outer bound to recommend in standards that use the term, “annual” or “annually.” There is a compliance bulletin on this issue. R3 This requirement uses a very vague term “reliability-related information,” which, also, does not track the language used in R1 -- “information.” It is recommended that R1 and R3 use the same terms and read “ . . . information, as defined by the Reliability Coordinator, . . . ” Response: Requirement R1 is not open-ended – it identifies information needed for Interconnection reliability. R3 points to the information identified by complying with R1. The intent was to limit the scope to areas needed for reliability. RCs may want other information for reasons not related to reliability, and that information is outside the scope of this standard. R4 As stated above, “at least” does not add value, and, therefore, should be

				deleted. Response: The phrase, “at least” was included to relay the intent – that the monthly requirement is a minimum, and some entities may wish to perform this more frequently. It does not add any compliance obligation to perform this activity more frequently than specified. R5, as written, is confusing. The recommended fix is to delete “all other” and replace with “impacted”. Response: The SDT did intend that all other RCs be notified. This requirement continues the current practice of informing all RCs of Adverse Reliability Impacts (ARIs). Due to the nature of an ARI, this requirement is typically implemented as an RCIS message or a hotline call to all RC’s. This is intended to make all RCs aware of ARIs and support situational awareness.
Response: The RCSDT thanks you for your comment. Please see responses above.				
Thomas W. Richards	Fort Pierce Utilities Authority	4	Negative	From the last posting to this posting, for COM-002-3 R2, the phrase "the accuracy of the message has been confirmed" was added to the second step of three part communication. "Accuracy" is not the correct term here. "Understanding" is a better term. It would seem that "accuracy" is a term to be used in R3, the third part of the 3-part communication so that the issuer of the directive ensures the accuracy of the recipients understanding. FPUA suggests changing COM-002-3 R2 to read: Each Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details to clearly communicate the recipient's understanding of the Reliability Directive.. The term "accuracy" can be interpreted as requiring the recipient to second-guess the Reliability Directive of the RC to enure the accuracy of the RC's directive in the first place. Under tight time constraints of Emergencies, this is not practical. We are sure that was not the intent of the drafting team. Response: The RCSDT revised the requirement as follows to remove the “accuracy” language: R2. Each Balancing Authority, Transmission Operator, Generator

				Operator, and Distribution Provider that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive. For IRO-001-2, FPUA does not see a need for R1. Doesn't the ERO already have that authority to establish RC's through the registration process, and to certify system operators through the PER standards? Response: Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCS DT concurs and has removed R1 from IRO-001-2. IRO-014-2 R5, "impacted" was replaced with "other". Wouldn't it be better to at least limit the notification to within the same interconnection? Or is R5 truly to identify all NERC registered RC's? Response: This requirement continues the current practice of informing all RCs of ARIs. Due to the nature of an ARI, this requirement is typically implemented as an RCIS message or a hotline call to all RC's. This is intended to make all RCs aware of ARIs and support situational awareness. More minor comments / suggestions for improvement: IRO-002 R2 can be improved by replacing "prevent identified events" with "prevent anticipated events". "Anticipated" aligns better with contingency analysis than "identified" IRO-005-4 R1 and R2 can be improved by replacing "expected" with "anticipated". Contingencies are not necessarily "expected"; however, we do "anticipate" them. Response: The SDT believes the commenter intended to be commenting upon IRO-001-2 R2 rather than IRO-002-2 R2. The SDT has revised the requirements per your suggestion.
Response: Thank you for your comments. Please see responses above.				
Anthony L Wilson	Georgia Power Company	3	Affirmative	Please see comments
Response: The RCS DT thanks you for your comment. Please see response to posting comments for the SERC OC Standards Review Group; the RCS DT did not specifically find comments from Georgia Power Company and believes comments were included within this group.				

Gordon Pietsch	Great River Energy	1	Negative	Reliability Directive: It is our opinion the definition as currently written is too subjective and may cause a compliance auditor to question the grounds under which one of applicable entities declared the directive. We believe that revising the definition to state “to address a declared emergency...” will remove the subjectivity. Requirements for using three-part communication: It is our opinion that the standard needs language that clearly states that during a Blast Call three-part communication is not required. Blast Calls are used when information needs to be disseminated quickly to a large number of entities. Strictly enforcing the use of three-part communication under these circumstances has the potential to be more harmful to reliability than helpful.
Response: The RCSDT thanks you for your comment. Reliability Directive: The RCSDT believes the proposed standard requirement addresses your requested revision. “R1...shall identify the action as a Reliability Directive...” is addressing a declared emergency. R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. As a reference, we have included the existing definition of Emergency: Emergency: Any abnormal system condition that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System. The RCSDT agrees that the use of Blast Calls to issue Reliability Directives, in mass, is efficient and effective. The RCSDT believes Reliability Directives issued in mass should be defined by procedure, and that the procedure would establish a method of affirmation and notice of implementation. As envisioned, communications protocols would be addressed in the COM-003 standard being developed in Project 2007-02.				
Shaun Jensen	Idaho Power Company	3	Negative	It appears there is much concern with the wording, particularly in R2, as well as parties having issues with intermingled definitions. It is recommended to reword this, and ensure the VSL accurately reflects a direct definition that all entities all clear and certain on.
Response: The RCSDT thanks you for your comment. The RCSDT is not sure of which standard requirement is being referenced.				
Bob C. Thomas	Illinois Municipal Electric Agency	4	Negative	IMEA appreciates the SDT's efforts to date. We are basing our negative vote on ballot pool communications that have addressed points that need further refinement before the proposed revisions to these reliability standards are affirmed. IMEA supports, in particular, comments submitted by the Midwest ISO and the SERC OC

				Standards Review Group.
Response: The RCSDT thanks you for your comments. Please see responses to Midwest ISO and SERC OC Standards Review Group.				
Kim Warren	Independent Electricity System Operator	2	Negative	While we support the general direction of these standards development actions, we do have a number of concerns which cumulatively lead us to advocate a NEGATIVE vote. These include: (1) The phrase “within the same Interconnection” in COM-001-2 R1, limits the coordination activities to RCs, TOPs and BAs that can be detrimental to reliability. We recommend removing this phrase. Response: The RCSDT does not agree that the phrase “within the same interconnection” limits coordination between entities. The purpose of the phrase is to place a bound on which adjacent entity an RC must have Interpersonal Communication (e.g., an EI RC does not need communication with WI RCs). The phrase “within the same interconnection” is added for the case of ERCOT which has only DC tie lines with the Eastern Interconnection and has minimal interchange. (2) We believe the Interchange Coordinator and Purchasing-Selling Entity also need to have adequate communication capabilities with other entities but they are not included in the applicability section of COM-001-2. Response: We disagree that the IC and PSE need to be an applicable entity. To maintain reliability does not require communication with these entities. The applicability of COM-001, COM-002 and IRO-001 were revised to include the same reliability entities: RC, TOP, BA, DP and GOP. LSE, PSE and TSP were removed from the applicability of these standards per stakeholder suggestion. (3) The proposed definition of Reliability Directive addresses Emergency condition only. There are situations where a Reliability Directive is issued such that the directed action must be taken by the receiving entity to address a reliability constraint, which by itself does not constitute an Emergency. We suggest the term Reliability Directive be revised to: “A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address a reliability constraint or an Emergency.” Response: The RCSDT believes that your comment concerns “directives” or “instructions” for normal operational activities rather than a Reliability Directive. There is no requirement preventing an entity from issuing either directives or

				instructions for the situations you mention. The intent of creating a Reliability Directive definition is to ensure that communications is tightened during Emergencies (per blackout report). When an RC issues a Reliability Directive, the RC has made a deliberate decision to formally end collaboration and require specific action(s). In addition, the Operating Personnel Communication Protocols SDT is addressing your concern about instances that are not considered an emergency. As envisioned, communications protocols requiring additional applications for use of three-part communications would be addressed in the COM-003 standard being developed in Project 2007-02. (4) Requirement R9 of COM-001-2 needs to be clarified. As written the requirement seems open ended once action to repair of a failed Alternative Interpersonal Communication is initiated within 2 hours but not completed within that time. It is not clear whether there is an expectation on the responsible entity to designate a replacement Alternative Interpersonal Communication if repairs cannot be completed within that period. Response: The requirement is saying that if the test fails you must initiate action for repair or designate a replacement alternative within two hours. There is no requirement for a tertiary capability nor is there a requirement for a repair deadline. We have also submitted additional comments in response to the request for comments. Response: Please see responses to other comments
Response: The RCSDT thanks you for your comment. Please see responses above.				
Michael Moltane	International Transmission Company Holdings Corp	1	Negative	ITC votes negative for the reasons detailed in the MISO-submitted comment form related to this Project (ITC signed onto the MISO comments). While this standard revision moves in the right direction, we believe at least one additional iteration will be needed to correct the concerns indicated in the comment form.
Response: The RCSDT thanks you for your comments. Please see responses to Midwest ISO.				
Kathleen Goodman	ISO New England, Inc.	2	Negative	Although ISO-NE believes these Standard represent a great improvement, we are voting against because we believe they would be improved by the comments that we have offered. We would gladly modify our vote in the Affirmative if our comments are considered in the next ballot.

Response: The RCSDT thanks you for your comment. Please see response to those comments.				
Charles Locke	Kansas City Power & Light Co.	3	Negative	These requirements impose alternative means of communication on TOP's, BA's and GOP's regardless of the impact the entity may have on maintaining interconnection reliability. In addition, there are many IRO requirements that are proposed to be eliminated that do not appear to be considered in other places.
Response: The RCSDT thanks you for your comments. We cannot delineate entity impact on reliability and respond only regarding entity registration with NERC.				
Scott Heidtbrink	Kansas City Power & Light Co.	5	Negative	These requirements impose alternative means of communication on TOP's, BA's and GOP's regardless of the impact the entity may have on maintaining interconnection reliability. In addition, there are many IRO requirements that are proposed to be eliminated that do not appear to be considered in other places.
Response: The RCSDT thanks you for your comments. We cannot delineate entity impact on reliability and respond only regarding entity registration with NERC.				
Jessica L Klinghoffer	Kansas City Power & Light Co.	6	Negative	These requirements impose alternative means of communication on TOP's, BA's and GOP's regardless of the impact the entity may have on maintaining interconnection reliability. In addition, there are many IRO requirements that are proposed to be eliminated that do not appear to be considered in other places.
Response: The RCSDT thanks you for your comments. We cannot delineate entity impact on reliability and respond only regarding entity registration with NERC.				
Jim M Howard	Lakeland Electric	5	Negative	From the last posting to this posting, for COM-002-3 R2, the phrase "the accuracy of the message has been confirmed" was added to the second step of three part communication. Why was this added? - "Accuracy" is not the correct term here. Suggest changing COM-002-3 R2 to read: Each Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details to clearly communicate the recipient's understanding of the Reliability Directive. Response: The SDT, in drafting the proposed language, did indeed discuss using the word "understanding" rather than accuracy. However, the SDT was not able to

				identify a feasible measure for “understanding”. A recipient can judge whether the response is accurate when compared with the communications issued, but cannot judge the understanding of anyone, even though the responder may have accurately responded. The term "accuracy" can be interpreted as requiring the recipient to second-guess the Reliability Directive of the RC to ensure the accuracy of the RC's directive in the first place. Under tight time constraints of Emergencies, this is not practical. We are sure that was not the intent of the drafting team. Response: Several commenters expressed concern about the use of the word, 'accuracy' and the team revised the requirement to remove this word.
Response: The RCSDT thanks you for your comment.				
Paul Shipps	Lakeland Electric	6	Negative	The phrase "the accuracy of the message has been confirmed" was added to the second step of three part communication. "Accuracy" is not the correct term here. "Understanding" is a better term. The term "accuracy" is a term to be used in R3, the third part of the 3-part communication, so that the issuer of the directive ensures the accuracy of the recipients understanding.
Response: The RCSDT thanks you for your comment. The RCSDT has removed that phrase from the requirement as it was difficult to measure and many stakeholders had concerns with the language.				
Rick Crinklaw	Lane Electric Cooperative, Inc.	3	Negative	Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the

				language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of Communication capabilities impacted entities will be notified of the past loss and current status of Communication." We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.
Response: The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u>." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.				
Michael Henry	Lincoln Electric Cooperative, Inc.	3	Negative	Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-

				service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of Communication capabilities impacted entities will be notified of the past loss and current status of Communication." We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.
Response: The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u>." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this				

return call would not be timely enough, then the issuer would determine a different mitigation plan.				
Bruce Merrill	Lincoln Electric System	3	Negative	For NERC Reliability Standard COM-001-2, LES believes that interpersonal communication is the act of communicating and that the requirements specify normal and redundant facilities for Interpersonal Communication. As such, LES recommends the definition for “Interpersonal Communication” be changed to “Any act where two or more individuals communicate, interact, consult or exchange information, including listening or reading”. Additionally, for NERC Reliability Standard IRO-001-2, LES recommends replacing the word “certify” in R1 and M1 with “assign”. As currently written it is unclear what the certification of the Reliability Coordinator will entail and how it will be established by the ERO.
Response: The RCSDT thanks you for your comment. We specifically included “medium” to distinguish a source or vehicle of communication instead of a “personal” reference. NERC has an established certification procedure for all registered entities and “certify” is in line with NERC’s process.				
Dennis Florom	Lincoln Electric System	5	Negative	For NERC Reliability Standard COM-001-2, LES believes that interpersonal communication is the act of communicating and that the requirements specify normal and redundant facilities for Interpersonal Communication. As such, LES recommends the definition for “Interpersonal Communication” be changed to “Any act where two or more individuals communicate, interact, consult or exchange information, including listening or reading”. Additionally, for NERC Reliability Standard IRO-001-2, LES recommends replacing the word “certify” in R1 and M1 with “assign”. As currently written it is unclear what the certification of the Reliability Coordinator will entail and how it will be established by the ERO.
Response: The RCSDT thanks you for your comment.. We specifically included “medium” to distinguish a source or vehicle of communication instead of a “personal” reference. NERC has an established certification procedure for all registered entities and “certify” is in line with NERC’s process.				
Richard Reynolds	Lost River Electric Cooperative	3	Negative	Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the

				event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of Communication capabilities impacted entities will be notified of the past loss and current status of Communication." We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.
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Charles A. Freibert	Louisville Gas and Electric Co.	3	Negative	Refer to the comment form.
Response: The RCSDT thanks you for your comment. Please see response to posting comments for LGE/KE; the RCSDT did not specifically find comments from Louisville Gas and Electric Co.				
Joseph G. DePoorter	Madison Gas and Electric Co.	4	Negative	MGE is voting negative for several reasons. Please see the MRO NSRS comments for a full description. Plus, whenever there are multiple Standards within a Project, registered entities will be forced to vote negative when there is at least one negative aspect.
Response: The RCSDT thanks you for your comment. Please see response to MRO NSRS comments. The NERC SC approved the SAR and the RCSDT only drafts requirements within the scope of the SAR. The RCSDT will move to a successive ballot with each standard balloted separately.				
Joe D Petaski	Manitoba Hydro	1	Negative	The current data retention requirement of 90 days is more than adequate. Increasing this period to 12 months would result in a significant amount of work with no benefit to reliability. For additional comments, please see Manitoba Hydro's comments provided during formal comment period.
Response: The RCSDT thanks you for your comment. However, the comment submitted is incomplete and does not reference specific standard(s) or requirement(s). The data retention periods for the set of standards proposed is consistent with the guidelines provided in the NERC Drafting team Guidelines. Note that with recent changes to the Rules of Procedure, entities must be prepared to demonstrate that they were compliant for the full time period since the last audit.				
Greg C. Parent	Manitoba Hydro	3	Negative	The current data retention requirement of 90 days is more than adequate. Increasing this period to 12 months would result in a significant amount of work with no benefit to reliability. For additional comments, please see Manitoba Hydro's comments provided during formal comment period.
Response: The RCSDT thanks you for your comment. However, the comment submitted is incomplete and does not reference specific standard(s) or requirement(s). The data retention periods for the set of standards proposed is consistent with the guidelines provided in the NERC Drafting team Guidelines. Note that with recent changes to the Rules of Procedure, entities must be prepared to demonstrate that they were compliant for the full time period since the last audit.				
S N Fernando	Manitoba Hydro	5	Negative	The current data retention requirement of 90 days is more than adequate. Increasing this period to 12 months would result in a significant amount of work with no benefit to reliability. For additional comments, please see Manitoba Hydro's

				comments provided during formal comment period.
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Daniel Prowse	Manitoba Hydro	6	Negative	The current data retention requirement of 90 days is more than adequate. Increasing this period to 12 months would result in a significant amount of work with no benefit to reliability. For additional comments, please see Manitoba Hydro's comments provided during formal comment period.
Response: The RCSDT thanks you for your comment. However, the comment submitted is incomplete and does not reference specific standard(s) or requirement(s). The data retention periods for the set of standards proposed is consistent with the guidelines provided in the NERC Drafting team Guidelines. Note that with recent changes to the Rules of Procedure, entities must be prepared to demonstrate that they were compliant for the full time period since the last audit.				
Jason L Marshall	Midwest ISO, Inc.	2	Negative	We thank the drafting team for their efforts on this project to improve the reliability coordination standards. The quality of the standards continues to improve over previous postings. While the drafting team is definitely moving the standards in the right direction, we believe we have not reached the point of diminishing returns and that there are several issues that the drafting team still needs to address. 1 This standard does not comport with the informational filing that NERC submitted to FERC on August 10, 2009 regarding its discontinued use of sub-requirements in standards development activities. Response: The sub-requirements are an old format. The standard was updated to the new template, and sub-requirements are now Parts. 2 In general, we are not opposed to the concept of the ERO certifying the Reliability Coordinators; however, there are some issues with how the requirement IRO-001-2 R1 is written. The requirement places emphasis on regions and regional boundaries when no emphasis should be placed there. There are multiple Reliability Coordinators that span multiple regions. The language “to continuously assess transmission reliability” should be changed to “to continuously assess Bulk Electric System reliability” to reflect on what the standards are enforceable. The requirement on the ERO should also be expanded similar to BAL-005-0.1b R1 to ensure that all operating entities and the entire BES are covered under a Reliability Coordinator Area.

				Response: Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2. 3 The SDT did not address all of our concerns with COM-002-3 from the last posting. For entities registered as multiple functions, the combination of the definition of Reliability Directive and Requirement R1 could be confused to require a company to issue directives to itself. There are several organizations registered as a Reliability Coordinator, Transmission Operator and Balancing Authority. In these companies, it is not uncommon for those responsibilities to be distributed across multiple desks. Thus, for certain situations, a single System Operator may actually be the Reliability Coordinator and the Transmission Operator. In other situations, the System Operator serving the Reliability Coordinator function may be adjacent to the System Operator serving the as the Transmission Operator or Balancing Authority. We believe that it should never be necessary for these System Operators to issue Reliability Directives to themselves in the first example or to their co-worker in the second example to demonstrate compliance to NERC standards. How the entity coordinates its actions among its Reliability Coordinator, Balancing Authority and Transmission Operator roles is a corporate governance issue that should not be confused or complicated by the NERC standards. Thus, we believe that standards should be made clear that the Reliability Directive is directed to another company. Response: COM-002 does not preclude text or other forms of communication for issuing Reliability Directives. However, entities still must comply with the requirements of COM-002. Further, the RCSDT believes it to be equally imperative that each NERC registered function hold the authority to issue Reliability Directives, and the ability to receive Reliability Directives, whether those Reliability Directives are issued to subordinate registered functions within a vertically integrated utility, or to registered entities that are corporately separate. The RCSDT believes the following response to draft 3 comments still holds true: “The way that COM-002 is crafted, it focuses on functional entity communication between and among functions. Face-to-face communication of Reliability Directives are subject to the requirements of COM-002 and can be measured for COM-002 by allowing Operator Logs as possible evidence to support compliance”. The use of operator logs to memorialize and provide evidence of compliance is applicable to those Reliability Directives issued and received within the same control room or operations center. The RCSDT believes that any Registered Entity or person operating as such must understand the intent of the issued Reliability Directive, and that the issuer of the Reliability Directive believe that the Reliability

				Directive was correctly received. 4 We also are concerned about the need to conduct three-part communications for a Reliability Directive issued through a blast call. Under these circumstances, the need for immediate action of multiple parties may require a blast call and there may not be time for all parties to complete three-part communications before initiating actions. Thus, we believe blast calls should be treated separately and that should be made clear. Response: The RCSDT agrees that the use of Blast Calls to issue Reliability Directives, in mass, is efficient and effective. However the essence of accurately implementing Reliability Directives is accomplished by use of 3-part communications. The RCSDT believes Reliability Directives issued in mass should be defined by procedure, and that the procedure would establish a method of affirmation and notice of implementation. As envisioned, communications protocols requiring for issuing alerts will be addressed in the COM-003 standard being developed in Project 2007-02. 5 COM-002-3 R2 needs to be rewritten as it is too verbose. The point is for the recipient of the original message to get the issuer to confirm that the message was understood. We suggest rewording R2 to “Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive.” Once the receiver has completed this requirement, the ball is in the issuer’s court per Requirement R3. No additional words are necessary in the requirement. Response: The RCSDT agrees and has revised the requirement as you suggest. 6 Please strike part IRO-014-2 Part 1.7. There is no need to have a weekly conference to discuss every Operating Procedure, Operating Process and Operating Plan. As this requirement is written, a conference call would be necessary for each. Furthermore, IRO-014-2 R4 already includes a requirement to have weekly conference calls that should suffice. IRO-014-2 R2 seems to recognize that these Operating Procedures, Processes and Plans likely will not need to be discussed weekly as it only requires an annual update. Response: The intent of R1 is for Reliability Coordinators to coordinate specific activities with other impacted Reliability Coordinators. These activities are listed as Parts. Further the RCSDT believes that it is prudent that Reliability Coordinators talk at least once a week to verify viability of mutual plans, procedures or processes. The relation of IRO-14-2 PART 1.7 to R4 is that PART 1.7 requires

				having a conference call, R4 requires participation by all impacted Reliability Coordinators. As such, neither replaces the other. 7 IRO-014-2 R4 is overly broad and would require Reliability Coordinators that will not impact one another to participate on conference calls with one another without any reliability benefit. The issue is created by the addition of the clause “within the same Interconnection” to the requirement. ISO-NE, FRCC, Midwest ISO, and SPP are all in the same Interconnection. It is hard to fathom there being reliability benefit to SPP and ISO-NE conversing weekly or Midwest ISO and FRCC conversing weekly. We suggest limiting the requirement to adjacent Reliability Coordinators. Response: IRO-14-2 R4 is applicable to those Reliability Coordinators engaged in activities related to R1 and subsequently PART 1.7. It is unlikely that Reliability Coordinators whom are geographically and electrically distant will have mutually agreed upon operating procedures; therefore requirement R4 would not apply. 8 For IRO-014-2 R5, we suggest replacing “other” with “impacted” to limit the notification of Adverse Reliability Impacts to only those Reliability Coordinators that need to know. Because the definition of Adverse Reliability Impact includes “Bulk Electric System instability or Cascading”, it is possible that the cascading of 138 kV lines serving a load pocket or generator outlet stability issues could require a Reliability Coordinator to notify all other Reliability Coordinators regardless of impact. This would include Reliability Coordinators outside of the Interconnection with the problem. It would also include Reliability Coordinators that are not impacted. For instance, an issue in New England that would not pose a threat outside the northeast would require ISO-NE to notify SPP and FRCC and Reliability Coordinators in the Western Interconnection. There is no reliability benefit to this notification. Response: This requirement continues the current practice of informing all RCs of ARIs. Due to the nature of an ARI, this requirement is typically implemented as an RCIS message or a hotline call to all RC's. This is intended to make all RCs aware of ARIs and support situational awareness. 9 IRO-014-2 R6-R8 are problematic and need to be refined to make clear that the Reliability Coordinators shall operate to the most conservative limit. It should not require a Reliability Coordinator that disagrees with an action plan to implement the action plan. The Reliability Coordinator will be disagreeing with the action plan for reliability reasons. Assuming they are correct, the requirement to implement said action plan will actually put the Interconnection at greater risk. These requirements inappropriately attempt to codify the debate and analysis that occurs between and within Reliability Coordinators when there are differing results in reliability analysis. This is part of the problem with having a Wide Area view that results in Reliability Coordinators having a view into other Reliability Coordinator Areas. Their results

			and conclusions may be different. There should be a hierarchical structure for whose results should be used. It should be the Reliability Coordinator with primary responsibility unless the other Reliability Coordinator has evidence to demonstrate that the Reliability Coordinator with primary responsibility is incorrect. What this should do is to trigger both to review their models and data to assess the problem. None of this needs to be codified in the standards though. Response: Requirements R6-R8 are translated from IRO-016-1, Requirement R1. If an RC sees a problem and another does not see the same problem, then there may be an issue with someone's model or processes or procedures. The RC's are supposed to have coordinated Operating Plans, Processes or Procedures to operate reliably. R6-R8 are only applicable if one of the two (or more) RCs do not see that a problem exists. It would be a detriment to reliability for both RCs to take no action. RCs are required to coordinate actions under existing IRO-016-1, R1. If one RC identifies a problem and provides an action plan to another RC to mitigate the problem, the second RC is obligated under R8 to implement it. We have revised the R8 to clarify this intent. IRO-014-2, Revised R8. During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, each Reliability Coordinator shall implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact unless such actions would violate safety, equipment, regulatory or statutory requirements. 10 In the definition of Reliability Directive, we suggest changing "to address an Emergency" to "to address a declared Emergency". This would help limit second guessing for a situation where a System Operator took action because he truly believed he was in an Emergency but after the fact analysis demonstrates there really was not an Emergency. Response: The RCDT believes that modifying Reliability Directive by including "declared Emergency" would add an unnecessary step in mitigation of the Emergency. 11 We disagree with deleting IRO-002-1 R5 and R7 which establish tools and monitoring capabilities. There should be basic tools requirements established for Reliability Coordinators. Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities will be addressing these issues in more detail. Thus, it does not make sense to delete these requirements until that dra Response: Each RC has been certified to continue operations as an RC or been certified prior to beginning operations as an RC. The minimum set of tools and capabilities for an RC are "checked off" during the certification process. The

				reliability objective of R5 and R7 is to perform analyses to ensure reliability of the BES by specifying capability rather than mandating specific tools. The analysis provisions of R5 and R7 are covered under IRO-008-1, Requirements R1 (perform Operational Planning Analysis) and R2 (perform Real-time Analysis). It is anticipated that Project 2009-02 team will address this issue more fully.
Response: The RCS DT thanks you for your comments.				
Richard Burt	Minnkota Power Coop. Inc.	1	Negative	Minnkota is in agreement with the comments submitted by the MRO NSRS.
Response: The RCS DT thanks you for your comment. Please see MRO NSRS response to comments.				
Don Horsley	Mississippi Power	3	Affirmative	Please see comments
Response: The RCS DT thanks you for your comment. Please see response to those comments.				
John S Bos	Muscatine Power & Water	3	Negative	1 In the COM-001 requirements, MP&W does not agree that a Distribution Provider and a Generator Operator need to be held to the same level of responsibility as a Reliability Coordinator, Balancing Authority, or Transmission Operator. In FERC Order 693 (paragraph 487), FERC directed the Distribution Provider and Generator Operator to be incorporated in this standard by stating: "We expect the telecommunication requirements for all applicable entities will vary according to their roles and that these requirements will be developed under the Reliability Standards development process." A Distribution Provider and Generator Operator may not be staffed 24 hours a day like a Balancing Authority or Transmission Operator; nevertheless, the Standards Drafting Team did not consider this. Response: There is no requirement that requires identical communications systems. The requirement is to have "a" communication capability. Regarding 24/7 support, the requirement is to have communications capability. The type of media used is not specified. For a small DP, an on-call system could suffice. The RCS DT also recognizes the FERC directive and has not included GOPs and DPs in the requirements for Alternative Interpersonal Communications capability. 2 MP&W does not agree with the revision of IRO-001 with the statement included

				for certifying Reliability Coordinators. As written, it is ambiguous as far as what level of certification this would involve. Response: Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2. 3 MP&W disagrees with COM-002-3 R2. As stated in FERC Order 693 (paragraph 512) it is essential that Reliability Coordinators, Balancing Authorities, and Transmission Operators have communications with Distribution Providers. Requirement 2 also applies to Transmission Service Providers, Load-Serving Entities and Purchasing and Selling Entities. As stated above, it is going to be unattainable to communicate with a Distribution Provider since most Distribution Providers are usually not operated 24 hours per day like Reliability Coordinators, Balancing Authorities, and Transmission Operators. Many Distribution Providers have answering services that will relay a message once they receive it and then pass it along to someone. An answering service could repeat the directive back, word for word, but this would not add any level of reliability. The Standards Drafting Team should reconsider the applicability section of this Standard to apply to only Reliability Coordinators, Balancing Authorities, and Transmission Operators for the issuance of a Reliability Directive. Response: There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u>." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.
Response: The RCSDT thanks you for your comments. Please see responses above.				
Mike Avesing	Muscatine Power & Water	5	Negative	In the COM-001 requirements, MP&W does not agree that a Distribution Provider and a Generator Operator need to be held to the same level of responsibility as a Reliability Coordinator, Balancing Authority, or Transmission Operator. In FERC

			Order 693 (paragraph 487), FERC directed the Distribution Provider and Generator Operator to be incorporated in this standard by stating: "We expect the telecommunication requirements for all applicable entities will vary according to their roles and that these requirements will be developed under the Reliability Standards development process." A Distribution Provider and Generator Operator may not be staffed 24 hours a day like a Balancing Authority or Transmission Operator; nevertheless, the Standards Drafting Team did not consider this. Response: There is no requirement that requires identical communications systems. The requirement is to have "a" communication capability. Regarding 24/7 support, the requirement is to have communications capability. The type of media used is not specified. For a small DP, an on-call system could suffice. The RCSDT also recognizes the FERC directive and has not included GOPs and DP in the requirements for Alternative Interpersonal Communications capability. MP&W does not agree with the revision of IRO-001 with the statement included for certifying Reliability Coordinators. As written, it is ambiguous as far as what level of certification this would involve. Response: Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2. MP&W disagrees with COM-002-3 R2. As stated in FERC Order 693 (paragraph 512) it is essential that Reliability Coordinators, Balancing Authorities, and Transmission Operators have communications with Distribution Providers. Requirement 2 also applies to Transmission Service Providers, Load-Serving Entities and Purchasing and Selling Entities. As stated above, it is going to be unattainable to communicate with a Distribution Provider since most Distribution Providers are usually not operated 24 hours per day like Reliability Coordinators, Balancing Authorities, and Transmission Operators. Many Distribution Providers have answering services that will relay a message once they receive it and then pass it along to someone. An answering service could repeat the directive back, word for word, but this would not add any level of reliability. The Standards Drafting Team should reconsider the applicability section of this Standard to apply to only Reliability Coordinators, Balancing Authorities, and Transmission Operators for the issuance of a Reliability Directive. Response: The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is

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Response: The RCSDT thanks you for your comment.				
Brandy D Olson	Muscatine Power & Water	6	Negative	In the COM-001 requirements, MP&W does not agree that a Distribution Provider and a Generator Operator need to be held to the same level of responsibility as a Reliability Coordinator, Balancing Authority, or Transmission Operator. In FERC Order 693 (paragraph 487), FERC directed the Distribution Provider and Generator Operator to be incorporated in this standard by stating: "We expect the telecommunication requirements for all applicable entities will vary according to their roles and that these requirements will be developed under the Reliability Standards development process." A Distribution Provider and Generator Operator may not be staffed 24 hours a day like a Balancing Authority or Transmission Operator; nevertheless, the Standards Drafting Team did not consider this. Response: There is no requirement that requires identical communications systems. The requirement is to have "a" communication capability. Regarding 24/7 support, the requirement is to have communications capability. The type of media used is not specified. For a DP an on-call system could suffice. The RCSDT also recognizes the FERC directive and has not included GOPs and DP in the requirements for Alternative Interpersonal Communications capability. MP&W does not agree with the revision of IRO-001 with the statement included for certifying Reliability Coordinators. As written, it is ambiguous as far as what level of certification this would involve. Response: Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.

				MP&W disagrees with COM-002-3 R2. As stated in FERC Order 693 (paragraph 512) it is essential that Reliability Coordinators, Balancing Authorities, and Transmission Operators have communications with Distribution Providers. Requirement 2 also applies to Transmission Service Providers, Load-Serving Entities and Purchasing and Selling Entities. As stated above, it is going to be unattainable to communicate with a Distribution Provider since most Distribution Providers are usually not operated 24 hours per day like Reliability Coordinators, Balancing Authorities, and Transmission Operators. Many Distribution Providers have answering services that will relay a message once they receive it and then pass it along to someone. An answering service could repeat the directive back, word for word, but this would not add any level of reliability. The Standards Drafting Team should reconsider the applicability section of this Standard to apply to only Reliability Coordinators, Balancing Authorities, and Transmission Operators for the issuance of a Reliability Directive. Response: The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u>." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.
Response: The RCSDT thanks you for your comment.				
Tony Eddleman	Nebraska Public Power District	3	Negative	COM-001-2: A) We would need clarification as to what the process would be for Interpersonal communication and alternate Interpersonal communications and voice recording if the (1) TO and the BA are the same person, (2) if the TO and the BA are sitting across the desk from each other, or (3) if the TO, BA, and Distribution provider are all in the same company or same room. B) In the definition of Interpersonal Communications if data is included (?), what

				evidence of compliance is expected? C) R 1.2 and R2.2 Reliability Coordinators communication shouldn't be limited to the same interconnection. They need communications concerned with schedules across DC ties. D) For R3, neighboring Transmission Operators should be included. E) For R5, neighboring Balancing Authorities should be included. Response: A) The IC and AIC requirements apply to the functional entity. If a company has all of the functions performed in the same room, they would verbally communicate with each other in person (with sound waves being the medium). B) Data is not included in the definition of Interpersonal Communications but is covered in approved IRO-010-1 and proposed TOP-003-2. C) BAs handle Interchange Schedules. The RC has Interpersonal Communications with its BAs. DC ties usually have contractually designated operators who handle operating concerns. D) The SDT agrees, and has revised the requirement to include 'adjacent' TOPs synchronously connected within the same Interconnection. E) The SDT agrees and has revised the requirement to include 'adjacent' BAs COM-002-3 (R1): A) Since an entity can be registered for multiple functions (functions noted in R1), this could lead to the requirement for entities to issue directives to themselves or co-workers in the same room. B) How would a 3-part communication work when a "blast" call is used to provide directives to several entities? Response: A) COM-002 does not preclude text or other forms of communication for issuing Reliability Directives. However, entities still must comply with the requirements of COM-002. Further, the RCS DT believes it to be equally imperative that each NERC registered function hold the authority to issue Reliability Directives, and the ability to receive Reliability Directives, whether those Reliability Directives are issued to subordinate registered functions within a vertically integrated utility, or to registered entities that are corporately separate.

				The RCSDT believes the following response to draft 3 comments still holds true: “The way that COM-002 is crafted, it focuses on functional entity communication between and among functions. Face-to-face communication of Reliability Directives are subject to the requirements of COM-002 and can be measured for COM-002 by allowing Operator Logs as possible evidence to support compliance”. COM-002 should not be construed to mean that an individual serving in two functions be required to issue a Reliability Directive to himself, but rather it is expected that such an individual would appropriately address the reliability issues as required by the function they are serving and its subsequent responsibilities. B) The RCSDT agrees that the use of Blast Call's to issue Reliability Directives, in mass, is efficient and effective. However the essence of accurately implementing Reliability Directives is accomplished by use of 3-part communications. The RCSDT believes Reliability Directives issued in mass should be defined by procedure, and that the procedure would establish a method of affirmation and notice of implementation. As envisioned, communications protocols requiring for issuing alerts will be addressed in the COM-003 standard being developed in Project 2007-02.
Response: The RCSDT thanks you for your comment.				
Don Schmit	Nebraska Public Power District	5	Negative	COM-001-2: A) We would need clarification as to what the process would be for Interpersonal communication and alternate Interpersonal communications and voice recording if the TO and the BA are the same person, if the TO and the BA are sitting across the desk from each other, or if the TO, BA, and Distribution provider are all in the same company or same room. B) If the Interpersonal Communication definition includes data (?) then what evidence needs to be provided? C) R1.2 and R2.2, Reliability Coordinators communication shouldn't be limited to the same interconnection. They also need communications concerned with schedules across DC ties. D) For R3, neighboring Transmission Operators should be included. E) For R5, neighboring Balancing Authorities should be included. Response: A) The IC and AIC requirements apply to the functional entity. If a

			company has all of the functions performed by the same person or people in the same room, they would verbally communicate with each other in person. (sound waves – medium) B) Data is not included in the definition of Interpersonal Communications but is covered in approved IRO-010-1 and proposed TOP-003-2. C) BAs handle Interchange Schedules. The RC has Interpersonal Communications with its BAs. DC ties usually have contractually designated operators who handle operating concerns. D) The SDT agrees, and has revised the requirement to include 'adjacent' TOPs synchronously connected within the same Interconnection. E) The SDT agrees and has revised the requirement to include 'adjacent' BAs COM-002-3(R1): A) Concern regarding entities registered with multiple functions. Could lead to requirement for entities to give directives to themselves or to co-workers in the same room. B) How would 3-part communications be handled during 'blast' calls? Response: A) COM-002 does not preclude text or other forms of communication for issuing Reliability Directives. However, entities still must comply with the requirements of COM-002. Further, the RCSDT believes it to be equally imperative that each NERC registered function hold the authority to issue Reliability Directives, and the ability to receive Reliability Directives, whether those Reliability Directives are issued to subordinate registered functions within a vertically integrated utility, or to registered entities that are corporately separate. The RCSDT believes the following response to draft 3 comments still holds true: “The way that COM-002 is crafted, it focuses on functional entity communication between and among functions. Face-to-face communication of Reliability Directives are subject to the requirements of COM-002 and can be measured for COM-002 by allowing Operator Logs as possible evidence to support compliance”. Com-002 should not be construed to mean that an individual serving in two functions be required to issue a Reliability Directive to himself, but rather it is expected that such an individual would appropriately address the reliability issues as required by the function they are serving and its subsequent responsibilities. B) The RCSDT agrees that the use of Blast Calls to issue Reliability Directives, in

				mass, is efficient and effective. However the essence of accurately implementing Reliability Directives is accomplished by use of 3-part communications. The RCSDT believes Reliability Directives issued in mass should be defined by procedure, and that the procedure would establish a method of affirmation and notice of implementation. As envisioned, communications protocols requiring for issuing alerts will be addressed in the COM-003 standard being developed in Project 2007-02.
Response: The RCSDT thanks you for your comment.				
Gregory Campoli	New York Independent System Operator	2	Abstain	The NYISO agrees that these revised standards are an improvement from the current version. However we believe that the comments submitted by the IRC and NPCC are required to make them acceptable as the new set of standards. We will have an opportunity to revise our vote on the second ballot based on the consideration given to the comments submitted.
Response: The RCSDT thanks you for your comment. See IRC and NPCC comments.				
Michael Schiavone	Niagara Mohawk (National Grid Company)	3	Affirmative	IRO-001 R1 The language “to continuously assess transmission reliability” should be changed to “to continuously assess Bulk Electric System reliability” to reflect what the enforceability of the standards are meant to be. Response: Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2. IRO-001 R2 Should “of” be “to”? Reliability Directives are issued to TOPs, BA, etc. Response: The requirement was rewritten for clarity as follows: R2. Each Reliability Coordinator shall take actions or direct actions (which could include issuing Reliability Directives) by Transmission Operators, Balancing Authorities, Generator Operators, and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. IRO-001 R2 Contains the words “which could include issuing Reliability Directives”, but Reliability Directives are not referenced anywhere else in the standard. This inclusion seems unnecessary since without it, R2 already requires that the RC take actions or direct actions by others to prevent identified events or mitigate the

				magnitude or duration of actual events that result in Adverse Reliability Impacts. Whether or not a Reliability Directive is issued is irrelevant in this requirement. These words should be removed. Note that COM-002 will stipulate the requirement for 3-part communication when a Reliability Directive is issued. The inclusion of “which could include issuing Reliability Directives” in IRO-001 is unnecessary. Response: R2 requires the Reliability Coordinator to act. These actions could include Reliability Directives in the case of an Emergency. However, issuing Reliability Directives might not always be necessary, as the Reliability Coordinator may be acting proactively well in advance of an emergency. R2 promotes this proactive approach, but reserves the use of Reliability Directives for circumstances that require its use. During the vetting of the prior version of this requirement, some stakeholders expressed concern that the word, “action,” if not clarified, could lead some people to believe that the Reliability Coordinator must be the entity to perform the actual operation. COM-002 In place of requiring an operator, in real-time, to state “this is a Reliability Directive,” there should be an allowance for an entity to develop procedures indicating, in advance, their expectations of three-part to their sub-operating entities. Modify R1 to be “When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action, either verbally, when the communication is issued, or in advance through documented procedures, as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time.]” Response: Your proposed edit does not meet the reliability intent of the requirement. The RCSDT believes that it is important to state that the Reliability Directive is being issued to convey that action by the recipient is required. An RC could issue a Reliability Directive to implement an agreed upon procedure whereby the three part communication would not list each step of the procedure individually, but would include implementation of the entire procedure. As envisioned, communications protocols such as the procedure you've proposed will be addressed in the COM-003 standard being developed in Project 2007-02.
Response: The RCSDT thanks you for your comment. Please see responses above.				
Jon Shelby	Northern Lights Inc.	3	Negative	Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability

				directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of Communication capabilities impacted entities will be notified of the past loss and current status of Communication." We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.
Response: The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u>." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical				

that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.				
Douglas Hohlbaugh	Ohio Edison Company	4	Affirmative	FirstEnergy supports the proposed standards and would appreciate consideration of our comments submitted through the formal comment period.
Response: The RCSDT thanks you for your comment. Your comments have been considered, Please see the Consideration of Comments document for FirstEnergy.				
Ray Ellis	Okanogan County Electric Cooperative, Inc.	3	Negative	Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication

				not be available within the 15 minute access time, then upon reestablishment of Communication capabilities impacted entities will be notified of the past loss and current status of Communication." We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.
Response: The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u>." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.				
Margaret Ryan	Pacific Northwest Generating Cooperative	8	Negative	Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due

				to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of Communication capabilities impacted entities will be notified of the past loss and current status of Communication." We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.
Response: The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u> ." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.				
Brenda L Truhe	PPL Electric Utilities Corp.	1	Negative	Comments were submitted as part of a group via the comment form. Thank you for your work on the standard.
Response: The RCSDT thanks you for your comment. Your other comments have been considered. Please see the Consideration of Comments document.				
Mark A Heimbach	PPL EnergyPlus LLC	6	Negative	Comments: We thank the Standards Drafting Team for the improvements made in the revisions to COM-001 and COM-002. The revision appropriately clarifies the standard. We are providing the following comments for the Standards Drafting Team to consider. 1) Consider changing R1 to 'Each RC shall have the capability for Interpersonal Communications with the following entities to exchange Interconnection and

				operating information...' for clarity as Interpersonal Communications and capability are both nouns. Response: Thank you for your suggestion to modify the sentence structure into a noun phrase. However the RCSDT believes the current form is unambiguous. 2) We feel changing the applicability of the standard is important to the accuracy of the standard. The purpose of COM-002 is 'To ensure emergency communications between operating personnel are effective'. Since operating personnel are covered by the applicability of RC, BA, TOP and GOP, we suggest the applicability to TSP, LSE, and PSE be removed from COM-002-3. Response: The SDT agrees. The applicability of COM-002 has been revised. COM-001, and COM-002 are now applicable to the RC, TOP, BA, GOP and DP only. 3) Additionally, we would like to bring to the attention of the Standards Drafting Team, that the implementation plan for COM-001-2 and IRO-001-2 still includes TSP, LSE, and PSE although the revised standard does not include these entities in the Applicability Section. For COM-001-2 refer to the implementation plan, page 11. For IRO-001-2 refer to the implementation plan for new R2, new R3, new R4 and the chart on the last page. Thank you for your consideration in addressing these comments. Response: The RCSDT has revised the implementation plans appropriately to address your comment.
Response: The RCSDT thanks you for your comments. .				
Annette M Bannon	PPL Generation LLC	5	Negative	We thank the Standards Drafting Team for the improvements made in the revisions to COM-001 and COM-002. The revision appropriately clarifies the standard. We are providing the following comments for the Standards Drafting Team to consider. 1) Consider changing R1 to 'Each RC shall have the capability for Interpersonal Communications with the following entities to exchange Interconnection and operating information...' for clarity as Interpersonal Communications and capability are both nouns. Response: Thank you for your suggestion to modify the sentence structure into a noun phrase. However the RCSDT believes the current form is unambiguous. 2) We feel changing the applicability of the standard is important to the accuracy of the standard. The purpose of COM-002 is 'To ensure emergency communications

				between operating personnel are effective'. Since operating personnel are covered by the applicability of RC, BA, TOP and GOP, we suggest the applicability to TSP, LSE, and PSE be removed from COM-002-3. Response: We agree. The applicability of COM-002 has been revised. COM-001, and COM-002 are now applicable to the RC, TOP, BA, GOP and DP only. 3) Additionally, we would like to bring to the attention of the Standards Drafting Team, that the implementation plan for COM-001-2 and IRO-001-2 still includes TSP, LSE, and PSE although the revised standard does not include these entities in the Applicability Section. For COM-001-2 refer to the implementation plan, page 11. For IRO-001-2 refer to the implementation plan for new R2, new R3, new R4 and the chart on the last page. Thank you for your consideration in addressing these comments. Response: The RCSDT has revised the implementation plans appropriately to address your comment.
Response: The RCSDT thanks you for your comments.				
John T Sturgeon	Progress Energy	6	Negative	COM-001-2 R10 states that "Each Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider and Generator Operator shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that last 30 minutes or longer". The standard states that the RC, TOP, BA shall designate an Alternative Interpersonal Communication capability but does not require the same of the DP and GOP. Compliance by the DP and GOP with R10 would be jeopardized while still being compliant with the rest of the standard by having only the Interpersonal Communications capability. Response: The DP or GOP has access to additional Interpersonal Communications, in all likelihood, to make notifications for failure. There is not a requirement for an alternative, but it is likely that someone could use a cell phone to make the notification. The RCSDT is proposing to add Part 7.3 and 8.3 to the requirements as follows: 7.3 Each Distribution Provider that experiences a failure of its Interpersonal Communication capabilities shall consult with their Transmission Operator or Balancing Authority to determine a mutually agreeable time to restore its Interpersonal Communication capability. 8.3 Each Generator Operator that experiences a failure of its Interpersonal Communication capabilities shall consult with their Transmission Operator or Balancing Authority to determine a mutually

				agreeable time to restore its Interpersonal Communication capability. The phrase “within” used in R3-R6 does not take into account that there are electrically adjacent BAS/TOPs who are not “within” each other’s area. Response: The requirements are dealing with entities within the Area or entities that operate Facilities located within the Area. We have also added the following to R3: Adjacent Transmission Operators synchronously connected within the same Interconnection. The SDT also added, ‘adjacent Balancing Authorities’ to Requirements R4, R5 and R6.
Response: The RCSDT thanks you for your comment.				
Peter Dolan	PSEG Energy Resources & Trade LLC	6	Negative	Com-001-2 implementation plan lists that this is applicable to PSE’s and LSE’s however, PSE’s and LSE’s were removed from the actual standard. The implementation plan should be revised. Com-002-3 standard continues to include PSE. PSE’s do not play an active role in operating the BES and have no authority or ability to perform reliability coordination related tasks as may be directed by a RC. PSE’s should be removed from the standard. IRO-001-2 references PSE’s in the implementation for R2, R3, R4 and “Functions that must comply with the requirements in this standard” table. PSE’s were removed from the standard and should be removed from the implementation plan.
Response: The RCSDT thanks you for your comment. The applicability of COM-002 has been revised. COM-001, and COM-002 are now applicable to the RC, TOP, BA, GOP and DP only. The RCSDT has revised the implementation plans appropriately to address your comment.				
Kenneth D. Brown	Public Service Electric and Gas Co.	1	Negative	Com-001-2 implementation plan lists that this is applicable to PSE’s and LSE’s however, PSE’s and LSE’s were removed from the actual standard. The implementation plan should be revised. Com-002-3 standard continues to include PSE. PSE’s do not play an active role in operating the BES and have no authority or ability to perform reliability coordination related tasks as may be directed by a

				RC. PSE's should be removed from the standard. IRO-001-2 references PSE's in the implementation for R2, R3, R4 and "Functions that must comply with the requirements in this standard" table. PSE's were removed from the standard and should be removed from the implementation plan.
Response: The RCSDT thanks you for your comment. The applicability of COM-002 has been revised. COM-001, and COM-002 are now applicable to the RC, TOP, BA, GOP and DP only. The RCSDT has revised the implementation plans appropriately to address your comment.				
Jeffrey Mueller	Public Service Electric and Gas Co.	3	Negative	PSEG opposes this standard for the following reasons: Com-001-2 implementation plan lists that this is applicable to PSE's and LSE's however, PSE's and LSE's were removed from the actual standard. The implementation plan should be revised. Com-002-3 standard continues to include PSE. PSE's do not play an active role in operating the BES and have no authority or ability to perform reliability coordination related tasks as may be directed by a RC. PSE's should be removed from the standard. IRO-001-2 references PSE's in the implementation for R2, R3, R4 and "Functions that must comply with the requirements in this standard" table. PSE's were removed from the standard and should be removed from the implementation plan.
Response: The RCSDT thanks you for your comment. The applicability of COM-002 has been revised. COM-001, and COM-002 are now applicable to the RC, TOP, BA, GOP and DP only. The RCSDT has revised the implementation plans appropriately to address your comment.				
Dominick Grasso	Public Service Enterprise Group Incorporated	5	Negative	COM-001-2 implementation plan lists that this is applicable to PSE's and LSE's however, PSE's and LSE's were removed from the actual standard. The implementation plan should be revised. COM-002-3 standard continues to include PSE. PSE's do not play an active role in operating the BES and have no authority or ability to perform reliability coordination related tasks as may be directed by a RC. PSE's should be removed from the standard. IRO-001-2 references PSE's in the implementation for R2, R3, R4 and "Functions that must comply with the requirements in this standard" table. PSE's were removed from the standard and should be removed from the implementation plan.
Response: The RCSDT thanks you for your comment. The applicability of COM-002 has been revised. COM-001, and COM-002 are now applicable to the RC, TOP, BA, GOP and DP only.				

The RCSDT has revised the implementation plans appropriately to address your comment.				
Steven Grega	Public Utility District No. 1 of Lewis County	5	Negative	These changes do not recognize that many small utilities do not have 24-hour dispatch, do not have SCADA systems or do not man generation plants 24-hours a day. Specific exception should be written into the standards to provide relief for small GO, GOP, LSE and DP. The standard changes need to address notifications if personnel are only available on a on-call basis.
Response: The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u>." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.				
Heber Carpenter	Raft River Rural Electric Cooperative	3	Negative	Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due

				to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of Communication capabilities impacted entities will be notified of the past loss and current status of Communication." We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.
Response: The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u>." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.				
Anthony E Jablonski	ReliabilityFirst Corporation	10	Negative	1. General comments a. The standards should be balloted individually rather than balloted as a group. Response: The SDT agrees, and will be balloting the standards individually. 2. COM-001-2 a. The "R" should be removed from all sub requirements (they should be referenced as parts) A Response: The SDT agrees. This has been corrected. 3. IRO-005-4 a. Fix typo in R1. Insert the word "and" between the words "notify issue" b. Response: This typo has been addressed through other edits 4. IRO-001-2 a. The Electric Reliability Organization (ERO) listed in the Applicability

				section and R1 is neither a user, owner nor operator of the BES and such should not be subject to Reliability Standards. Response: Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.
Response: The RCSDT thanks you for your comment. Please see responses above.				
Ken Dizes	Salmon River Electric Cooperative	3	Negative	Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of

				Communication capabilities impacted entities will be notified of the past loss and current status of Communication." We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.
Response: The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u>." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.				

Carter B. Edge	SERC Reliability Corporation	10	Negative	If the following issues are addressed in the standards revisions I should be able to cast an affirmative vote: COM-001-2 o Each sub-requirement should not have an “R” in front of the number in order to be consistent with NERC’s August 10, 2009 filing at FERC on this subject. Response: The SDT agrees. This has been corrected. o Requirement R3 and R4 should include adjacent TOPs as a sub-requirement. Response: The SDT agrees. The SDT modified R3 and R4 to add adjacent TOPs o Requirements R5 and R6 should include adjacent BAs as a sub-requirement. Response: The SDT added adjacent Balancing Authorities to Requirements R4, R5 and R6. o “to exchange Interconnection and operating information” should be deleted from requirements R1 through R8 as it is redundant with the definition of Interpersonal Communications Response: The SDT agrees. The SDT adopted this suggestion and deleted this phrase. o The last page of the Implementation Plan includes LSEs, PSE, and TSPs as being responsible entities under this standard, yet the standard does not include them. Please correct the implementation plan. Response: The implementation plan was corrected as proposed. TOP-001-1, o Requirement R3, which is what the SDT appears to be using as its justification for not adding a requirement here is proposed to be deleted by the RTO-SDT on Project 2007-03. IRO-001-2 R2-R4 deal with complying with directives or instruction and is the justification for retiring TOP-001, R3. IRO-001-2 o I’m unclear on the language of R1. I think you are attempting to create a

			requirement similar to BAL-005, R1 where all generation, transmission, and load operating within an Interconnection must be included within the metered boundaries of a Balancing Authority Area. If that is the case, suggested language could be "All Balancing Areas and Transmission Operators must be under the authority of a Reliability Coordinator certified by the ERO to continuously assess transmission reliability and coordinate emergency operations within each region and across the regional boundaries" Response: Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2. o Please remove the yellow box on page 1 indicating this standard will be retired. Response: The SDT agrees, and has made the change. Additional comments: o Reliability Directives may be issued by blast calls from Reliability Coordinators. It is inefficient and may be a hindrance to reliability to require 3-part communications in these instances. Response: The RCSDT agrees that the use of Blast Call's to issue Reliability Directives, in mass, is efficient and effective. However the essence of accurately implementing Reliability Directives is accomplished by use of 3-part communications. The RCSDT believes Reliability Directives issued in mass should be defined by procedure, and that the procedure would establish a method of affirmation and notice of implementation. As envisioned, communications protocols such as the procedure you've proposed will be addressed in the COM-003 standard being developed in Project 2007-02. o There are several organizations registered as BAs, RCs and TOPs. It is not uncommon for those entities to be distributed across multiple desks in the same control room without regard to how an entity is registered. Thus, a single System Operator may perform functions that are categorized under two or more of those functional entities. The drafting team should clarify that under no circumstances should that System Operator be required to issue a Reliability Directive to himself. This is a corporate governance issue. Response: COM-002 does not preclude text or other forms of communication for issuing Reliability Directives. However, entities still must comply with the requirements of COM-002. Further, the RCSDT believes it to be equally imperative that each NERC registered function hold the authority to issue

			Reliability Directives, and the ability to receive Reliability Directives, whether those Reliability Directives are issued to subordinate registered functions within a vertically integrated utility, or to registered entities that are corporately separate. The RCSDT believes the following response to draft 3 comments still holds true: “The way that COM-002 is crafted, it focuses on functional entity communication between and among functions. Face-to-face communication of Reliability Directives are subject to the requirements of COM-002 and can be measured for COM-002 by allowing Operator Logs as possible evidence to support compliance.” The use of operator logs to memorialize and provide evidence of compliance is directly specific to those Reliability Directives issued and received within the same control room or operations center. The RCSDT believes that any Registered Entity or person operating as such must understand the intent of the issued Reliability Directive, and that the issuer of the Reliability Directive believe that the Reliability Directive was correctly received. COM-002 should not be construed to mean that an individual serving in two functions be required to issue a Reliability Directive to himself, but rather it is expected that such an individual would appropriately address the reliability issues as required by the function they are serving and its subsequent responsibilities. o In IRO-014, R1, delete sub-requirement 1.7. The requirement for weekly conference calls related to operating procedures is duplicative to R4 and could be burdensome while adding very little value under certain circumstances. R1, Part 1.7 indicates that the Operating Plan, process or Procedure is to include how the entity will accomplish these calls. R4 requires the entity to actually perform them. Response: The intent of R1 is for Reliability Coordinators to coordinate specific activities with other impacted Reliability Coordinators. These activities are listed as Parts. Part 1.7 is requires you to have a procedure relating to weekly conference calls while R4 requires participation in weekly calls. Further the RCSDT believes that it is prudent that Reliability Coordinators talk at least once a week to verify viability of mutual plans, procedures or processes. o In IRO-014, R4, delete the phrase “(per Requirement 1, Part 1.7)” as a conforming change. Response: The intent of R1 is for Reliability Coordinators to coordinate specific activities with other impacted Reliability Coordinators, these activities are listed as sub requirements. Part 1.7 is requires you to have a procedure relating to weekly

				conference calls while R4 requires participation in weekly calls. Further the RCSDT believes that it is prudent that Reliability Coordinators talk at least once a week to verify viability of mutual plans, procedures or processes. o I believe that the intent of IRO-014, Requirements R6-R8 is to require conservative operation by all affected Reliability Coordinators if any Reliability Coordinator detects an Adverse Reliability Impact. It could be read to allow at least the theoretical possibility that an RC may determine an Adverse Reliability Impact in another RC's area that the other RC neither can see nor believes that any action should be taken. R7 puts the burden on the first RC to develop a plan that it cannot implement because it has no agreement with the BAs and TOPs in the other RC area and thus could be ineffective. Alternately, it could be read that the identifying RC must take action in its own area to mitigate the Adverse Reliability Impact identified in another area much like the "general prudential rule" in the Coast Guard's Rules of the Road where regardless of what the rules state if action can be taken to avoid a collision at sea, that action must be taken. Please clarify. Response: Requirements R6-R8 are translated from IRO-016-1, Requirement R1. If an RC sees a problem and another does not see the same problem, then there may be an issue with someone's model or processes or procedures. The RC's are supposed to have coordinated Operating Plans, Processes or Procedures to operate reliably. R6-R8 are only applicable if one of the two (or more) RCs do not see that a problem exists. It would be a detriment to reliability for both RCs to take no action. RCs are required to coordinate actions under existing IRO-016-1, R1. If one RC identifies a problem and provides an action plan to another RC to mitigate the problem, the second RC is obligated under R8 to implement it. We have revised the R8 to clarify this intent. IRO-014-2, Revised R8. During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact , each Reliability Coordinator shall implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact unless such actions would violate safety, equipment, regulatory or statutory requirements. o Please review all the implementation plans to be sure the applicable entities match those in the standards. Response: The Implementation Plans have been modified to address this concern.

Response: The RCSDT thanks you for your comment. Please see responses above.				
Paul Benjamin Kerr	Shell Energy North America (US), L.P.	6	Affirmative	The introduction of the definition of “Reliability Directive” and its connection to the definition of “Emergency” within this Project brings much needed clarity for the sector and will promote consistency between Regional Entities and within the audits of Registered Entities. Shell Energy supports the removal of Purchasing Selling Entities as a function to which IRO-001 applies. This removal recognizes that PSEs do not play a role in reliability coordination under this standard since they have no authorities and no abilities to assume or perform responsibilities associated with reliability coordination. This conclusion is reinforced by the adoption of the defined term “Reliability Directive”. Where a RC, TOP, or BA needs to address an Emergency they do not contact, consult, or direct a PSE to take action that would address the Emergency. Rather, where the PSE is a user of the grid to perform or execute transactions, it is subject to the actions of these other entities that have the authority to stop, curtail, or alter the submitted transactions of the PSE in a way that aids in resolving the problem. With the fitting adoption of “Reliability Directive” into COM-002 as well, Shell Energy does not believe it is necessary or appropriate for the applicability of this standard to include Purchasing Selling Entities, as is contained in the current draft proposal. This standard does not apply to PSEs today, however, during the progression of Project 2006-06 this applicability was added to an early draft version that preceded the discussions and clarification that comes from the definition of a Reliability Directive in the standard. Shell Energy does not support the inclusion of PSEs in the current draft version of COM-002, and feels that it should be removed. The purpose of this standard is, “To ensure Emergency communications between operating personnel are effective” and relates directly to the capabilities and authorities established for the RC, TOP, or BA that requires actions to be taken by a recipient of a Reliability Directive. As noted previously, PSEs are acted upon by the entities with the necessary authority, and are not in a role that would initiate or fulfil the required actions. As additional matters related to the clarification and cleanup of the standards in this project, the implementation plans for both IRO-001 and COM-001 erroneously contain references to PSEs in the sections “Functions that Must Comply with the Requirements”. These references need to be removed.
Response: The RCSDT thanks you for your comment. The applicability of COM-001, and COM-002 were revised to be consistent and only include the RC, TOP, BA, DP and GOP. The Implementation Plans have been corrected.				
Robert A Schaffeld	Southern Company	1	Affirmative	Please see comments

	Services, Inc.			
Response: The RCSDT thanks you for your comment. Please see response to those comments.				
Ronald L Donahey	Tampa Electric Co.	3	Negative	Our only disagreement is with the use of the term "Reliability" in defining a directive.
Response: The RCSDT thanks you for your comment. The term "Reliability Directive" was chosen to specifically delineate between other types of directives, such as market directives. It is imperative that reliability standards relate to reliability concerns.				
Steve Eldrige	Umatilla Electric Cooperative	3	Negative	Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window." Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities

				that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of Communication capabilities impacted entities will be notified of the past loss and current status of Communication." We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.
Response: The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is, "to ensure emergency communications between operating personnel are <u>effective</u>." It's not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication - in many cases this may be via a receptionist or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.				
Jonathan Appelbaum	United Illuminating Co.	1	Negative	See UI Comment form, In General: 1. COM-001-2 does not specify the amount of time a DP has to reestablish the Interpersonal Communication Capability after the capability fails before it is assessed non-compliance for not having the communication. Response: The DP or GOP has access to additional Interpersonal Communications, in all likelihood, to make notifications for failure. There is not a requirement for an alternative, but it is highly unlikely that someone couldn't use their cell phone to make the notification. The RCSDT is proposing to add Part 7.3 and 8.3 to the requirements as follows: 7.3 Each Distribution Provider that experiences a failure of its Interpersonal Communication capabilities shall consult with their Transmission Operator or Balancing Authority to determine a mutually agreeable time to restore its Interpersonal Communication capability. 8.3 Each Generator Operator that experiences a failure of its Interpersonal Communication capabilities shall consult with their Transmission Operator or Balancing Authority to determine a mutually agreeable time to restore its Interpersonal Communication capability.

				2. VSL for R7 should have a time component Response: The VSL represents a single violation of the requirement. For this requirement, the DP must have Interpersonal Communication with its TOP and BA. The VSL was revised to remove “or more” to conform to the requirement. Because the Requirement does not have a time component, the SDT cannot add a time component to the VSL – this would violate one of the FERC Guidelines for setting VSLs. 3. R7 should address the instance if the DP is not required to have communication with the BA, because the BA communicates thru the TOP. Response: The RCSDT believes that Interpersonal Communication between the DP and its BA and the TOP is required for reliability. 4. COM-002 R2 seems awkwardly worded. R2 as it is written says the repeat is confirming the accuracy of the message itself. I think it is agreed that the repeat back in R2 is to allow the issuer of the Directive to confirm that the message was received accurately understood by the recipient. Response: The RCSDT has revised the requirement and has removed “with enough details that the accuracy of the message was confirmed” from the requirement. 5. The VSL for Com-002 R2 is severe and states "The responsible entity that was the recipient of a Reliability Directive failed to repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message was confirmed." The purpose of the R2 repeat-back is to allow the Issuer verify the message was accurately received. This VSL penalizes the responsible entity for not accurately receiving the message. The VSL should penalize the refusal of the registered entity to repeat back the message not for receiving the message incorrectly. Response: The RCSDT agrees and has removed “with enough details that the accuracy of the message was confirmed” from the VSL.
Response: The RCSDT thanks you for your comment. Please see responses above.				
Allen Klassen	Westar Energy	1	Negative	The new definition of Alternative Interpersonal Communication in COM-001 appears to rule out the use of redundant systems that happen to be used daily, which might be done to ensure that they function when needed.

Response: The RCSDT thanks you for your comment. The intent of Alternative Interpersonal Communication (AIC) is to make sure there is an alternative in case the Interpersonal Communication fails. If you have two, you may designate one as the AIC regardless of how often you use it.				
Forrest Brock	Western Farmers Electric Coop.	1	Negative	COM-001 - Definition of Interpersonal Communication needs more clarification. For example, would this include data exchanged via ICCP? Examples of what constitutes "Interconnection and operating information" would help as much "information" can be interpreted as fitting into this - or not. Response: Interpersonal Communication does not include data exchange. Severe VSL for R9 - second part after the "OR" is a virtual repetition of the wording in the Lower VSL for R9. Response: The Severe VSL was revised to remove "within 2 hours". It now reads: "The responsible entity tested the Alternative Interpersonal Communications capability and identified a problem but didn't initiate action to repair or designate a replacement Alternative Interpersonal Communications." COM-003 - R3 contains a typographical or grammar error. "...Reliability Directive as per Requirement R2 IS correct..." not AS correct... Response: Assuming you meant COM-002-3, the SDT agrees and has made the correction.
Response: The RCSDT thanks you for your comment. Please see responses above.				
Anthony Jankowski	Wisconsin Energy Corp.	4	Affirmative	Please correct the clean version of IRO-005 R1 to match the red-line.
Response: The RCSDT thanks you for your comment. We have made the corrections.				
Michael Ibold	Xcel Energy, Inc.	3	Affirmative	While we appreciate the drafting team's efforts to clarify the multiple effective dates, we feel it is still daunting and complex, which leaves too much room for miscalculation. We recommend that NERC and/or the drafting team publish what the actual effective dates are, as soon as FERC (and again when the other regulatory authorities) have approved it. This could either be done in the effective

				date section of the standard itself, or as a stand-alone reference document posted along with the standard on NERC's website.
Response: The RCSDT thanks you for your comment. We will pass your comment on the NERC Standards Process Manager for consideration.				
James A Maenner		8	Negative	In comments (Reliability Coordination - Project 2006-06) Midwest ISO raised a number of issues that need to be addressed prior to passage of these standards.
Response: The RCSDT thanks you for your comment. Please see responses to comments made by MISO on the initial ballot as well as the regular comment form.				

END OF REPORT

Consideration of Comments on Reliability Coordination — Project 2006-06

The Reliability Coordination Drafting Team thanks all commenters who submitted comments on the proposed revisions to COM-001-2, IRO-001-2, IRO-002-2 and IRO-005-4. These standards were posted for a 30-day public comment period from February 25, 2011 through March 7, 2011. The stakeholders were asked to provide feedback on the standards through a special Electronic Comment Form. There were 41 sets of comments, including comments from more than 168 different people from approximately 112 companies representing 9 of the 10 Industry Segments as shown in the table on the following pages.

http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Herb Schrayshuen, at 609-452-8060 or at herb.schrayshuen@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.¹

Summary Consideration:

The RCSDT thanks all stakeholders for their comments. Many stakeholders provided comments suggesting revisions to the standards. Many of these suggestions were incorporated into the standards. As a result of the revisions, the RCSDT is moving COM-001-2, COM-002-3 and IRO-001-2 to a successive ballot. The RCSDT made a few clarifying edits to the remaining standards based on stakeholder comments. Therefore, IRO-002-3, IRO-005-4 and IRO-014-2 are being moved to recirculation ballot. Because of this approach, the SDT will be proposing an interim change to IRO-001: the elimination of Requirement R7, as it is duplicative of one of the requirements in IRO-014-2.

For the COM-001 standard, several commenters had suggestions for improvements to the requirement language and applicability. The RCSDT believes the standard correctly and adequately requires each applicable entity that would have capability to receive Interconnection and operating information to have Interpersonal Communications and Alternative Interpersonal Communications to be used when the Interpersonal Communication is not available. The RCSDT has addressed the applicability of the standards and implementation plans by aligning COM-001-2, and COM-002-3 to include the same entities and by removing LSE, PSE and TSP from the COM standards.

Many comments were concerned about both the medium (e.g. cellular, satellite, etc.) and media (e.g. voice, email, etc.) used for Interpersonal Communications. The current language avoids being prescriptive and allows each entity to determine what is suitable. Interpersonal Communication and Alternative Interpersonal Communication is between the applicable entities which may include multiple locations (e.g. a primary and back-up control center).

The RCSDT added the following Requirement Parts at the suggestion of stakeholders:

- 3.5 Adjacent Transmission Operators synchronously connected within the same Interconnection
- 4.3 Adjacent Transmission Operators synchronously connected within the same Interconnection
- 5.6 Adjacent Balancing Authorities
- 6.3 Adjacent Balancing Authorities

The RCSDT agrees with the many industry comments and removed the phrase "to exchange Interconnection and operating information" in requirements R1 through R8. This removal clarifies that the intent of this capability is NOT for the exchange of data.

¹ The appeals process is in the Reliability Standards Development Procedures:
<http://www.nerc.com/standards/newstandardsprocess.html>.

A few commenters also expressed concerns about the frequency of testing Alternative Interpersonal Communications capability. The RCSDT believes that the proposed testing frequency is supported by the majority of stakeholders and is not overly burdensome.

Several commenters suggested that VSLs should be written based on the percent of entities rather than by an occurrence of a violation. VSLs must be written on a violation occurrence basis in accordance with FERC guidelines. The requirements specify which entities must be included in communications capabilities. If a single entity is missing, this is a violation of the requirement. According to VSL guidelines, if missing any part of the requirement could have the same reliability outcome as missing the entire requirement, the requirement is binary and the VSL must be severe.

A new requirement was added to COM-001 for clarity regarding responsibilities of the Distribution Provider and the Generator Operator when either entity experiences a failure of its Interpersonal Communication capability:

R11. Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities shall consult with its Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability. *[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]*

This requirement requires collaboration between entities to restore a failed communications capability.

The RCSDT asked stakeholders if they believed that the requirements of TOP-001-1 obviate the need to develop additional requirements to address Xcel's comment as directed in FERC Order 693. The original justification that the RCSDT posited for not adding a requirement to directly address Xcel Energy's comments in paragraph 516 and FERC's related recommendation in paragraph 523 was that TOP-001-1 R3 was considered to address this concern. Since that time, the RTO SDT has proposed to retire TOP-001-1 R3. However, NERC has since retired IRO-004-1 R3 and R5 along with IRO-005-3 R5. Because these are retired, there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency. Therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered "would violate safety, equipment, regulatory, or statutory requirements," the TOP may respond to the RC that it cannot comply.

Stakeholders were asked if they agree with the revision to IRO-001, R1 for certifying Reliability Coordinators. Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.

A significant revision to IRO-001-2 was made by removing the Interchange Coordinator from the standard. The RCSDT made this revision because the Balancing Function is responsible for implementing interchange (see NERC Reliability Functional Model, version 5, page 32, item 7) and to operate the Balancing Authority Area to maintain load-interchange-generation balance (item 3).

The RCSDT asked stakeholders if they agree with moving two requirements from IRO-001 back to IRO-002 relating to Analysis Tool outages. All stakeholders that responded agreed and there were no comments received.

The RCSDT asked stakeholders if they agree with moving two requirements from IRO-001 back to IRO-005 relating to Reliability Coordinator notifications. Several commenters noted a typographical error in R1 which was corrected to read:

When the results of an Operational Planning Analysis or Real-time Assessment indicate an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify ~~issue an alert to~~ all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

One commenter also asked that an errant yellow text box be removed from Page 1, which was also done.

The RCSDT received a number of comments regarding the applicability of COM-001, and COM-002. The RCSDT agrees with these comments and has removed PSE and LSE from the COM-001-2 implementation plan. The RCSDT also addressed minor issues involving typos, formatting and style.

The RCSDT received comments suggesting clarification of COM-002-3. The RCSDT intends the communication of Reliability Directives to be person-to-person and in such a manner that the Reliability Directive is understood and not necessarily repeated verbatim. COM-002-3 is not intended to be prescriptive on how the Reliability Directive is issued. Spoken or written communications are valid methods (i.e. using the telephone, radio, electronic texting, email, etc.). The purpose of COM-002-3 is to ensure emergency communications between operating personnel are effective. There is no proxy requirement for 24/7 operating personnel regarding small entities. Only “capability” as provided for in COM-001-2 is applicable. The RCSDT agrees that the use of Blast Calls to issue Reliability Directives, in mass, is efficient and effective. The RCSDT believes Reliability Directives issued in mass should be defined by procedure, and that the procedure would establish a method of affirmation and notice of implementation. As envisioned, communications protocols would be addressed in the COM-003 standard being developed in Project 2007-02.

Some commenters suggested revisions to IRO-014, requirement R8 to conform to similar requirements R6 and R7. The RCSDT made the suggested revision by re-ordering R8:

R8. During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, each Reliability Coordinator shall implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact unless such actions would violate safety, equipment, regulatory or statutory requirements. [Violation Risk Factor: High][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

IRO-014-2, requirement R4 is applicable to those Reliability Coordinators engaged in activities related to requirement R1 and part 1.7. It is unlikely that Reliability Coordinators geographically and electrically distant from one another will have mutually agreed upon operating procedures (per requirement R1), and therefore requirement R4 would not be applicable. The RCSDT believes IRO-014-2, requirement R4 (which requires weekly communication) provides reasonable contact and flexibility – and this requirement is in effect today.

The RCSDT coordinated the use of the NERC Glossary term “Adverse Reliability Impact” with the Real-Time Operations team and continues the practice of informing all RCs of Adverse Reliability Impacts in requirement R5.

The RCSDT has revised IRO-014-2, requirements R6-R8 to clarify that when one RC identified a problem and presents an action plan for another RC, the second RC is obligated to implement the action plan. The RCSDT will forward the concern about RC’s identifying themselves and the receiver to establish authority to the Project 2007-02, Operating Personnel Communications Protocols SDT. The Project 2007-02 team is developing a standard that includes requirements for use of specific communications protocols.

Index to Questions, Comments, and Responses

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Consideration of Comments on Reliability Coordination — Project 2006-06

The Industry Segments are:

- 1 — Transmission Owners
- 2 — RTOs, ISOs
- 3 — Load-serving Entities
- 4 — Transmission-dependent Utilities
- 5 — Electric Generators
- 6 — Electricity Brokers, Aggregators, and Marketers
- 7 — Large Electricity End Users
- 8 — Small Electricity End Users
- 9 — Federal, State, Provincial Regulatory or other Government Entities
- 10 — Regional Reliability Organizations, Regional Entities

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
1.	Group	Guy Zito	Northeast Power Coordinating Council										X
Additional Member		Additional Organization		Region	Segment Selection								
1.	Alan Adamson	New York State Reliability Council, LLC		NPCC	10								
2.	Gregory Campoli	New York Independent System Operator		NPCC	2								
3.	Kurtis Chong	Independent Electricity System Operator		NPCC	2								
4.	Sylvain Clermont	Hydro-Quebec TransEnergie		NPCC	1								
5.	Bohdan M. Dackow	US Power Generating Company (USPG)		NPCC	NA								
6.	Chris de Graffenried	Consolidated Edison Co. of New York, Inc.		NPCC	1								
7.	Gerry Dunbar	Northeast Power Coordinating Council		NPCC	10								
8.	Dean Ellis	Dynegy Generation		NPCC	5								
9.	Brian Evans-Mongeon	Utility Services		NPCC	8								
10.	Mike Garton	Dominion Resources Services, Inc.		NPCC	5								
11.	Brian L. Gooder	Ontario Power Generation Incorporated		NPCC	5								
12.	Kathleen Goodman	ISO - New England		NPCC	2								
13.	Chantel Haswell	FPL Group, Inc.		NPCC	5								
14.	David Kiguel	Hydro One Networks Inc.		NPCC	1								
15.	Michale R. Lombardi	Northeast Utilities		NPCC	1								

Consideration of Comments on Reliability Coordination — Project 2006-06

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
16.	Rnady MacDonald	New Brunswick System Operator	NPCC	2									
17.	Bruce Metruck	New York Power Authority	NPCC	6									
18.	Lee Pedowicz	Northeast Power Coordinating Council	NPCC	10									
19.	Robert Pellegrini	The United Illuminating Company	NPCC	1									
20.	Si Truc Phan	Hydro-Quebec TransEnergie	NPCC	1									
21.	Saurabh Saksena	National Grid	NPCC	1									
22.	Michael Schiavone	National Grid	NPCC	1									
23.	Peter Yost	Consolidated Edison co. of New York, Inc.	NPCC	3									
24.	Ben Wu	Orange and Rockland Utilities	NPCC	1									
2.	Group	Ron Sporseen	PNGC Power member owners		X		X					X	
	Additional Member	Additional Organization	Region	Segment Selection									
1.	Bud Tracy	Blachly-Lane Electric Cooperative	WECC	3									
2.	Dave Markham	Central Electric Cooperative	WECC	3									
3.	Dave Hagen	Clearwater Power	WECC	3									
4.	Roman Gillen	Consumer's Power Inc.	WECC	1, 3									
5.	Roger Meader	Coos-Curry Electric Cooperative	WECC	3									
6.	Dave Sabala	Douglas Electric Cooperative	WECC	8									
7.	Bryan Case	Fall River Electric Cooperative	WECC	3									
8.	Rick Crinklaw	Lane Electric Cooperative	WECC	3									
9.	Michael Henry	Lincoln Electric Cooperative	WECC	3									
10.	Richard Reynolds	Lost River Electric Cooperative	WECC	8									
11.	Jon Shelby	Northern Lights	WECC	3									
12.	Ray Ellis	Okanogan Electric Cooperative	WECC	8									
13.	PNGC Power	Rick Paschall	WECC	8									
14.	Heber Carpenter	Raft River Electric Cooperative	WECC	3									
15.	Ken Dizes	Salmon River Electric Cooperative	WECC	1, 3									
16.	Steve Eldrige	Umatilla Electric Cooperative	WECC	1, 3									
17.	Marc Farmer	West Oregon Electric Cooperative	WECC	8									

Consideration of Comments on Reliability Coordination — Project 2006-06

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
3.	Group	Denise Koehn	Bonneville Power Administration	X		X		X	X				
		Additional Member	Additional Organization	Region	Segment Selection								
1.	Paul Blake	BPA, Transmission Control Center	PSC	WECC	1								
2.	Tedd Snodgrass	BPA, Transmission Dispatch		WECC	1								
4.	Group	Brenda Truhe	PPL	X									
		Additional Member	Additional Organization	Region	Segment Selection								
1.	Annette Bannon	PPL Generation		RFC	5								
2.	Annette Bannon	PPL Generation		WECC	5								
3.	Mark Heimbach	PPL EnergyPlus		MRO	6								
4.	Mark Heimbach	PPL EnergyPlus		NPCC	6								
5.	Mark Heimbach	PPL EnergyPlus		RFC	6								
6.	Mark Heimbach	PPL EnergyPlus		SERC	6								
7.	Mark Heimbach	PPL EnergyPlus		SPP	6								
8.	Mark Heimbach	PPL EnergyPlus		WECC	6								
5.	Group	Patricia Hervochon	PSEG	X		X		X	X				
		Additional Member	Additional Organization	Region	Segment Selection								
1.	Kenneth Brown	PSE&G		RFC	1								
2.	Jeffrey Mueller	PSE&G		RFC	3								
3.	Kenneth Petroff	PSEG Nuclear		RFC	5								
4.	Peter Dolan	PSEG ER&T		RFC	6								
6.	Group	Louis Slade	Dominion	X		X		X	X				
		Additional Member	Additional Organization	Region	Segment Selection								
1.	Mike Garton			MRO									
2.	Connie Lowe			SERC									
3.	Michael Gildea			ERCOT									

Consideration of Comments on Reliability Coordination — Project 2006-06

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
7.	Group	Jim Case	SERC OC Standards Review Group	X		X							
Additional Member Additional Organization Region Segment Selection													
1.	Rene' Free	Santee Cooper	SERC	1, 3, 5, 9									
2.	Glenn Stephens	Santee Cooper	SERC	1, 3, 5, 9									
3.	Gerry Beckerle	Ameren	SERC	1, 3									
4.	Tim Hattaway	PowerSouth	SERC	1, 3, 5, 9									
5.	Mike Hardy	Southern	SERC	1, 3, 5									
6.	Joel Wise	TVA	SERC	1, 3, 5, 9									
7.	Jake Miller	Dynegy	SERC	5									
8.	Eugene Warnecke	Ameren	SERC	1, 3									
9.	Andy Burch	EEI	SERC	1, 5									
10.	Gene Delk	SCE&G	SERC	1, 3, 5									
11.	Robert Thomasson	BREC	SERC	1, 3, 5, 9									
e1 2.	Brad Young	LGE/KU	SERC	1, 3, 5									
13.	Marc Butts	Southern	SERC	1, 3, 5									
14.	Larry Rodriquez	Entegra Power	SERC	5									
15.	Alvis Lanton	SIPC	SERC	1, 3, 5									
16.	Randall Haynes	Alcoa	SERC	1, 5									
17.	Connie Lowe	Dominion VP	SERC	1, 3									
18.	Melinda Montgomery	Entergy	SERC	1, 3									
19.	Mike Oatts	Southern	SERC	1, 3, 5									
20.	Jason Marshall	MISO	SERC	2									
21.	John Troha	SERC	SERC	10									
8.	Group	Albert DiCaprio	IRC Standards Review Committee		X								
Additional Member Additional Organization Region Segment Selection													
1.	Patrick Brown	PJM	RFC	2									
2.	Matt Goldberg	ISO-NE	NPCC	2									

Consideration of Comments on Reliability Coordination — Project 2006-06

Group/Individual		Commenter	Organization		Registered Ballot Body Segment									
					1	2	3	4	5	6	7	8	9	10
3.		Dan Rochester	IESO	NPCC	2									
4.		Steve Myers	ERCOT	ERCOT	2									
5.		Mark Thompson	AESO	WECC	2									
6.		Greg Van Pelt	CAISO	WECC	2									
7.		Charles Yeung	SPP	SPP	2									
8.		Terry Bilke	MISO	RFC	2									
9.		Greg Campoli	NYISO	NPCC	2									
10.		Kathleen Goodman	ISO-NE	NPCC	2									
11.		Ben Li	IESO	NPCC	2									
12.		Jason Marshall	MISO	RFC	2									
13.		Don Weaver	NBSO	NPCC	2									
9.	Group	Carol Gerou	MRO's NERC Standards Review Subcommittee											X
	Additional Member	Additional Organization	Region	Segment Selection										
1.	Mahmood Safi	Omaha Public Utility District	MRO	1, 3, 5, 6										
2.	Chuck Lawrence	American Transmission Company	MRO	1										
3.	Tom Webb	Wisconsin Public Service Corporation	MRO	3, 4, 5, 6										
4.	Jason Marshall	Midwest ISO Inc.	MRO	2										
5.	Jodi Jenson	Western Area Power Administration	MRO	1, 6										
6.	Ken Goldsmith	Alliant Energy	MRO	4										
7.	Alice Ireland	Xcel Energy	MRO	1, 3, 5, 6										
8.	Dave Rudolph	Basin Electric Power Cooperative	MRO	1, 3, 5, 6										
9.	Eric Ruskamp	Lincoln Electric System	MRO	1, 3, 5, 6										
10.	Joseph Knight	Great River Energy	MRO	1, 3, 5, 6										
11.	Joe DePoorter	Madison Gas & Electric	MRO	3, 4, 5, 6										
12.	Scott Nickels	Rochester Public Utilities	MRO	4										
13.	Terry Harbour	MidAmerican Energy Company	MRO	1, 3, 5, 6										
14.	Richard Burt	Minnkota Power Cooperative, Inc.	MRO	1, 3, 5, 6										

Consideration of Comments on Reliability Coordination — Project 2006-06

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
10.	Group	Sam Ciccone	FirstEnergy	X		X	X	X	X				
Additional Member Additional Organization Region Segment Selection 1. Dave Folk FE RFC 1, 3, 4, 5, 6 2. Doug Hohlbaugh FE RFC 1, 3, 4, 5, 6 3. Brian Orians FE RFC 5 4. John Reed FE RFC 1 5. Andy Hunter FE RFC 1 6. Bil Duge FE RFC 5													
11.	Group	Jason Marshall	Midwest ISO Standards Collaborators		X								
Additional Member Additional Organization Region Segment Selection 1. Robert Thomasson Big Rivers Electric Cooperative SERC 1, 3 2. Joe O'Brien NIPSCo RFC 1, 3, 5, 6 3. Bob Thomas Illinois Municipal Electric Agency RFC 4 4. Kirit Shah Ameren SERC 1 5. Joe Knight Great River Energy MRO 1, 3, 5, 6 6. Mike Moltane ITC Holdings MRO 1													
12.	Group	Robert Rhodes	SPP Standards Development	X	X	X	X	X					
Additional Member Additional Organization Region Segment Selection 1. Fred Meyer Empire District Electric SPP 1 2. Gregory McAuley Oklahoma Gas & Electric SPP 1, 3, 5 3. John Allen City Utilities of Springfield, MO SPP 1, 4 4. Kyle McMenamin Xcel Energy SPP 1, 3, 5 5. Michelle Corley Cleco SPP 1, 3, 5 6. Rick Brenneman Xcel Energy SPP 1, 3, 5 7. Sean Simpson Board of Public Utilities of Kansas City, KS SPP 1, 3, 5 8. Forrest Brock Western Farmers Electric Cooperative SPP 1, 3, 5													

Consideration of Comments on Reliability Coordination — Project 2006-06

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
9.		Jim Useldinger	Kansas City Power & Light	SPP	1, 3, 5								
13.	Group	Michael Gammon	Kansas City Power & Light		X		X		X	X			
Additional Member Additional Organization Region Segment Selection 1. Jennifer Flandermeyer Kansas City Power & Light SPP 1, 3, 5, 6													
14.	Individual	Jack Cashin	Competitive Suppliers					X					
15.	Individual	John Bee	Exelon	X		X		X	X				
16.	Individual	Sandra Shaffer	PacifiCorp	X		X		X	X				
17.	Individual	Janet Smith	Arizona Public Service Company	X		X		X	X				
18.	Individual	Brent Ingebrigtsen	LG&E and KU Energy			X							
19.	Individual	Cindy Martin	Southern Company	X		X							
20.	Individual	Greg Froehling	Green Country Energy, Green Country Operating Services					X					
21.	Individual	Steve Alexanderson	Central Lincoln			X	X						
22.	Individual	Mace Hunter	Lakeland Electric	X		X		X					
23.	Individual	Joe Petaski	Manitoba Hydro	X		X		X	X				
24.	Individual	Brian J Murphy	NextEra Energy, Inc.	X		X		X	X				
25.	Individual	Jonathan Appelbaum	United Illuminating Company	X									

Consideration of Comments on Reliability Coordination — Project 2006-06

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
26.	Individual	Paul Kerr	Shell Energy North America (US), L.P.						X				
27.	Individual	Thad Ness	American Electric Power	X		X		X	X				
28.	Individual	David Thorne	Pepco Holdings Inc	X		X							
29.	Individual	Andrew Pusztai	American Transmission Company	X									
30.	Individual	Kathleen Goodman	ISO New England		X								
31.	Individual	Steve Myers	ERCOT ISO		X								
32.	Individual	Steve Rueckert	WECC										X
33.	Individual	Bill Keagle	BGE	X									
34.	Individual	Brenda Powell	Constellation Energy Commodities Group						X				
35.	Individual	Greg Rowland	Duke Energy	X		X		X					
36.	Individual	CJ Ingersoll	CECD			X							
37.	Individual	Rex A Roehl	Indeck Energy Services					X					
38.	Individual	Shaun Anders	City of Springfield, IL - City Water Light and Power (CWLP)	X		X		X					
39.	Individual	RoLynda Shumpert	South Carolina Electric and Gas	X		X		X	X				
40.	Individual	Dan Rochester	Independent Electricity System Operator		X								

Consideration of Comments on Reliability Coordination — Project 2006-06

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
41.	Individual	Alice Ireland	Xcel Energy	X		X		X	X				

1. Do you agree with COM-001 requirements for Interpersonal Communications capability and Alternative Interpersonal Communications capability (R1-R8)? If not, please explain in the comment area below.

Summary Consideration:

For the COM-001 standard, several commenters had suggestions for improvements to the requirement language and applicability. The RCSDT believes the standard correctly and adequately requires each applicable entity that would have capability to receive Interconnection and operating information to have Interpersonal Communications and Alternative Interpersonal Communications to be used when the Interpersonal Communication is not available. The RCSDT has addressed the applicability of the standards and implementation plans by aligning COM-001-2, and COM-002-3 to include the same entities and by removing LSE, PSE and TSP from the COM standards.

Many comments were concerned about both the medium (e.g. cellular, satellite, etc.) and media (e.g. voice, email, etc.) used for Interpersonal Communications. The current language avoids being prescriptive and allows each entity to determine what is suitable. Interpersonal Communication and Alternative Interpersonal Communication is between the applicable entities which may include multiple locations (e.g. a primary and back-up control center).

The RCSDT added the following Requirement Parts at the suggestion of stakeholders:

3.5 Adjacent Transmission Operators synchronously connected within the same Interconnection

4.3 Adjacent Transmission Operators synchronously connected within the same Interconnection

5.6 Adjacent Balancing Authorities

6.3 Adjacent Balancing Authorities

The RCSDT agrees with the many industry comments and removed the phrase "to exchange Interconnection and operating information" in requirements R1 through R8. This removal clarifies that the intent of this capability is NOT for the exchange of data.

A few commenters also expressed concerns about the frequency of testing Alternative Interpersonal Communications capability. The RCSDT believes that the proposed testing frequency is supported by the majority of stakeholders and is not overly burdensome.

Several commenters suggested that VSLs should be written based on the percent of entities rather than by an occurrence of a violation. VSLs must be written on a violation occurrence basis in accordance with FERC guidelines. The requirements specify which entities must be included in communications capabilities. If a single entity is missing, this is a violation of the requirement. According to VSL guidelines, if missing any part of the requirement could have the same reliability outcome as missing the entire requirement, the requirement is binary and the VSL must be severe.

A new requirement was added for clarity regarding responsibilities of the Distribution Provider and the Generator Operator when either entity experiences a failure of its Interpersonal Communication capability:

R11. Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities shall consult with its Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability. *[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]*

This requirement requires collaboration between entities to restore a failed communications capability.

Organization	Yes or No	Question 1 Comment
ERCOT ISO	No	We expressed in the last posting that we felt the definition of Interpersonal Communications might inadvertently include data. The SDT responded that it does not by referring to Interpersonal in the name of the definition. Clearly, you cannot refer to the word you are defining in order to define it. However, it is possible “allows two or more individuals to ...” may solve this problem. Clarity should be sought in the next posting, if possible. This standard does not comport with the informational filing that NERC submitted to FERC on August 10, 2009 regarding its discontinued use of sub-requirements in standards development activities. We request the sub-requirements be modified into bulleted lists. Consider striking “to exchange Interconnection and operating information” in R1, R3, R5, R7, and R8. It is redundant to the use of Interpersonal Communications “to interact, consult, or exchange information” in the definition. Consider striking “to exchange Interconnection and operating information” in R2, R4, R6. It is redundant to the use of Alternative Interpersonal Communications which uses Interpersonal Communications in its definition. Interpersonal Communications includes “to interact, consult, or exchange information” in its definition. For R2, why is Interchange Coordinator excluded? It is included in the Requirement R1 which deals with the Interpersonal Communications. Communications would need to be maintained with the Interchange Coordinator in the event of a failure of the Interpersonal Communications. For R3, affected neighboring Transmission Operators should be included. For R4 and R6, the sub-requirement list is different than for than for the associated Interpersonal Communications requirements R3 and R5 respectively. We believe these should be duplicate. That is the sub-requirement list for R4 should match R3 and the R6 should match R5. In the event of a failure of the Interpersonal Communications, the Transmission Operator and Balancing Authority both would need to maintain communications to the same entities as in the requirement to have Interpersonal Communications. Again, we would suggest replacing sub-requirements with bulleted lists. For R5, why are neighboring Balancing Authorities not included? Additionally R5 should only read Contact with Interchange Coordinator within same Interconnection. They certainly need to be able to contact one another to identify discrepancies in scheduling and sources of meter error that could lead to deviations in ACE. Should R2, R4 and R6 be constructed parallel to R1, R3, and R5? In R1, R3 and R5, the requirement is “shall have” while in R2, R4, and R6, the requirement is “shall designate”. Since one is for the Interpersonal Communications and the other is for the Alternative Interpersonal Communications, it seems the same wording should be used. We do not believe R2.2 and R1.2 should be limited to Reliability Coordinators in the same Interconnection only. We suggest modifying “within the same Interconnection” to “within the same Interconnection, and, as appropriate, between a-synchronously connected RCs which are not precluded by law from scheduling interchange energy (for schedule changes, curtailments, etc.)” since reliability coordination may be required among the RCs on both sides of an Interconnection boundary. The VSLs for R1 through R8 should be expanded to include multiple levels based on the number of entities that the functional entity does not have Interpersonal Communications or Alternative Interpersonal

Organization	Yes or No	Question 1 Comment
		Communications. FERC specified their general preference for gradated in paragraph 27 of their June 19, 2008 order on VSLs. The second half of the Severe VSL for R9 is almost a duplicate to the Lower VSL. There are some small changes in the wording but both situations deal with the case where there is a problem that has been identified with the Interpersonal Communications system and it takes more than two hours to initiate repair.
ISO New England	No	We expressed in the last posting that we felt the definition of Interpersonal Communications might inadvertently include data. The SDT responded that it does not by referring to Interpersonal in the name of the definition. Clearly, you cannot refer to the word you are defining in order to define it. However, it is possible “allows two or more individuals to ...” may solve this problem. Clarity should be sought in the next posting, if possible. This standard does not comport with the informational filing that NERC submitted to FERC on August 10, 2009 regarding its discontinued use of sub-requirements in standards development activities. We request the sub-requirements be modified into bulleted lists. Consider striking “to exchange Interconnection and operating information” in R1, R3, R5, R7, and R8. It is redundant to the use of Interpersonal Communications “to interact, consult, or exchange information” in the definition. Consider striking “to exchange Interconnection and operating information” in R2, R4, R6. It is redundant to the use of Alternative Interpersonal Communications which uses Interpersonal Communications in its definition. Interpersonal Communications includes “to interact, consult, or exchange information” in its definition. For R2, why is Interchange Coordinator excluded? It is included in the Requirement R1 which deals with the Interpersonal Communications. Communications would need to be maintained with the Interchange Coordinator in the event of a failure of the Interpersonal Communications. For R3, affected neighboring Transmission Operators should be included. For R4 and R6, the sub-requirement list is different than for than for the associated Interpersonal Communications requirements R3 and R5 respectively. We believe these should be duplicate. That is the sub-requirement list for R4 should match R3 and the R6 should match R5. In the event of a failure of the Interpersonal Communications, the Transmission Operator and Balancing Authority both would need to maintain communications to the same entities as in the requirement to have Interpersonal Communications. Again, we would suggest replacing sub-requirements with bulleted lists. For R5, why are neighboring Balancing Authorities not included? Additionally R5 should only read Contact with Interchange Coordinator within same Interconnection. They certainly need to be able to contact one another to identify discrepancies in scheduling and sources of meter error that could lead to deviations in ACE. Should R2, R4 and R6 be constructed parallel to R1, R3, and R5? In R1, R3 and R5, the requirement is “shall have” while in R2, R4, and R6, the requirement is “shall designate”. Since one is for the Interpersonal Communications and the other is for the Alternative Interpersonal Communications, it seems the same wording should be used. We do not believe R2.2 and R1.2 should be limited to Reliability Coordinators in the same Interconnection only. We suggest modifying “within the same Interconnection” to “within the same Interconnection, and, as appropriate, between a-synchronously connected RCs which are not precluded by law from scheduling interchange energy (for schedule changes, curtailments, etc.)” since reliability

Organization	Yes or No	Question 1 Comment
		coordination may be required among the RCs on both sides of an Interconnection boundary. The VSLs for R1 through R8 should be expanded to include multiple levels based on the number of entities that the functional entity does not have Interpersonal Communications or Alternative Interpersonal Communications. FERC specified their general preference for gradated in paragraph 27 of their June 19, 2008 order on VSLs. The second half of the Severe VSL for R9 is almost a duplicate to the Lower VSL. There are some small changes in the wording but both situations deal with the case where there is a problem that has been identified with the Interpersonal Communications system and it takes more than two hours to initiate repair.
IRC Standards Review Committee	No	We expressed in the last posting that we felt the definition of Interpersonal Communications might inadvertently include data. The SDT responded that it does not by referring to Interpersonal in the name of the definition. Clearly, you cannot refer to the word you are defining in order to define it. However, it is possible “allows two or more individuals to ...” may solve this problem. Clarity should be sought in the next posting, if possible. This standard does not comport with the informational filing that NERC submitted to FERC on August 10, 2009 regarding its discontinued use of sub-requirements in standards development activities. We request the sub-requirements be modified into bulleted lists. Consider striking “to exchange Interconnection and operating information” in R1, R3, R5, R7, and R8. It is redundant to the use of Interpersonal Communications “to interact, consult, or exchange information” in the definition. Consider striking “to exchange Interconnection and operating information” in R2, R4, R6. It is redundant to the use of Alternative Interpersonal Communications which uses Interpersonal Communications in its definition. Interpersonal Communications includes “to interact, consult, or exchange information” in its definition. For R2, why is Interchange Coordinator excluded? It is included in the Requirement R1 which deals with the Interpersonal Communications. Communications would need to be maintained with the Interchange Coordinator in the event of a failure of the Interpersonal Communications. For R3, affected neighboring Transmission Operators should be included. For R4 and R6, the sub-requirement list is different than for than for the associated Interpersonal Communications requirements R3 and R5 respectively. We believe these should be duplicate. That is the sub-requirement list for R4 should match R3 and the R6 should match R5. In the event of a failure of the Interpersonal Communications, the Transmission Operator and Balancing Authority both would need to maintain communications to the same entities as in the requirement to have Interpersonal Communications. Again, we would suggest replacing sub-requirements with bulleted lists. For R5, why are neighboring Balancing Authorities not included? Additionally R5 should only read Contact with Interchange Coordinator within same Interconnection. They certainly need to be able to contact one another to identify discrepancies in scheduling and sources of meter error that could lead to deviations in ACE. Should R2, R4 and R6 be constructed parallel to R1, R3, and R5? In R1, R3 and R5, the requirement is “shall have” while in R2, R4, and R6, the requirement is “shall designate”. Since one is for the Interpersonal Communications and the other is for the Alternative Interpersonal Communications, it seems the same wording should be used. We do not believe R2.2 and R1.2 should be limited to Reliability Coordinators in the same Interconnection only. We suggest modifying “within the same Interconnection” to “within the same

Organization	Yes or No	Question 1 Comment
		Interconnection, and, as appropriate, between a-synchronously connected RCs which are not precluded by law from scheduling interchange energy (for schedule changes, curtailments, etc.)” since reliability coordination may be required among the RCs on both sides of an Interconnection boundary. The VSLs for R1 through R8 should be expanded to include multiple levels based on the number of entities that the functional entity does not have Interpersonal Communications or Alternative Interpersonal Communications. FERC specified their general preference for gradated in paragraph 27 of their June 19, 2008 order on VSLs. The second half of the Severe VSL for R9 is almost a duplicate to the Lower VSL. There are some small changes in the wording but both situations deal with the case where there is a problem that has been identified with the Interpersonal Communications system and it takes more than two hours to initiate repair.
Midwest ISO Standards Collaborators	No	We expressed in the last posting that we felt the definition of Interpersonal Communications might inadvertently include data. The drafting team responded that it does not by referring to Interpersonal in the name of the definition. Clearly, you cannot refer the word you are defining to define it. However, it is possible “allows two or more individuals to ...” may solve this problem. What are the drafting team’s thoughts on this issue? This standard does not comport with the informational filing that NERC submitted to FERC on August 10, 2009 regarding its discontinued use of sub-requirements in standards development activities. Consider striking “to exchange Interconnection and operating information” in R1, R3, R5, R7, and R8. It is redundant to the use of Interpersonal Communications “to interact, consult, or exchange information” in the definition. Consider striking “to exchange Interconnection and operating information” in R2, R4, R6. It is redundant to the use of Alternative Interpersonal Communications which uses Interpersonal Communications in its definition. Interpersonal Communications includes “to interact, consult, or exchange information” in its definition. For R2, why is Interchange Coordinator excluded? It is included in the Requirement R1 which deals with the Interpersonal Communications. Communications would need to be maintained with the Interchange Coordinator in the event of a failure of the Interpersonal Communications. For R3, neighboring Transmission Operators should be included. For R4 and R6, the sub-requirement list is different than for than for the associated Interpersonal Communications requirements R3 and R5 respectively. They should be duplicate. That is the sub-requirement list for R4 should match R3 and the R6 should match R5. In the event of a failure of the Interpersonal Communications, the Transmission Operator and Balancing Authority both would need to maintain communications to the same entities as in the requirement to have Interpersonal Communications. For R5, why are neighboring Balancing Authorities not included? They certainly need to be able to contact one another to identify discrepancies in scheduling and sources of meter error that could lead to deviations in ACE. Should R2, R4 and R6 be constructed parallel to R1, R3, and R5? In R1, R3 and R5, the requirement is “shall have” while in R2, R4, and R6, the requirement is “shall designate”. Since one is for the Interpersonal Communications and the other is for the Alternative Interpersonal Communications, it seems the same wording should be used. Should R2.2 and R1.2 be limited to Reliability Coordinators in the same Interconnection only? The VSLs for R1 through R8 should be expanded to include multiple levels based on the number of entities that the functional entity does not have Interpersonal Communications or

Organization	Yes or No	Question 1 Comment
		Alternative Interpersonal Communications. FERC specified their general preference for gradated in paragraph 27 of their June 19, 2008 order on VSLs. The second half of the Severe VSL for R9 is almost duplicate to the Lower VSL. There are some small changes in the wording but both situations deal with the case where there is a problem that has been identified with the Interpersonal Communications system and it takes more than two hours to initiate repair.
Northeast Power Coordinating Council	No	It was expressed in the last posting that the definition of Interpersonal Communications might inadvertently include data. The SDT responded that it does not by referring to Interpersonal in the wording of the definition. The word being defined shouldn't be in the definition. However, incorporating "allows two or more individuals to ..." is an option that may solve this problem. The next posting should clarify this. Response: The RCSDT has clarified in previous responses to comments that the requirements of COM-001 do not apply to data. The current proposed definition of Interpersonal Communications includes the phrase "allows two or more individuals to...". In an effort to make this more clear, the RCSDT has revised Requirements R1-R8 to remove the phrase "to exchange Interconnection and operating information" as you and others have suggested. This will provide the needed clarity for stakeholders that COM-001 does not include "data exchange." This standard does not comport with the informational filing that NERC submitted to FERC on August 10, 2009 regarding its discontinued use of sub-requirements in standards development activities. The sub-requirements should be modified into bulleted lists. Response: The information filing did not propose to eliminate the use of numbered items altogether, but proposed changing the manner in which they were numbered. Bulleted lists are used to indicate sets of options; numbered lists are used when each of the listed items are required. Consider striking "to exchange Interconnection and operating information" in R1, R3, R5, R7, and R8. It is redundant to the use of Interpersonal Communications "to interact, consult, or exchange information" in the definition. Response: The RCSDT agrees and we have removed the phrase "to exchange Interconnection and operating information" from R1-R8. This helps clarify the intent that the capability is NOT for data exchange as data is covered under the provisions of the recently approved IRO-010-1a. Consider striking "to exchange Interconnection and operating information" in R2, R4, R6. It is redundant to the use of Alternative Interpersonal Communications which uses Interpersonal Communications in its definition. Interpersonal Communications includes "to interact, consult, or exchange information" in its definition. Response: The RCSDT agrees and we have removed the phrase "to exchange Interconnection and

Organization	Yes or No	Question 1 Comment
		operating information from R1-R8. This helps clarify the intent that the capability is NOT for data exchange as data is covered under the provisions of the recently approved IRO-010-1a. For R2, why is Interchange Coordinator excluded? It is included in the Requirement R1 which deals with the Interpersonal Communications. Communications would need to be maintained with the Interchange Coordinator in the event of a failure of the Interpersonal Communications. Response: R1 is dealing with the “normal” communications. R2 deals with the default reliability needs. The normal communications include Interchange Coordinators because they are part of the administration of Interchange. The SDT predicated R2 on being in an unusual situation in which only the basic reliability functions were needed. In such times, the Interchange Function is seen as sacrificial because the BA itself could operate reliably (not necessarily efficiently) by simply dealing with it is adjacent BAs and “scheduling” interchange on a BA to BA basis (as opposed to a PSE to PSE basis). The Interchange Coordinator is only needed to ensure all of the commercial arrangements are validated by all parties. In stressed conditions those checkouts can be by-passed and dealt with after-the-fact. That <u>does not mean</u> that when an entity goes to backup is expected to bypass the Interchange Coordinator. The requirement R2 merely focused on the worst case situation. This requirement is not meant to define the alternate backup system; it is merely mandating the lowest mandatory requirements on the backup system. For example during the Y2K operations backup systems included satellite phones which did not cover all entities involved in normal operations. The SDT wrote the requirements to assure that such an event would not cause all RCs, BAs and TOPs to be non-compliant. For R3, affected neighboring Transmission Operators should be included. Response: The SDT has included the following Part 3.5 of Requirement R3: 3.5 Adjacent Transmission Operators synchronously connected within the same Interconnection For R4 and R6, the sub-requirement list is different from the associated Interpersonal Communications requirements R3 and R5 respectively. These should be duplicate. The sub-requirement list for R4 should match R3, and the sub-requirement list for R6 should match R5. In the event of a failure of the Interpersonal Communications, the Transmission Operator and Balancing Authority both would need to maintain communications to the same entities as in the requirement to have Interpersonal Communications. Response: The SDT has included the following Part 4.3 of Requirement R4: 4.3 Adjacent Transmission Operators synchronously connected within the same Interconnection The SDT has included the following Part 6.3 of Requirement R6: 6.3 Adjacent Balancing Authorities

Organization	Yes or No	Question 1 Comment
		The RCSDT asserts the standard meets FERC Order 693 regarding DP and GOP entities by requiring these entities to have Interpersonal Communication capability. Not requiring DP and GOP entities to have Alternative Interpersonal Communication capability meets FERC's intention as stated here: "We (FERC) clarify that the NOPR did not propose to require redundancy on generator operators' or distribution providers' telecommunication facilities..." (Order 693, RM06-16-000, Paragraph 487). The sub-requirements should be bulleted lists. Response: Bulleted lists are used to indicate sets of options; numbered lists are used when each of the listed items are required. For R5, why are neighboring Balancing Authorities not included? Response: The SDT has included the following Part 5.6 of Requirement R5: 5.6 Adjacent Balancing Authorities Note that this is a defined term in the glossary: "A Balancing Authority Area that is interconnected (to) another Balancing Authority Area either directly or via a multi-party agreement or transmission tariff." Additionally, R5 should only read Contact with Interchange Coordinator within the same Interconnection. They need to be able to contact one another to identify discrepancies in scheduling and sources of meter error that could lead to deviations in ACE. Response: The RCSDT has removed the Interchange Coordinator from the standard (R1 and R5) as the BA is responsible for the reliability implications of Interchange. The reliability relationship lies between BA's. Should R2, R4 and R6 be constructed parallel to R1, R3, and R5? In R1, R3 and R5, the requirement is "shall have" while in R2, R4, and R6, the requirement is "shall designate". Since one is for the Interpersonal Communications and the other is for the Alternative Interpersonal Communications, the same wording should be used. Response: The SDT inserted the different terminology because there may be more than one type backup system. Some entities have land lines; cell phones; satellite phones; voice over internet; and/or teleconferencing. The language is intended to provide flexibility to allow entities to have one or more types of backup while designating one for Alternative Interpersonal Communications. R2.2 and R1.2 should not be limited to Reliability Coordinators in the same Interconnection only. Modify "within the same Interconnection" to "within the same Interconnection, and, as appropriate, between a-synchronously connected RCs which are not precluded by law from scheduling interchange energy (for schedule changes, curtailments, etc.)" since reliability coordination may be required among the RCs on both sides of an Interconnection boundary.

Organization	Yes or No	Question 1 Comment
		Response: The requirement proposed by NPCC is predicated on “as appropriate.” Such subjective phrases cannot be used in a standard. The issue of asynchronous entities is not germane to the requirement but the requirement does not preclude additional coordination to meet the specifics of ERCOT, HQ and WECC. A regional variance may be an option for you to consider. The VSLs for R1 through R8 should be expanded to include multiple levels based on the number of entities that the functional entity does not have Interpersonal Communications or Alternative Interpersonal Communications with. FERC specified their general preference for gradated in paragraph 27 of their June 19, 2008 order on VSLs. Response: Each entity listed in Requirements R1-R8 is required to meet the contents with respect to each other entity listed in the requirement. Failure to have the capability with a single entity is a single violation of the requirement. For example, if an RC has 5 BA’s within it Area and fails to have Interpersonal Communications with two of them, then the RC has violated the requirement twice. The VSLs are written to address each violation of the Requirement. We have removed the words “or more” from the VSLs. The second half of the Severe VSL for R9 is almost a duplicate of the Lower VSL. There are some small changes in the wording but both situations deal with the case where there is a problem that has been identified with the Interpersonal Communications system and it takes more than two hours to initiate repair. Response: The R9 Severe VSL was revised to remove “within 2 hours”. It now reads: “The responsible entity tested the Alternative Interpersonal Communications capability and identified a problem but didn’t initiate action to repair or designate a replacement Alternative Interpersonal Communications.”
Response: The RCSDT thanks you for your comment. Please see responses embedded above.		
PNGC Power member owners	No	Thank you for the opportunity to comment and for your hard work on this project: While we agree that effective Interpersonal Communications capability are integral to reliability, many Distribution Providers (DP) are small entities that do not maintain a 24-7 dispatch desk capable of receiving or responding to emergency reliability directives in a timely manner. It is our belief that some of the proposals in this project could unnecessarily force small entities to make investments that will not enhance reliability. Many DPs rely on answering services to address customer-service issues during non-business hours. On-call personnel are contacted in the event of an outage or emergency and crews are dispatched as appropriate. It is difficult to envision a BA or TOP issuing an Emergency Reliability Directive to a small entity (25 MW or so) which would require these smaller entities to comply with COM-001. Order 693 directs the inclusions of DPs in the COM-001-2 standard but it is our belief that the Commission offered language that GOs and DPs need not have redundant communications, training unrelated to normal/emergency operations, and that telecommunications

Organization	Yes or No	Question 1 Comment
		requirements for entities will vary according to their function. We believe those intentions should be reflected in the language of this standard. We would suggest adding wording such as in the applicability section, "Distribution Providers who maintain a 24-7 control centers with the ability to manually shed load of at least 100 MW within a 15-minute operational window."Also, a note that smaller, rural entities can be dependent on a phone system provider that will not allow for backup communications. Should the communication line(s) be dependent on one main phone trunk line, the failure due to an issue on this main line will make it impossible to notify anyone of its failure short of physically traveling to an area where phone service is available. For some rural areas, this will exceed the one hour time limit to report the communication outage. Forcing smaller entities to acquire satellite phone service to mitigate for a phone outage is a high price to pay when no reliability improvement will be achieved. Suggested change could be: "... shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer where alternate forms of communication are available within a 15 minute access time. Should alternate forms of communication not be available within the 15 minute access time, then upon reestablishment of Communication capabilities impacted entities will be notified of the past loss and current status of Communication."We've heard many representatives from FERC and NERC indicate that the standards development process has led the industry to take action in many cases for the sake of compliance while not necessarily enhancing reliability. As has been stated many times, the process should be about improving reliability, not about complying with standards. Unnecessarily including smaller entities that will NEVER receive an emergency reliability directive might be an example of the former.
Response: The RCSDT thanks you for your comment. There is no requirement for 24/7 support, the requirement is to have communications capability. The type of system (i.e. On-Call) is not prescribed in the standard and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is "To ensure emergency communications between operating personnel are <u>effective</u>." It is not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication, in many cases this may be via a receptionist, or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.		
PPL	Yes	
PSEG	No	Com-001-2 implementation plan lists that this is applicable to PSE's and LSE's however, PSE's and LSE's were removed from the actual standard. The implementation plan should be revised.
Response: The RCSDT thanks you for your comment. We have revised as you suggested.		
Dominion	No	The monthly testing requirement for Alternative Interpersonal Communications is overly burdensome without any evidence to support that it is necessary to insure reliability. We believe that an entity will take necessary

Organization	Yes or No	Question 1 Comment
		steps to insure the Alternative Interpersonal Communications is functioning properly, especially if it experiences problems with its Interpersonal Communications, it. We can support quarterly testing as we believe it strikes a reasonable balance.
Response: The RCSDT thanks you for your comment. The drafting team has not received a large number of comments that suggest that the frequency of the testing is burdensome and believes that the testing could occur in the normal course of daily activities. Therefore, the SDT believes the frequency of testing will not be burdensome.		
South Carolina Electric and Gas	No	Each sub-requirement should not have an “R” in front of the number in order to be consistent with NERC’s August 10, 2009 filing at FERC on this subject. Requirement R3 and R4 should include adjacent TOPs as a sub-requirement. Requirements R5 and R6 should include adjacent BAs as a sub-requirement. “to exchange Interconnection and operating information” should be deleted from requirements R1 through R8 as it is redundant with the definition of Interpersonal Communications. The last page of the Implementation Plan includes LSEs, PSE, and TSPs as being responsible entities under this standard, yet the standard does not include them. Please correct the implementation plan.
SERC OC Standards Review Group	No	Each sub-requirement should not have an “R” in front of the number in order to be consistent with NERC’s August 10, 2009 filing at FERC on this subject. Response: The RCSDT agrees and this change has been made. Requirement R3 and R4 should include adjacent TOPs as a sub-requirement. Response: The SDT has included the following Part 3.5 of Requirement R3 and 4.3 of R4: Adjacent Transmission Operators synchronously connected within the same Interconnection Requirements R5 and R6 should include adjacent BAs as a sub-requirement. Response: The SDT has included the following Part 5.6 of Requirement R5 and Part 6.3 of R6: Adjacent Balancing Authorities Note that this is a defined term in the glossary: “A Balancing Authority Area that is interconnected to another Balancing Authority Area either directly or via a multi-party agreement or transmission tariff.” ”to exchange Interconnection and operating information” should be deleted from requirements R1 through R8 as it is redundant with the definition of Interpersonal Communications. Response: The RCSDT agrees and we have removed the phrase “to exchange Interconnection and operating information from R1-R8.

Organization	Yes or No	Question 1 Comment
		The last page of the Implementation Plan includes LSEs, PSE, and TSPs as being responsible entities under this standard, yet the standard does not include them. Please correct the implementation plan. Response: The RCSDT agrees and we have made the revision.
Response: The RCSDT thanks you for your comment. Please see responses above.		
MRO's NERC Standards Review Subcommittee	No	A. R5.5 states a BA shall have Interpersonal Communications with each Interchange Coordinator within its BA area and adjacent Interchange Coordinators. NERC Registry Criteria (v5) uses the term "Interchange Authority" not Interchange Coordinator, please clarify. Response: The RCSDT has removed the Interchange Coordinator from the standard based on stakeholder feedback. B. Upon review of the NERC Compliance Registry, there are only 56 BA's that are also registered as an IA but 138 total BA's within the registry. R5.5 is not clearly written because many BA's do not have an IA within their BA area. Though a BA will use an IA to schedule interchange, a possible rewrite of R5.5 may be "Each Interchange Authority that the BA actively uses to arrange Interchange". Response: The RCSDT has removed the Interchange Coordinator from the standard based on stakeholder feedback. C. R10 states that the RC, TOP, BA, DP and GOP shall notify "impacted entities" within 60 minutes... Please clarify if the SDT means the entities within the applicability section or is this to be determined by the entity. A possible rewrite may be; "Each RC shall notify TOP's, BA's, and IA's within its RC area along with adjacent RC's within the same Interconnection". This break down would need to be required for each affected entity and would provide clarity to the industry. Response: R10 specifies only "impacted entities". That phrase is used to limit the scope of the requirement. If an entity has a failure of its Interpersonal Communications capability with only one entity, then <i>that</i> entity is the "impacted entity" and they should be notified of the failure. D. We do not agree with a DP and GOP need to be held to the same level of compliance as a RC, BA or TOP. FERC Order 693 (paragraph 487) directed the DP and GOP to be included in this standard by stating: "We expect the telecommunication requirements for all applicable entities will vary according to their roles and that these requirements will be developed under the Reliability Standards development process". A DP and GOP may not be staffed 24 hours a day like a BA or TOP and the SDT did not take this into consideration. Response: There is no requirement that requires identical communications systems. The requirement is to have "a" communication capability. The RCSDT asserts the standard meets FERC Order 693 regarding DP and GOP entities by requiring these entities to have Interpersonal Communication capability. Not requiring DP

Organization	Yes or No	Question 1 Comment
		and GOP entities to have Alternative Interpersonal Communication capability meets FERC's intention as stated here: "We (FERC) clarify that the NOPR did not propose to require redundancy on generator operators' or distribution providers' telecommunication facilities..." (Order 693, RM06-16-000, Paragraph 487). A new requirement was also added concerning the failure of a DP or GOP Interpersonal Communications capability: R11 Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities shall consult with its Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i> E. We understand that the DP and GOP need a means of communicating with their BA and TOP (R7 and R8) but would this not be the same Interpersonal Communications capability that as stated in R3 and R5 for the TOP and BA? Example: If the BA uses a phone line as their Interpersonal Communication medium to contact the DP wouldn't the DP also use the same medium to communicate with their BA? Yes, there could be different mediums but 99% of the time it will be the same medium. Response: The RCSDT agrees with your assumption; however a reciprocal requirement is necessary. Without R7 and R8, there would be no requirement for the DP or GOP. F. R10 could mean that if there is a logging system that detects an Interpersonal Communication failure, then all applicable entities will need to monitor that monitoring device. Since this requirement applies to all applicable entities, and Interpersonal Communication mediums will most likely be the same, there will always be two entities found non compliant if the 60 minute threshold is passed. Response: There is no requirement to monitor or log Interpersonal Communications capability, only to test. R10 requires the entity to notify the impacted entities upon a failed test or the detection of a failure.
Response: The RCSDT thanks you for your comment. Please see responses above.		
FirstEnergy	No	It is not clear from the definition of Interpersonal Communications if certain communications "mediums" such as email, instant messaging, etc. are included. Response: The requirements are for communications between two or more persons. Mediums are not listed to avoid being prescriptive in the requirement. The measures provide examples of mediums. Furthermore, the Measures for these requirements all include "electronic communications" as acceptable evidence. If the drafting team does not intend these mediums be included, then it should be clarified in the

Organization	Yes or No	Question 1 Comment
		definition. We suggest the following wording of the definition: Interpersonal Communication: Any medium that allows two or more individuals to interact, consult, or exchange information. This interaction consists of verbal, spoken words exchanged in Real-time. Response: The use of verbal communication only is not the intent of the requirement. Written communication is also an acceptable form of Interpersonal Communication.
Response: The RCSDT thanks you for your comment. Please see responses above.		
SPP Standards Development	No	We would suggest that the applicability of COM-001-2 be expanded to that listed in COM-002-3. How can the directives to be issued in COM-002 be delivered and confirmed without having Interpersonal Communications capability? Response: The RCSDT has revised the applicability of COM-001 and COM-002 such that they contain the same functional entities. These are: RC, TOP, BA, GOP, and DP. All of the functional entities listed in R1.1 should also be listed in R2.1. Similarly the sub-requirements of R3 should also be applied to R4. The same holds true for R5 and R6. Response: The requirements for Alternative Interpersonal Communications are different than for Interpersonal Communications. There is not necessarily a reliability need to have redundant capability with each and every entity such as DP and GOP. If the SDT intends to exclude data communications from Interpersonal Communications and Alternative Interpersonal Communications, we suggest the SDT be more specific in the definition to specifically exclude data communications in the definition. It is not readily apparent that these terms do not apply to data communications and without a clarification, confusion exists. Consider Response: The RCSDT agrees and have removed the phrase “to exchange Interconnection and operating information from R1-R8. This helps clarify the intent that the capability is NOT for data exchange, as data is covered under the provisions of the recently approved IRO-010-1a.
Response: The RCSDT thanks you for your comment. Please see responses above.		
Kansas City Power & Light	No	These requirements require TOP's, BA's, and GOP's to establish alternative means of “interpersonal” communications with other BA's, GOP's, and BA's respectively without regard to the reliability impact each TOP, BA or GOP has on the interconnection. Why would it be necessary for a TOP with one 161kv transmission line or a BA with 100 MW of total load, or one GOP with a 30MW unit to realize additional costs

Organization	Yes or No	Question 1 Comment
		when the facilities they operate have little reliability impact? Response: The RCSDT believes that any NERC Registered Entity capable of issuing or receiving a directive is an applicable party to COM-001. In addition, most RC's have established satellite telephone systems as back-up communication with TOP's. RC's may have to establish additional communication systems with BA's as these requirements impose to avoid Standards of Conduct issues. Response: It is unclear how this scenario would present Standards of Conduct issues for communication between reliability entities. The requirements pertain to reliability functions, not commercial functions or the way in which entities are structured internally. R9 - considering the reliability of communication systems, a 2 hour response to a problem with the alternative means of communication is over sensitive. Allowing for sometime in an operating shift would be more in line, such as 8 hours. Response: The requirement is to initiate action within 2 hours, not complete it. The two hour time reference aligns with the timing shown in EOP-008 for back-up facilities.
Response: The RCSDT thanks you for your comment. Please see responses above.		
Competitive Suppliers		
Exelon	No	1. COM-001-2, 4.4 - Distribution Providers and 4.5, Generation Operators should be highlighted and communicated as a substantive change since entities may not be aware that they are being added to the applicability section of the standard. Response: These revisions were done based on FERC Order 693 directives. They have been widely distributed in redline form. NERC will ensure that the change in applicability is highlighted in the announcement of the next posting. 2. COM-001-2, R10 - should have the following underlined clarifying text added, shall notify impacted entities within 60 minutes of the detection of a failure "of all primary and alternative " Interpersonal Communications capabilities that lasts 30 minutes or longer. Exelon believes that the intent of R10 is for complete loss of communication ability and should not be applied to facilities that have multiple backups. Response: The RCSDT developed R10 based on R3 of COM-001-1. The intent is to ensure that entities know not to use the primary and to use the alternative. 3. COM-001-2, M1 thru 9 - Suggest that network diagrams and / or communications schematics be added as

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Organization	Yes or No	Question 1 Comment
		suggested evidence. Response: The measure only provides examples of the types of evidence that may be used for compliance and the list is not all inclusive. The term "...evidence that could include, but is not limited to..." addresses your suggestion. 4. COM-001-2, VSL for R9 - Regarding failure to test the Alternative Interpersonal Communication, the Severity Level does not align with the potential impact to the BES. The Severity Level for simply missing a test should be revised to a High VSL. Response: The VSL does not relate to risk to the BES (this is covered in the Violation Risk Factor). The VSL only indicates how badly an entity missed the mark with respect to the requirement. A Severe VSL is appropriate.
Response: The RCSDT thanks you for your comment. Please see responses above.		
PacifiCorp	Yes	
Arizona Public Service Company	Yes	
Southern Company	No	Comments: Standard COM-001-2R10. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider, and Generator Operator shall notify impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer. Comment: It is not clear whether the notification requirements identified in R10 apply to failure of ALL available Interpersonal Communications or ANY Interpersonal Communications. We suggest that the existence of functioning Alternative Interpersonal Communications precludes the requirement for notification of impacted entities. Response: The intent of R10 is to ensure that entities know not to use the primary and to use the alternative. Notification is required for the failure of the primary capability. D. Compliance 1. Compliance Monitoring Process 1.3 Data Retention Each Generator Operator shall keep the most recent twelve months of historical data (evidence) for Requirements R8 and R10, Measures M8 and M10. Comment: The data retention requirements specified for the Generator Operator in Para. 1.3 (above) are not consistent with the 3-year audit interval for the GOP. Question: When audited on this Standard is the expectation that the GOP will have 12 months of evidence or 36 months of evidence? Response: The Data Retention section of the standard conforms to the NERC guidelines. The RCSDT has also added the following to the data retention section:

Organization	Yes or No	Question 1 Comment
		The following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit. Standard COM-002-3R2. Each Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message has been confirmed. Comment: The term "Reliability Directive" is currently not defined in the NERC Glossary of Terms. However, in the Implementation Plan for COM-002-3 the RC SDT proposes a definition for Reliability Directive. It is implied in the standard that the Reliability Directive is issued as a voice command which precludes the use of our preferred method of Interpersonal Communication. However, this is not definitively stated in either the standard or the proposed definition. I think this needs to be made clearer if the Reliability Directive must be issued as a voice command. Response: The RCSDT disagrees with your assumption that the requirement implies that a Reliability Directive must be issued verbally. In a previous version of the draft standard, the RCSDT had included "verbal" issuance of directives. This was removed to allow the use of other than voice capability to issue a Reliability Directive.
Response: The RCSDT thanks you for your comment. Please see responses above.		
Green Country Energy, Green Country Operating Services	No	COM-001 General question/comment. The reference to infrastructure should be removed and just keep the word "medium". Here's why: What communication medium (infrastructure) does not use satellite at some point unless entities are within a close geographical proximity? How likely is it to have 2 different mediums? o Local phone and fax hard-wire likely. o Long distance phone and fax - satellite o Cell phone - satellite o Internet - satellite o Radio - antenna The reason for mentioning this is, if all we have is satellite then the reference to infrastructure should be removed and just keep the word "medium".
Response: The RCSDT thanks you for your comment. The RCSDT believes that the language of the definition is clearer with the existing verbiage.		
Central Lincoln	No	See Q 6 below.
Response: The RCSDT thanks you for your comment. Please see responses to Q6.		

Organization	Yes or No	Question 1 Comment
Lakeland Electric	Yes	
Manitoba Hydro	Yes	
NextEra Energy, Inc.	No	As drafted, COM-001 is not clear or complete. At this stage in the evolution of compliance with the mandatory Reliability Standards, it is important that any new or revised Reliability Standard clearly articulate all compliance obligations and tasks consistent with Sections 302 (6) and (8) of the NERC Rules of Procedure. Thus, NextEra Energy Inc. (NextEra) has numerous recommended corrections to provide clarity and completeness to COM-001. For example, the requirement to designate an Alternative Interpersonal Communication capability is not clear. Does the designator solely designate for the designator's knowledge or does the designator need to inform the entity on the other end of the connection. In R2, for instance, the Reliability Coordinator must designate, but it is also not clear whether the Reliability Coordinator must inform the Balancing Authorities or Transmission Operators. It is further unclear whether the designation must be documented, or if any informing of the Balancing Authorities or Transmission Operators must be documented. Thus, it is recommended that the drafters decide what was intended regarding the designation and clearly state the requirements. Response: The Requirement R2 is for the RC to designate an Alternative Interpersonal Communication and inform the other entity (BA, TOP, etc.) as to what that Alternative Interpersonal Communication is. The Measure M2 provides examples of the types of evidence which may be used to prove compliance with the requirement. In R9 it states that “. . . on at least a monthly basis.” There are two issues to consider here. If the sentence stays, grammatically it should read “. . . on, at least, a monthly basis. . . However, from a compliance and technical perspective, the term “at least” has no significance and should be deleted. The requirement is to test on a monthly basis - the phrase “at least” only introduces ambiguity and implies that the party should consider every two or three weeks. If the drafting team believes a best practice is less than a month, there are other NERC educational tools to explain a best practice. Response: The RCSDT used this term to allow more frequent testing to be performed. In R10, it states “. . . shall notify the impacted entity . . .” It would be clearer to state: “. . . shall notify the impacted Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider or Generator Operator . . .” Response: The RCSDT believes your suggestion adds unnecessary verbiage to the requirement and does not provide additional clarity.

Organization	Yes or No	Question 1 Comment
Response: The RCSDT thanks you for your comment. Please see responses above.		
United Illuminating Company	No	COM-001-2 does not specify the amount of time a DP has to reestablish the Interpersonal Communication Capability after the capability fails before it is assessed non-compliance for not having the communication. Is an entity non-compliant the minute the communication capability is unavailable? If so, then to be compliant a tertiary (or secondary capability for DP) must be installed by the entity. Something similar was discussed with EOP-008 R3: "To avoid requiring a tertiary facility, a backup facility is not required during: o Planned outages of the primary or backup facilities of two weeks or less o Unplanned outages of the primary or backup facilities". UI suggests the drafting team incorporate something similar. Response: The RCSDT is proposing a new requirement to address your concerns for the DP. We have included the GOP as well: R11. Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i> The VSL for R7 is severe only and states: "The Distribution Provider failed to have Interpersonal Communications capability with one or more of the entities listed in Parts 7.1 or 7.2".I believe there should be a time component to the VSL and the VSL staged. For example, failure to have communication established for less than 60 minutes would be Lower, anything over 1 hour severe. Also needed is a phrase to state when the violation begins. Does the violation begin when the loss of Communication Capability is detected or when it occurred? In other words, does the violation start when the operator attempts to use the phone and it is not functional, or did it occur when the phone line functionality failed but was not yet detected because no attempt to use the phone was made. So the VSL for R7 would follow a format of: "The Distribution Provider failed to have Interpersonal Communication Capability with one or more entities listed in Parts 7.1 or 7.2 for a continual 60 minutes period as measured from the time the ICC failure was detected". An alternative remedy is to alter the language of R7 to allow for unplanned outage. Response: The VSL represents a single violation of the requirement. For this requirement, the DP must have Interpersonal Communication with its TOP and BA. The VSL was revised to remove "or more" to conform to the requirement. NERC does not have a Reliability Requirement for a DP to staff a control room 24/7. COM-0001 can be interpreted to imply that a DP needs to be staffed 24/7 to facilitate interpersonal communications. If NERC wants to extend the requirement for a 24/7 staffed operating position at the DP then the appropriate method is

Organization	Yes or No	Question 1 Comment
		thru a SAR to PER-002. Response: COM-001 is not intended to imply a 24/7 requirement. COM-001 R7 should have a sub-requirement added recognizing that DP's are not required to staff 24/7 and many do not staff overnight. UI suggests adding R7.3: DP's will notify their TOP and/or BA when it is not staffing an operating desk. Response: While the SDT does not disagree this would be good practice, other methods of addressing this situation (e.g., having an answering service, an on –call staff, or something similar) would be valid as well. The SDT does not believe it would be appropriate to limit this to only one method. R7: Should address the instance if the DP is not required to have communication with the BA, because the BA communicates thru the TOP. Response: The intent of the standard is that the DP will have communication with their BA. Ti is not prescriptive as to how that communication will be implemented.
Response: The RCSdT thanks you for your comment. Please see responses above.		
American Electric Power	No	The applicability of COM-001 and COM-002 appear to be at odds with each other. The requirements may need to be re-written so that they are in sync.
Response: The RCSdT thanks you for your comment. The RCSdT has made revisions to COM-001 and COM-002 such that the applicability is compatible.		
Pepco Holdings Inc	Yes	
American Transmission Company	Yes	ATC agrees with the understanding that the line of demarcation is up to the point where ATC owns the equipment.
Response: The RCSdT thanks you for your comment.		
WECC	Yes	
BGE	Yes	BGE has no additional comments.
Constellation Energy Commodities Group	Yes	

Organization	Yes or No	Question 1 Comment
Duke Energy	No	o We question how far the definition of Alternative Interpersonal Communication goes in requiring separate infrastructure from Interpersonal Communication. For example, wireless communications sometime utilize fiber optic networks. Response: The definition requires the use of different infrastructure (medium) than the Interpersonal Communication used for day to day ops. The RCSDT cannot be prescriptive regarding the specific medium to be employed. This is intended to apply to assets and access to media that is within the control of the entity responsible for complying with the Requirement. For example, the way cell phone signals are routed is not within your control. o We question why the requirements state that entities must “have” Interpersonal Communications capability, but must “designate” Alternative Interpersonal Communications capability? Response: Many entities have multiple Alternative Interpersonal Communication capabilities. Allowing them to designate which one they want to employ allows for flexibility in which one they use for AIC. o R1.2 and R2.2 - Why is this limited to the same interconnection? Response: The phrase “within the same interconnection” is added for the case of ERCOT, which has only DC tie lines with the Eastern Interconnection and has minimal interchange. o R3 - need to add neighboring TOPs. Response: Agreed. o R5 - need to add adjacent BAs. Response: Agreed. o Interchange Coordinator - Add IC to the Applicability Section, and add a requirement that the IC have Interpersonal Communication capability with its BA and adjacent BAs. Response: The RCSDT has eliminated the Interchange Coordinator from COM-001-2 based on other stakeholder comments.. o Requirements to “designate” Alternative Interpersonal Communication should carry a “Medium” VRF instead of “High”, because they are a backup capability. The word “designate” carries the connotation that these are documentation requirements. Response: The requirement to designate is for the entity to have an Alternative Interpersonal Communications capability and to designate what that is. In many cases, an entity will have multiple

Organization	Yes or No	Question 1 Comment
		alternatives and neighboring entities need to know how to contact them in case of a failure of the primary. If an entity does not designate its AIC, in an emergency it may not be able to issue or comply with directions or instructions which could directly contribute to BES instability, separation, or cascading failure.” The VRF should remain as high. o R9 requires a monthly test of Alternative Interpersonal Communications capability. This was quarterly in the last draft. We question how these requirements for “Alternative Interpersonal Communications” capability are related to requirements for “backup functionality” in EOP-008-1, which requires an annual test of backup functionality. Clarity on the relationship between “Interpersonal Communications”, “Alternative Interpersonal Communications”, “primary control center functionality” and “backup control center functionality” would be appreciated. Response: Interpersonal Communication and Alternative Interpersonal Communication should be in both the primary and back up control center. IC and AIC are between entities as well. These capabilities are in the primary and back up control centers. The requirement applies to the primary control center. EOP-008 applies to the back up control center. An entity may test its AIC in the normal course of daily activities. o R11 - is this requirement being moved to COM-003? Response: The OSCP SDT is vetting this requirement and it will be in COM-003. o Data Retention - Is data retention really going to be just 12 months? Most auditors seem to be asking for everything since the last audit. Response: The Data Retention section of the standard conforms to the NERC guidelines. The RCSDT has also added the following to the data retention section: The following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.
Response: The RCSDT thanks you for your comment. Please see responses above.		
CECD	No	Based on the drafting teams response that the definition of Interpersonal" clarifies the exclusion of media dedicated to Telemetry or other data exchange, the term Interpersonal Communication should be replaced with verbal communication capabilities. The term Alternative Interpersonal Communication should be replaced with alternative verbal communication capability that is able to serve as a substitute for and does not

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Organization	Yes or No	Question 1 Comment
		utilize the same infrastructure (medium) as verbal communications capabilities used for day-to-day operations.
Response: The RCSDT thanks you for your comment. The RCSDT wrote the definitions to include verbal as well as written communication, and the Measures provide examples of person to person communications.		
Indeck Energy Services	No	
City of Springfield, IL - City Water Light and Power (CWLP)	No	The definition of “Interpersonal Communications” is overly broad and does not address the functional needs of reliability coordination. The definition should be limited to systems utilized for essential reliability functions. While the Purpose statement in the standard does address this intent, the explicit inclusion in the definition removes all ambiguity. Further, the definition of “Alternative Interpersonal Communications” without corresponding explicit definition of Primary Interpersonal Communications may lead to confusion and unnecessary duplication of efforts in testing and maintenance.
Response: The RCSDT thanks you for your comment. The overall mission of reliability standards is for entities to address essential reliability functions.		
Independent Electricity System Operator	No	(1) NERC filed with FERC on August 10, 2009 indicating that it would discontinue the use of sub-requirements in standards. All draft standards posted since have the format of Part Numbers within each main Requirement. Please revise the standards in this project accordingly. Response: The RCSDT agrees and this revision will be made. (2) Having defined the terms Interpersonal Communication and Alternative Interpersonal Communication, the phrase “to exchange Interconnection and operating information” in a number of requirements is redundant and can be removed. Further, for R1, we suggest removing the phrase “within the same Interconnection since there RCs between two Interconnections still need to communication with each other for reliability coordination (e.g. curtailment of interchange transactions crossing Interconnection boundary, as stipulated in IRO-006). Response: The RCSDT agrees and have removed the phrase “to exchange Interconnection and operating information” from R1-R8. This helps clarify the intent that the capability is NOT for data exchange, as data is covered under the provisions of the recently approved IRO-010-1a. The phrase “within the same interconnection” is added for the case of ERCOT which has only DC tie lines with the Eastern Interconnection and has minimal interchange. (3) R2: Suggest to add Purchasing-Selling Entity and Interchange Authority (INT-004 and INT-005 have requirements for communication between the RC and the PSE and IA), and remove the phrase “within the

Organization	Yes or No	Question 1 Comment
		same Interconnection since there RCs between two Interconnections still need to communication with each other for reliability coordination (e.g. curtailment of interchange transactions crossing Interconnection boundary, as stipulated in IRO-006). Response: The applicability of COM-001 and COM-002 were revised to include the same reliability entities: RC, TOP, BA, DP and GOP. LSE, PSE and TSP were removed from the applicability of these standards per stakeholder suggestion. The phrase “within the same interconnection” is added for the case of ERCOT which has only DC tie lines with the Eastern Interconnection and has minimal interchange. (4) R3: Suggest to add adjacent Transmission Operator and Purchasing-Selling Entity (the latter needed for meeting INT-004 requirements). Response: The SDT has included the following Part 3.5 of Requirement R3: 3.5 Adjacent Transmission Operators synchronously connected within the same Interconnection The applicability of COM-001 and COM-002 were revised to include the same reliability entities: RC, TOP, BA, DP and GOP. LSE, PSE and TSP were removed from the applicability of these standards per stakeholder suggestion. (5) The list of entities in R4 and R6 is different from those in R3 and R5. They should be the same for having Alternative Interpersonal Communication capability. Response: The RCSDT asserts the standard meets FERC Order 693 regarding DP and GOP entities by requiring these entities to have Interpersonal Communication capability. Additionally requiring DP and GOP entities to have Alternative Interpersonal Communication capability only imposes more cost on smaller DP and GOP entities that have little or no risk impact to the bulk electric system. (6) R5: Suggest to add adjacent Balancing Authority as adjoining BAs need to communication with each to check schedules and other balancing information. Response: The SDT has included the following Part 5.6 of Requirement R5: 5.6 Adjacent Balancing Authorities Note that this is a defined term in the glossary: “A Balancing Authority Area that is interconnected (to) another Balancing Authority Area either directly or via a multi-party agreement or transmission tariff.” (7) There are a number of parts in Requirements R1 to R8 each of which must be complied with. However, the VSLs for R1 to R8 are binary which do not provide any distinction in partial failure of each of these requirements. We suggest the SDT to apply the VSL guideline and re-establish the various levels of violation

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Organization	Yes or No	Question 1 Comment
		severity for these requirements. Response: Each entity listed in Requirements R1-R8 is required to meet the contents with respect to each other entity listed in the requirement. Failure to have the capability with a single entity is a single violation of the requirement. For example, if an RC has 5 BA's within it Area and fails to have Interpersonal Communications with two of them, then the RC has violated the requirement twice. The VSLs are written to address each violation of the Requirement. We have removed the words "or more" from the VSLs.
Response: The RCSDT thanks you for your comment. Please see responses above.		
Bonneville Power Administration	Yes	
Xcel Energy	No	We feel that either the definitions, or the requirements, should make it clear whether data is included.
Response: The RCSDT thanks you for your comment. The SDT has made modifications to attempt to make this as clear as possible.		

2. The RCSDT believes that the requirements of TOP-001-1 obviate the need to develop additional requirements to address Xcel's comment. Do you agree? If not, please explain in the comment area below.

Summary Consideration:

The original justification that the RCSDT posited for not adding a requirement to directly address Xcel Energy's comments in paragraph 516 and FERC's related recommendation in paragraph 523 was that TOP-001-1 R3 was considered to address this concern. Since that time, the RTO SDT has proposed to retire TOP-001-1 R3. However, FERC has since retired IRO-004-1 R3 and R5 along with IRO-005-3 R5. Because these are retired, there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered "would violate safety, equipment, regulatory, or statutory requirements," the TOP may respond to the RC that it cannot comply.

Organization	Yes or No	Question 2 Comment
Northeast Power Coordinating Council	No	If the requirement were going to remain, but the Project 2007-03 Real-Time Operations SDT proposed to retire that requirement during their last posting. There needs to be better coordination with that SDT.
Response: The RCSDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered "would violate safety, equipment, regulatory, or statutory requirement," the TOP may respond to the RC that it cannot comply.		
Bonneville Power Administration	Yes	
PPL	Yes	
Dominion	Yes	
SERC OC Standards Review Group	No	Top-001-1, Requirement R3, which is what the SDT appears to be using as its justification for not adding a requirement here is proposed to be deleted by the RTO-SDT on Project 2007-03.
Response: The SDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered "would violate safety, equipment, regulatory, or statutory requirement," the TOP may respond to the RC that it cannot comply.		

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Organization	Yes or No	Question 2 Comment
IRC Standards Review Committee	No	It might if the requirement were going to remain but the Project 2007-03 Real-Time Operations SDT proposed to retire that requirement during their last posting. We believe there needs to be better coordination with that SDT.
Response: The SDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered "would violate safety, equipment, regulatory, or statutory requirement," the TOP may respond to the RC that it cannot comply.		
MRO's NERC Standards Review Subcommittee	No	A. Agree that a receiving entity should not be held accountable until such time that they are required to take such action. B. It might if the requirement were going to remain but the Project 2007-03 ("Real-Time Operations SDT") proposed to retire that requirement during their last posting. This needs to be coordinated with that SDT.
Response: The SDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered "would violate safety, equipment, regulatory, or statutory requirement," the TOP may respond to the RC that it cannot comply.		
FirstEnergy	Yes	
Midwest ISO Standards Collaborators	No	It might if the requirement were going to remain but the Project 2007-03 Real-Time Operations SDT proposed to retire that requirement during their last posting. This needs to be coordinated with that SDT.
Response: The SDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered "would violate safety, equipment, regulatory, or statutory requirement," the TOP may respond to the RC that it cannot comply.		
SPP Standards Development	Yes	In fact, we believe that R1, R2 and R5 more specifically put that requirement on the TOP. The TOP doesn't have to wait for the RC and any directive that may be associated with R3 prior to taking action to mitigate an emergency condition.
Response: The SDT thanks you for your comment.		

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Organization	Yes or No	Question 2 Comment
Kansas City Power & Light	Yes	
Exelon	Yes	
PacifiCorp	Yes	
Arizona Public Service Company	Yes	
Southern Company	No	Comments: I see no connection between XCEL's comment on COM-001-1. The requirements of COM-001-1 require the RCs, TOPs, and BAs to have a primary interpersonal communications method and to designate an alternative. I believe that if the requirements for the entity to have both primary and alternative methods of interpersonal communications this objection could be cleared. For example, R2 Each Reliability Coordinator shall designate have an Alternative Interpersonal Communications capability with the following entities to exchange Interconnection and operating information
Response: Thank you for your comment. We agree that there is no connection between Xcel's concern and COM-001-1.		
Green Country Energy, Green Country Operating Services		No Comment
Manitoba Hydro	Yes	
NextEra Energy, Inc.	No	As stated in response to number 1, Reliability Standards are to be clear and complete. If a Transmission Operator is not responsible for a delay caused by a Reliability Coordinator, the Standard should specifically state that the Transmission Operator does not need to wait for an assessment or approval of a Reliability Coordinator to take actions pursuant to TOP-001-1 R3. Since the Reliability Coordinator is atop the reliability hierarchy, such a statement provides clarity and completeness to understanding a Transmission Operators rights. Thus, TOP-001-1 R3 should be revised to lead with: "Without any obligation to first seek and obtain an assessment or approval from its Reliability Coordinator, each Transmission Operator"
Response: The SDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered "would violate safety, equipment, regulatory, or statutory requirement," the TOP may respond to the RC that it cannot comply.		

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Organization	Yes or No	Question 2 Comment
United Illuminating Company	Yes	
American Electric Power	Yes	
Pepco Holdings Inc	Yes	
American Transmission Company	Yes	
ISO New England	No	It might if the requirement were going to remain but the Project 2007-03 Real-Time Operations SDT proposed to retire that requirement during their last posting. We believe there needs to be better coordination with that SDT.
Response: The SDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered “would violate safety, equipment, regulatory, or statutory requirement,” the TOP may respond to the RC that it cannot comply.		
ERCOT ISO	No	It might if the requirement were going to remain but the Project 2007-03 Real-Time Operations SDT proposed to retire that requirement during their last posting. We believe there needs to be better coordination with that SDT.
Response: The SDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered “would violate safety, equipment, regulatory, or statutory requirement,” the TOP may respond to the RC that it cannot comply.		
WECC	Yes	
BGE	Yes	BGE has no additional comments.
Response: Thank you for your comment.		
Constellation Energy Commodities Group	Yes	

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Organization	Yes or No	Question 2 Comment
Duke Energy	No	Requirements of TOP-001-1 are being revised under Project 2007-03, which may not continue to adequately address Xcel's concern.
Response: The SDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered "would violate safety, equipment, regulatory, or statutory requirement," the TOP may respond to the RC that it cannot comply.		
Indeck Energy Services	Yes	
City of Springfield, IL - City Water Light and Power (CWLP)	No	TOP-001 is in the process of being substantially modified by Project 2007-03. These changes may conflict with the matter addressed by Xcel's comment. Thus, Xcel's concern should be addressed independently but in the context of the TOP-001-2 revisions proposed by Project 2007-03.
Response: The SDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered "would violate safety, equipment, regulatory, or statutory requirement," the TOP may respond to the RC that it cannot comply.		
South Carolina Electric and Gas	No	Top-001-1, Requirement R3, which is what the SDT appears to be using as its justification for not adding a requirement here is proposed to be deleted by the RTO-SDT on Project 2007-03.
Response: The SDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered "would violate safety, equipment, regulatory, or statutory requirement," the TOP may respond to the RC that it cannot comply.		
Independent Electricity System Operator	No	TOP-001 is being revised and some of the requirements that fulfill this need may have been removed. We suggest the SDT check with the latest draft version of TOP-001 and coordinate with the Real-time Operation SDT to ensure there are not gaps.
Response: The SDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered "would violate safety, equipment, regulatory, or statutory requirement," the TOP may respond to the RC that it cannot comply.		

Organization	Yes or No	Question 2 Comment
Xcel Energy	No	We are concerned that the drafting team may not have understood Xcel Energy's comments and FERC's directive in Order 693. FERC had asked that NERC consider Xcel Energy's suggestion. This consideration does not necessarily equate to the development of additional requirements, however that may be the solution. We recognize that R1 and R2 of TOP-001-1 give the TOP authority to take immediate actions necessary to alleviate operating emergencies. We were concerned with the potential situation where the RC's directive (R3 of IRO-001-2) may conflict with actions the TOP has ALREADY taken. In this situation, we do not feel the TOP should be held at fault for the actions it took prior to the RC's directive. (R3 of IRO-001-2 is currently in effect under TOP-001-1 R3.) Additionally, R1 and R2 of TOP-001-1 have been removed from the latest draft of version 2. So, if TOP-001-2 and IRO-001-2 are approved as drafted, it would appear that all rights and protections of the TOP to take immediate actions will be removed and our initial issue, as detailed in Order 693, still exists.
Response: The SDT thanks you for your comment. The RTO SDT proposes to retire TOP-001-1 R3. However, since NERC has retired IRO-004-1 R3 and R5 along with IRO-005-3 R5 , there are no longer any requirements that would force a TOP to wait for a delayed RC response during an emergency, therefore the question is resolved, albeit differently than it was proposed to be resolved in this posting. If an RC were to give a Reliability Directive to a TOP that the TOP considered "would violate safety, equipment, regulatory, or statutory requirement," the TOP may respond to the RC that it cannot comply. The SDT appreciates this clarification by Xcel Energy. At any time in the future, Reliability Directives may be received that, based on the best available information at the time, change or reverse operating actions taken in the past, even the immediate past. The TOP is not held at fault for past actions that it took to protect the BES by any current or proposed NERC requirements. As written in TOP-001-2 R1, R3 and R4 as proposed by the RTO SDT, the TOP is not prevented from acting or telling the RC that for specific safety, equipment, regulatory or statutory reasons, it cannot comply.		

3. Do you agree with the revision to IRO-001, R1 for certifying Reliability Coordinators? If not, please explain in the comment area below.

Summary Consideration: Stakeholders were asked if they agree with the revision to IRO-001, R1 for certifying Reliability Coordinators. Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.

Organization	Yes or No	Question 3 Comment
ERCOT ISO	No	The language “to continuously assess transmission reliability” should be changed to “to continuously assess Bulk Electric System reliability” to reflect what the enforceability of the standards are meant to be. The requirement on the ERO should also be expanded similar to BAL-005-0.1b R1 to ensure that all operating entities and the entire BES is covered under a Reliability Coordinator. In R2, should “of” be “to”? Reliability Directives are issued to TOPs, BA, etc. The VSL for R1 is not consistent with the requirement. The requirement applies to the ERO but the VSL applies to the Regional Entity.
ISO New England	No	The language “to continuously assess transmission reliability” should be changed to “to continuously assess Bulk Electric System reliability” to reflect what the enforceability of the standards are meant to be. The requirement on the ERO should also be expanded similar to BAL-005-0.1b R1 to ensure that all operating entities and the entire BES is covered under a Reliability Coordinator. In R2, should “of” be “to”? Reliability Directives are issued to TOPs, BA, etc. The VSL for R1 is not consistent with the requirement. The requirement applies to the ERO but the VSL applies to the Regional Entity.
IRC Standards Review Committee	No	The language “to continuously assess transmission reliability” should be changed to “to continuously assess Bulk Electric System reliability” to reflect what the enforceability of the standards are meant to be. The requirement on the ERO should also be expanded similar to BAL-005-0.1b R1 to ensure that all operating entities and the entire BES is covered under a Reliability Coordinator. In R2, should “of” be “to”? Reliability Directives are issued to TOPs, BA, etc. The VSL for R1 is not consistent with the requirement. The requirement applies to the ERO but the VSL applies to the Regional Entity.

Organization	Yes or No	Question 3 Comment
Northeast Power Coordinating Council	No	The language “to continuously assess transmission reliability” should be changed to “to continuously assess Bulk Electric System reliability” to reflect what the enforceability of the standards are meant to be. Response: Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2. The requirement on the ERO should also be expanded similar to BAL-005-0.1b R1 to ensure that all operating entities and the entire BES are covered under a Reliability Coordinator. Response: R1 has been removed from the standard based on stakeholder comments. In R2, should “of” be “to”? Reliability Directives are issued to TOPs, BA, etc. Response: The requirement was rewritten for clarity as follows: R2. Each Reliability Coordinator shall take actions or direct actions (which could include issuing Reliability Directives) by Transmission Operators, Balancing Authorities, Generator Operators, and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. The VSL for R1 is not consistent with the requirement. The requirement applies to the ERO but the VSL applies to the Regional Entity. Response: R1 has been removed from the standard based on stakeholder comments.
Response: The RCSDT thanks you for your comment.		
Bonneville Power Administration	Yes	
PPL	Yes	
SERC OC Standards Review Group	No	We think you are attempting to create a requirement similar to BAL-005, R1. That language copied here is clear and concise - All generation, transmission, and load operating within an Interconnection must be included within the metered boundaries of a Balancing Authority Area.
Response: The RCSDT thanks you for your comment. Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.		
MRO's NERC Standards Review	No	A. R1, As written it is unclear what level of certification this will entail? Presently written within the NERC Reliability Standards, responsibility is given to RC's to manage the reliability of their areas. Recommend

Organization	Yes or No	Question 3 Comment
Subcommittee		deleting this requirement. The ERO has pushed back in other Standards to having a responsibility for any NERC Requirements, since they are not a user, owner, or operator of the BES (see EOP-004-2). Response: Many commenters also suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2. If this does move forward and an RC is certified by the ERO and then the RC is found non-compliant by a Regional Entity, for an associated certified item, will the ERO be held responsible, too? Response: The RCSDT has removed R1 from IRO-001-2. If the SDT selects to keep R1, there are some issues with how the requirement is written. The requirement places emphasis on regions and regional boundaries when no emphasis should be placed there. There are multiple Reliability Coordinators the span multiple regions. Response: The RCSDT has removed R1 from IRO-001-2. The language “to continuously assess transmission reliability” should be changed to “to continuously assess Bulk Electric System reliability” to reflect on what the standards are enforceable. The requirement on the ERO should also be expanded similar to BAL-005-0.1b R1 to ensure that all operating entities and the entire BES is covered under a Reliability Coordinator. B. In R2, should “of” be “to”. Reliability Directives are issued to TOPs, BA, etc. C. The VSL for R1 is not consistent with the requirement. The requirement applies to the ERO but the VSL applies to the Regional Entity. Response: Please see the response to the comments from NPCC above on these same topics..
Response: The RCSDT thanks you for your comment.		
FirstEnergy	Yes	
Midwest ISO Standards Collaborators	No	In general, we are not opposed to the concept of the ERO certifying the Reliability Coordinators; however, there are some issues with how the requirement is written. Response: Thank you. The requirement places emphasis on regions and regional boundaries when no emphasis should be placed

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Organization	Yes or No	Question 3 Comment
		there. There are multiple Reliability Coordinators that span multiple regions. Response: Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2. The language “to continuously assess transmission reliability” should be changed to “to continuously assess Bulk Electric System reliability” to reflect on what the standards are enforceable. The requirement on the ERO should also be expanded similar to BAL-005-0.1b R1 to ensure that all operating entities and the entire BES is covered under a Reliability Coordinator Area. In R2, should “of” be “to”. Reliability Directives are issued to TOPs, BA, etc. The VSL for R1 is not consistent with the requirement. The requirement applies to the ERO but the VSL applies to the Regional Entity. Response: Please see the response to the comments from NPCC above on these same topics..
Response: The RCSDT thanks you for your comment.		
SPP Standards Development	No	Is this more of a registry question than a standards issue? While we agree that there needs to be a requirement somewhere that establishes the need for Reliability Coordinators, isn't there also a similar need for other functional entities such as Transmission Operators, Balancing Authorities, etc? Should these be captured in standards or in the certification/registration process?
Response: The RCSDT thanks you for your comment. Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.		
Kansas City Power & Light	Yes	
Exelon		No comment - only applicable to RC
PacifiCorp	Yes	
Southern Company	No	Comments: This would allow NERC to designate one entity to be the Reliability Coordinator for an entire interconnection or the entire continent. This would reduce the Regional Reliability Organizations to

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Organization	Yes or No	Question 3 Comment
		compliance entities.
Response: The RCSDT thanks you for your comment. Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.		
Green Country Energy, Green Country Operating Services		No Comment
Manitoba Hydro	Yes	
United Illuminating Company	Yes	
American Electric Power	No	This is out of scope with the standard, as it is currently addressed through the NERC certification process that the NERC reliability coordinators are subject to.
Response: The RCSDT thanks you for your comment. Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.		
Pepco Holdings Inc	Yes	
American Transmission Company	Yes	
WECC	Yes	
BGE	Yes	BGE has no additional comments.
Constellation Energy Commodities Group	Yes	
Duke Energy	No	How is NERC going to certify the RCs? Response: R1 is a revision of an existing requirement in IRO-001-1.1. Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2. The NERC Rules of Procedure define the certification process and the level of certification.

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Organization	Yes or No	Question 3 Comment
		Also, we believe the word “all” should be inserted after the word “among”, so that it is clear that all generation, transmission and load must be included. Response: Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.
Response: The RCSDT thanks you for your comment.		
CECD	Yes	
Indeck Energy Services	No	
City of Springfield, IL - City Water Light and Power (CWLP)	Yes	
South Carolina Electric and Gas	No	We think you are attempting to create a requirement similar to BAL-005, R1. That language copied here is clear and concise - All generation, transmission, and load operating within an Interconnection must be included within the metered boundaries of a Balancing Authority Area.
Response: The RCSDT thanks you for your comment. Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.		
Independent Electricity System Operator	No	1. R2: The word “of” before Transmission Operators should be “to”. Response: The requirement was rewritten for clarity as follows: R2. Each Reliability Coordinator shall take actions or direct actions (which could include issuing Reliability Directives) by Transmission Operators, Balancing Authorities, Generator Operators, and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. 2. The VSL for R1 should be revised to replace Regional Entities with ERO. Response: Many commenters suggested removing the requirement because it is addressed in the NERC Rules of Procedure. The RCSDT concurs and has removed R1 from IRO-001-2.
Response: The RCSDT thanks you for your comment.		

4.

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Do you agree with moving two requirements from IRO-001 back to IRO-002 relating to Analysis Tool outages? If not, please explain in the comment area below.

Summary Consideration: There were no comments on this question. The SDT thanks you for your consideration of and agreement with this position.

Organization	Yes or No	Question 4 Comment
Northeast Power Coordinating Council	Yes	
Bonneville Power Administration	Yes	
PPL	Yes	
SERC OC Standards Review Group	Yes	
IRC Standards Review Committee	Yes	
MRO's NERC Standards Review Subcommittee	Yes	
FirstEnergy	Yes	
Midwest ISO Standards Collaborators	Yes	
SPP Standards Development	Yes	
Kansas City Power & Light	Yes	
Exelon		Comments: No comment - only applicable to RC
PacifiCorp	Yes	

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Organization	Yes or No	Question 4 Comment
Arizona Public Service Company	Yes	
Southern Company	Yes	
Green Country Energy, Green Country Operating Services		No Comment
Manitoba Hydro	Yes	
United Illuminating Company	Yes	
Pepco Holdings Inc	Yes	
American Transmission Company	Yes	
ISO New England	Yes	
ERCOT ISO	Yes	
WECC	Yes	
BGE	Yes	BGE has no additional comments.
Constellation Energy Commodities Group	Yes	
Duke Energy	Yes	
CECD	Yes	
Indeck Energy Services	Yes	
South Carolina Electric and Gas	Yes	

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Organization	Yes or No	Question 4 Comment
Independent Electricity System Operator	Yes	

5. Do you agree with moving two requirements from IRO-001 back to IRO-005 relating to Reliability Coordinator notifications? If not, please explain in the comment area below.

Summary Consideration: Commenters noted a typographical error in R1 which was corrected to read

R1. When the results of an Operational Planning Analysis or Real-time Assessment indicate an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify ~~issue an alert to~~ all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

One commenter also asked that an errant yellow text box be removed from Page 1, which was also done.

Organization	Yes or No	Question 5 Comment
Northeast Power Coordinating Council	No	R1 states “When the results of an Operational Planning Analysis or Real-time Assessment indicate an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.” The word “notify” should be struck.
Response: The SDT thanks you for your comment and will correct this typographical error to remove the words “issue an alert.”		
Bonneville Power Administration	Yes	
PPL	Yes	
SERC OC Standards Review Group	Yes	Please remove the yellow box on page 1 indicating this standard will be retired.
Response: The SDT thanks you for your comment and will remove the yellow box on page 1.		
IRC Standards Review Committee	Yes	R1 states “When the results of an Operational Planning Analysis or Real-time Assessment indicate an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.” The word “notify” should be struck.
Response: The SDT thanks you for your comment and will correct this typographical error to remove the words “issue an alert.”		

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Organization	Yes or No	Question 5 Comment
MRO's NERC Standards Review Subcommittee	Yes	
FirstEnergy	Yes	
Midwest ISO Standards Collaborators	Yes	
SPP Standards Development	Yes	
Kansas City Power & Light	Yes	
Exelon		Comments: No comment - only applicable to RC
PacifiCorp	Yes	
Arizona Public Service Company	Yes	
Southern Company	Yes	
Green Country Energy, Green Country Operating Services		No Comment
Manitoba Hydro	Yes	
United Illuminating Company	Yes	
Pepco Holdings Inc	Yes	
American Transmission Company	Yes	
ISO New England	Yes	R1 states "When the results of an Operational Planning Analysis or Real-time Assessment indicate an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify issue an alert to all impacted Transmission Operators and Balancing

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Organization	Yes or No	Question 5 Comment
		Authorities in its Reliability Coordinator Area.” The word “notify” should be struck.
Response: The SDT thanks you for your comment and will correct this typographical error to remove the words “issue an alert.”		
ERCOT ISO	Yes	R1 states “When the results of an Operational Planning Analysis or Real-time Assessment indicate an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.” The word “notify” should be struck.
Response: The SDT thanks you for your comment and will correct this typographical error to remove the words “issue an alert.”		
WECC	Yes	
BGE	Yes	BGE has no additional comments.
Constellation Energy Commodities Group	Yes	
Duke Energy	Yes	
CECD	Yes	
Indeck Energy Services	Yes	
South Carolina Electric and Gas	Yes	
Independent Electricity System Operator	Yes	

6. Do you have any other comment, not expressed in questions above, for the RC SDT?

Summary Consideration:

The RCSDT received comments suggesting clarification of COM-002-3. The RCSDT intends the communication of Reliability Directives to be person-to-person and in such a manner that the Reliability Directive is understood and not necessarily repeated verbatim. COM-002-3 is not intended to be prescriptive on how the Reliability Directive is issued. Spoken or written communications are valid methods (i.e. using the telephone, radio, electronic texting, email, etc.). The purpose of COM-002-3 is to ensure emergency communications between operating personnel are effective. There is no proxy requirement for 24/7 operating personnel regarding small entities. Only “capability” as provided for in COM-001-2 is applicable. The RCSDT agrees that the use of Blast Calls to issue Reliability Directives, in mass, is efficient and effective. The RCSDT believes Reliability Directives issued in mass should be defined by procedure, and that the procedure would establish a method of affirmation and notice of implementation. As envisioned, communications protocols would be addressed in the COM-003 standard being developed in Project 2007-02.

Some commenters suggested revisions to IRO-014, requirement R8 to conform to similar requirements R6 and R7. The RCSDT made the suggested revision by re-ordering R8:

R8. During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, each Reliability Coordinator shall implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact unless such actions would violate safety, equipment, regulatory or statutory requirements. [Violation Risk Factor: High][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

IRO-014-2, requirement R4 is applicable to those Reliability Coordinators engaged in activities related to requirement R1 and part 1.7, it is unlikely that Reliability Coordinators geographically and electrically distant from one another will have mutually agreed upon operating procedures (per requirement R1), and therefore requirement R4 would not be applicable. The RCSDT believes IRO-014-2, requirement R4 which requires weekly communication provides reasonable contact and flexibility – and this requirement is in effect today. The RCSDT coordinated the use of the NERC Glossary term “Adverse Reliability Impact” with the Real-Time Operations team and continues the practice of informing all RCs of Adverse Reliability Impacts in requirement R5. The RCSDT has revised IRO-014-2, requirements R6-R8 to clarify that when one RC identified a problem and presents an action plan for another RC, the second RC is obligated to implement the action plan. The RCSDT will forward the concern about RC's identifying themselves and the receiver to establish authority to the Project 2007-02, Operating Personnel Communications Protocols SDT. The Project 2007-02 team is developing a standard that includes requirements for use of specific communications protocols.

Organization	Yes or No	Question 6 Comment
Northeast Power Coordinating		The SDT did not address all concerns with COM-002-3 from the last posting. For entities registered as multiple functions, the combination of the definition of Reliability Directive and Requirement R1 could be

Organization	Yes or No	Question 6 Comment
Council		confused to require a company to issue directives to itself. There are several organizations registered as a Reliability Coordinator, Transmission Operator and Balancing Authority. In these companies, it is not uncommon for those responsibilities to be distributed across multiple desks. Thus, for certain situations, a single System Operator may actually be the Reliability Coordinator and the Transmission Operator. In other situations, the System Operator serving the Reliability Coordinator function may be adjacent to the System Operator serving as the Transmission Operator or Balancing Authority. It should never be necessary for these System Operators to issue Reliability Directives to themselves in the first example or to their co-worker in the second example to demonstrate compliance to NERC standards. How the entity coordinates its actions among its Reliability Coordinator, Balancing Authority and Transmission Operator roles is a corporate governance issue that should not be confused or complicated by the NERC standards. Thus, standards should be made clear that the Reliability Directive is directed to another company. In place of requiring an operator, in real-time, to state “this is a Reliability Directive,” there should be an allowance for an entity to develop procedures indicating, in advance, their expectations for three-part communications to their sub-operating entities. Therefore, we suggest modifying R1 to be “When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action, either verbally, when the communication is issued, or in advance through documented procedures, as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time.]” Response: COM-002 does not preclude text or other forms of communication for issuing Reliability Directives. However, entities still must comply with the requirements of COM-002. Further, the RCS DT believes it to be equally imperative that each NERC registered function hold the authority to issue Reliability Directives, and the ability to receive Reliability Directives, whether those Reliability Directives are issued to subordinate registered functions within a vertically integrated utility, or to registered entities that are corporately separate. The RCS DT believes the following response to draft 3 comments still holds true: “The way that COM-002 is crafted, it focuses on functional entity communication between and among functions. Face-to-face communication of Reliability Directives are subject to the requirements of COM-002 and can be measured for COM-002 by allowing Operator Logs as possible evidence to support compliance”. The use of operator logs to memorialize and provide evidence of compliance is directly specific to those Reliability Directives issued and received within the same control room or operations center. The RCS DT believes that any Registered Entity or person operating as such must understand the intent of the issued Reliability Directive, and that the issuer of the Reliability Directive believe that the Reliability Directive was correctly received. COM-002 should not be construed to mean that an individual serving in two functions be

Organization	Yes or No	Question 6 Comment
		required to issue a Reliability Directive to himself, but rather it is expected that such an individual would appropriately address the reliability issues as required by the function they are serving and its subsequent responsibilities. Also, the definition of Emergency as currently cited in these draft Standards and included in the existing NERC Glossary should be modified to include the NERC Glossary term Adverse Reliability Impact to make the Standards more crisp, clear and enforceable. Because the Project 2007-03 Real-Time Operations SDT proposed to utilize the definition of Adverse Reliability Impact in TOP-001-2 R5 during the last posting, the change to the definition should be coordinated with that team. Response: With respect to the suggestion of modifying the definition of Emergency. The RCSDT believes that the term Emergency relates to the actual state of the system, including local and wide area, while an Adverse Reliability Impact is the impact resulting from an event resulting in instability or cascading that affects a widespread area of an Interconnection. There could be an Emergency that is local, or that threatens equipment but which does not necessarily result in cascading or instability; it is in this regard that the RCSDT believes that the definition of Emergency should not be dependent upon or pertain only to Adverse Reliability Impact events. The RCSDT coordinated the use of Adverse Reliability Impacts with the Real-Time Operations team. There is a text box in IRO-005-4 that indicates this standard will be retired. Yet, there still remain requirements in the standard and various other associated documentation that indicates requirements are being move to this standard. Delete the text box. Response: We have deleted the text box. Strike IRO-014-2 Part 1.7. There is no need to have a weekly conference to discuss every Operating Procedure, Operating Process and Operating Plan. As this requirement is written, a conference call would be necessary for each. Furthermore, IRO-014-2 R4 already includes a requirement to have weekly conference calls that should suffice. IRO-014-2 R2 seems to recognize that these Operating Procedures, Processes and Plans likely will not need to be discussed weekly as it only requires an annual update. Response: The intent of R1 is for Reliability Coordinators to coordinate specific activities with other impacted Reliability Coordinators. These activities are listed as sub requirements. R1.7 requires you to have a procedure relating to weekly conference calls while R4 requires participation in weekly calls. Further, the RCSDT believes that it is prudent that Reliability Coordinators talk at least once a week to verify viability of mutual plans, procedures or processes. With respect to the relation of IRO-14-2 R1.7 and R4. R1.7 is requires you to have a procedure relating to

Organization	Yes or No	Question 6 Comment
		weekly conference calls while R4 requires participation in weekly calls. Requirement R2 in IRO-001 contains the words “which could include issuing Reliability Directives”, but Reliability Directives are not referenced anywhere else in the standard. This inclusion seems unnecessary since without it, R2 already requires that the RC take actions or direct actions by others to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. Whether or not a Reliability Directive is issued is irrelevant in this requirement. These words should be removed. Note that COM-002 already stipulates the requirement for 3-part communication when a Reliability Directive is issued. The inclusion of “which could include issuing Reliability Directives” in IRO-001 is unnecessary. Response: R2 requires the Reliability Coordinator to act. These actions could include Reliability Directives in the case of an Emergency; however, issuing Reliability Directives might not always be necessary, as the Reliability Coordinator may be acting proactively well in advance of an emergency. R2 promotes this proactive approach, but reserves the use of Reliability Directives for circumstances that require its use.
Response: The RCS DT thanks you for your comments.		
PPL		We are providing the following comments for the Standards Drafting Team to consider. 1) Consider changing R1 to ‘Each RC shall have the capability for Interpersonal Communications with the following entities to exchange Interconnection and operating information...’ for clarity as Interpersonal Communications and capability are both nouns. Response: Thank you for your suggestion to modify the sentence structure into a noun phrase, however the RCS DT believes the current form is unambiguous. 2) We feel changing the applicability of the standard is important to the accuracy of the standard. The purpose of COM-002 is ‘To ensure emergency communications between operating personnel are effective’. Since operating personnel are covered by the applicability of RC, BA, TOP and GOP, we suggest the applicability to TSP, LSE, and PSE be removed from COM-002-3. Response: We agree and have removed those entities 3) Additionally, we would like to bring to the attention of the Standards Drafting Team, that the implementation plan for COM-001-2 and IRO-001-2 still includes TSP, LSE, and PSE although the revised standard does not include these entities in the Applicability Section. For COM-001-2 refer to the implementation plan, page 1. For IRO-001-2 refer to the implementation plan for new R2, new R3, new R4

Consideration of Comments on Reliability Coordination — Project 2006-06

Organization	Yes or No	Question 6 Comment
		and the chart on the last page. Thank you for your consideration in addressing these comments. Response: The RCSDT has revised the applicability of COM-001, COM-002 and IRO-001 to align with each other. TSP, LSE and PSE are no longer in either standard.
Response: The RCSDT thanks you for your comments.		
PSEG		IRO COM-002-3 standard continues to include PSE. PSE's do not play an active role and have no authority or ability to perform reliability coordination. PSE's should be removed from the standard.-001-2 references PSE's in the implementation for R2, R3, R4 and "Functions that must comply with the requirements in this standard" table. PSE's were removed from the standard and should be removed from the implementation plan.
Response: The RCSDT thanks you for your comments. The RCSDT has revised the applicability of COM-001 and COM-002 to align with each other. TSP, LSE and PSE are no longer in either standard.		
Dominion		We do not agree with the addition of weekly conference calls as required in R4. We believe that RCs should schedule calls as needed but do not agree that a weekly scheduled call improves reliability.
Response: The RCSDT thanks you for your comments. The requirement for weekly conference calls exists in IRO-015-1. The RCSDT has revised the requirement and incorporated it into proposed IRO-014-2. R2. The Reliability Coordinator shall participate in agreed upon conference calls and other communication forums with adjacent Reliability Coordinators. R2.1. The frequency of these conference calls shall be agreed upon by all involved Reliability Coordinators and shall be at least weekly.		
SERC OC Standards Review Group		Reliability Directives may be issued by blast calls from Reliability Coordinators. It is inefficient and may be a hindrance to reliability to require 3-part communications in these instances. Response: The RCSDT agrees that the use of Blast Calls to issue Reliability Directives, in mass, is efficient and effective. However the essence of accurately implementing Reliability Directives is accomplished by use of 3-part communications. The RCSDT believes Reliability Directives issued in mass should be defined by procedure, and that the procedure would establish a method of affirmation and notice of implementation. There are several organizations registered as BAs, RCs and TOPs. It is not uncommon for those entities to be distributed across multiple desks in the same control room without regard to how an entity is registered.

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		Thus, a single System Operator may perform functions that are categorized under two or more of those functional entities. The drafting team should clarify that under no circumstances should that System Operator be required to issue a Reliability Directive to himself. This is a corporate governance issue. Response: COM-002 does not preclude text or other forms of communication for issuing Reliability Directives. However, entities still must comply with the requirements of COM-002. Further, the RCS DT believes it to be equally imperative that each NERC registered function hold the authority to issue Reliability Directives, and the ability to receive Reliability Directives, whether those Reliability Directives are issued to subordinate registered functions within a vertically integrated utility, or to registered entities that are corporately separate. The RCS DT believes the following response to draft 3 comments still holds true: “The way that COM-002 is crafted, it focuses on functional entity communication between and among functions. Face-to-face communication of Reliability Directives are subject to the requirements of COM-002 and can be measured for COM-002 by allowing Operator Logs as possible evidence to support compliance”. The use of operator logs to memorialize and provide evidence of compliance is directly specific to those Reliability Directives issued and received within the same control room or operations center. The RCS DT believes that any Registered Entity or person operating as such must understand the intent of the issued Reliability Directive, and that the issuer of the Reliability Directive believe that the Reliability Directive was correctly received. COM-002 should not be construed to mean that an individual serving in two functions be required to issue a Reliability Directive to himself, but rather it is expected that such an individual would appropriately address the reliability issues as required by the function they are serving and its subsequent responsibilities. In IRO-014, R1, delete sub-requirement 1.7. The requirement for weekly conference calls related to operating procedures is duplicative to R4 and could be burdensome while adding very little value under certain circumstances. In IRO-014, R4, delete the phrase “(per Requirement 1, Part 1.7)” as a conforming change. Response: The intent of R1 is for Reliability Coordinators to coordinate specific activities with other impacted Reliability Coordinators. These activities are listed as sub requirements. R1.7 requires you to have a procedure relating to weekly conference calls while R4 requires participation in weekly calls. Further, the RCS DT believes that it is prudent that Reliability Coordinators talk at least once a week to verify viability of mutual plans, procedures or processes. In IRO-014, Requirements R6-R8 allow at least the theoretical possibility that an RC may determine an Adverse Reliability Impact in another RC’s area that the other RC neither can see nor believes that any

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		action should be taken. R7 puts the burden on the first RC to develop a plan that it cannot implement because it has no agreement with the BAs and TOPs in the other RC area. As such, this requirement is unenforceable. Response: Requirements R6-R8 are translated from IRO-016-1, Requirement R1. If an RC sees a problem and another does not see the same problem, then there may be an issue with someone's model or processes or procedures. The RC's are supposed to have coordinated Operating Plans, Processes or Procedures to operate reliably. R6-R8 are only applicable if one of the two (or more) RCs do not see that a problem exists. It would be a detriment to reliability for both RCs to take no action. RCs are required to coordinate actions under existing IRO-016-1, R1. If one RC identifies a problem and provides an action plan to another RC to mitigate the problem, the second RC is obligated under R8 to implement it. We have revised the R8 to clarify this intent. R8. During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, each Reliability Coordinator shall implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact unless such actions would violate safety, equipment, regulatory or statutory requirements. IRO-014-2, Revised R8. During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, each Reliability Coordinator shall implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact unless such actions would violate safety, equipment, regulatory or statutory requirements. Please review all the implementation plans to be sure the applicable entities match those in the standards. Response: These have been updated. "The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Standards Review group only and should not be construed as the position of SERC Reliability Corporation, its board or its officers."
Response: The RCSDT thanks you for your comments.		
IRC Standards Review Committee		The SDT did not address all of our concerns with COM-002-3 from the last posting. For entities registered as multiple functions, the combination of the definition of Reliability Directive and Requirement R1 could be confused to require a company to issue directives to itself. There are several organizations registered as a Reliability Coordinator, Transmission Operator and Balancing Authority. In these companies, it is not uncommon for those responsibilities to be distributed across multiple desks. Thus, for certain situations, a single System Operator may actually be the Reliability Coordinator and the Transmission Operator. In other situations, the System Operator serving the Reliability Coordinator function may be adjacent to the System Operator serving the as the Transmission Operator or Balancing Authority. We believe that it should never be necessary for these System Operators to issue Reliability Directives to themselves in the first example or to

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		their co-worker in the second example to demonstrate compliance to NERC standards. How the entity coordinates its actions among its Reliability Coordinator, Balancing Authority and Transmission Operator roles is a corporate governance issue that should not be confused or complicated by the NERC standards. Thus, we believe that standards should be made clear that the Reliability Directive is directed to another company. Response: COM-002 does not preclude text or other forms of communication for issuing Reliability Directives. However, entities still must comply with the requirements of COM-002. Further, the RCSDT believes it to be equally imperative that each NERC registered function hold the authority to issue Reliability Directives, and the ability to receive Reliability Directives, whether those Reliability Directives are issued to subordinate registered functions within a vertically integrated utility, or to registered entities that are corporately separate. The RCSDT believes the following response to draft 3 comments still holds true: “The way that COM-002 is crafted, it focuses on functional entity communication between and among functions. Face-to-face communication of Reliability Directives are subject to the requirements of COM-002 and can be measured for COM-002 by allowing Operator Logs as possible evidence to support compliance”. The use of operator logs to memorialize and provide evidence of compliance is directly specific to those Reliability Directives issued and received within the same control room or operations center. The RCSDT believes that any Registered Entity or person operating as such must understand the intent of the issued Reliability Directive, and that the issuer of the Reliability Directive believe that the Reliability Directive was correctly received. COM-002 should not be construed to mean that an individual serving in two functions be required to issue a Reliability Directive to himself, but rather it is expected that such an individual would appropriately address the reliability issues as required by the function they are serving and its subsequent responsibilities. We believe that, in place of requiring an operator, in real-time, to state “this is a Reliability Directive,” there should be an allowance for an entity to develop procedures indicating, in advance, their expectations of three-part to their sub-operating entities. Therefore, we suggest modifying R1 to be “When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action, either verbally, when the communication is issued, or in advance through documented procedures, as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time.]” Response: In regards to your suggested modification of R1 to include “or in advance through documented

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		procedures”, the intent of R1 in its current form is to provide that ability, as such any documented procedure would require stating such implemented action is considered a response to a Reliability Directive. And would follow acknowledge and confirmation requirements. Also, we believe that the definition of Emergency, as currently cited in these draft Standards and included in the existing NERC Glossary should be modified to include the NERC Glossary term Adverse Reliability Impact to make the Standards more crisp, clear and enforceable. Because the Project 2007-03 Real-Time Operations SDT proposed to utilize the definition of Adverse Reliability Impact in TOP-001-2 R5 during the last posting, the change to the definition should be coordinated with that team. Response: The RCSDT believes that the term Emergency relates to the actual state of the system, including local and wide area, while an Adverse Reliability Impact is the impact resulting from an event resulting in instability or cascading that affects a widespread area of an Interconnection. There could be an Emergency that is local, or that threatens equipment but which does not necessarily result in cascading or instability; it is in this regard that the RCSDT believes that the definition of Emergency should not be dependent upon or pertain only to Adverse Reliability Impact events. The RCSDT coordinated the use of Adverse Reliability Impacts with the Real-Time Operations team. There is a text box in IRO-005-4 that indicates this standard will be retired. Yet, there still remain requirements in the standard and various other associated documentation indicates requirements are being move to this standard. Response: The text box was removed. Please delete the text box. IRO-014-2 R4 already includes a requirement to have weekly conference calls that should suffice. IRO-014-2 R2 seems to recognize that these Operating Procedures, Processes and Plans likely will not need to be discussed weekly as it only requires an annual update. Response: The intent of R1 is for Reliability Coordinators to coordinate specific activities with other impacted Reliability Coordinators, these activities are listed as sub requirements. Further the RCSDT believes that it is prudent that Reliability Coordinators talk at least once a week to verify viability of mutual plans, procedures or processes. The relation of IRO-14-2 R1.7 to R4 is that R1.7 requires having a conference call, R4 requires participation by all impacted Reliability Coordinators, as such, neither replaces the other. In the definition of Reliability Directive, we suggest changing “to address an Emergency” to “to address a reliability constraint or a declared Emergency”. The RCSDT believes that reliability constraint is ambiguous and undefined, thus introducing confusion. Further modifying Reliability Directive by including “declared Emergency” would add unnecessary step in mitigation of the Emergency

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		Further, Requirement R2 in IRO-001 contains the words “which could include issuing Reliability Directives” but Reliability Directives are not referenced anywhere else in the standard. This inclusion seems unnecessary since without it, R2 already requires that the RC take actions or direct actions by others to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. Whether or not a Reliability Directive is issued is irrelevant in this requirement. We suggest that these words be removed. Note that COM-002 already stipulates the requirement for 3-part communication when a Reliability Directive is issued. The inclusion of “which could include issuing Reliability Directives” in IRO-001 is unnecessary. Response: R2 requires the Reliability Coordinator to act, these actions could in include Reliability Directives in the case of an Emergency, however issuing Reliability Directives it might not always be necessary, as the Reliability Coordinator may be acting pro-active well in advance of an emergency. R2 promotes this pro-active approach, but reserves the use of Reliability Directives for circumstances that require its use.
Response: The RCSDT thanks you for your comments.		
Midwest ISO Standards Collaborators		The SDT did not address all of our concerns with COM-002-3 from the last posting. For entities registered as multiple functions, the combination of the definition of Reliability Directive and Requirement R1 could be confused to require a company to issue directives to itself. There are several organizations registered as a Reliability Coordinator, Transmission Operator and Balancing Authority. In these companies, it is not uncommon for those responsibilities to be distributed across multiple desks. Thus, for certain situations, a single System Operator may actually be the Reliability Coordinator and the Transmission Operator. In other situations, the System Operator serving the Reliability Coordinator function may be adjacent to the System Operator serving the as the Transmission Operator or Balancing Authority. We believe that it should never be necessary for these System Operators to issue Reliability Directives to themselves in the first example or to their co-worker in the second example to demonstrate compliance to NERC standards. How the entity coordinates its actions among its Reliability Coordinator, Balancing Authority and Transmission Operator roles is a corporate governance issue that should not be confused or complicated by the NERC standards. Thus, we believe that standards should be made clear that the Reliability Directive is directed to another company. Response: COM-002 does not preclude text or other forms of communication for issuing Reliability Directives. However, entities still must comply with the requirements of COM-002. Further, the RCSDT believes it to be equally imperative that each NERC registered function hold the authority to issue Reliability Directives, and the ability to receive Reliability Directives, whether those Reliability Directives are issued to subordinate registered functions within a vertically integrated utility, or to registered entities that are corporately separate. The RCSDT believes the following response to draft 3 comments still holds true: “The way that COM-002 is crafted, it focuses on functional entity communication between and among functions. Face-to-face communication of Reliability Directives are subject to the requirements of COM-

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		002 and can be measured for COM-002 by allowing Operator Logs as possible evidence to support compliance”. The use of operator logs to memorialize and provide evidence of compliance is directly specific to those Reliability Directives issued and received within the same control room or operations center. The RCSdT believes that any Registered Entity or person operating as such must understand the intent of the issued Reliability Directive, and that the issuer of the Reliability Directive believe that the Reliability Directive was correctly received. COM-002 should not be construed to mean that an individual serving in two functions be required to issue a Reliability Directive to himself, but rather it is expected that such an individual would appropriately address the reliability issues as required by the function they are serving and its subsequent responsibilities. We also are concerned about the need to conduct three-part communications for a Reliability Directive issued through a blast call. Under these circumstances, the need for immediate action of multiple parties may require a blast call and there may not be time for all parties to complete three-part communications before initiating actions. Thus, we believe blast calls should be treated separately and that should be made clear. Response: The RCSdT agrees that the use of Blast Calls to issue Reliability Directives, in mass, is efficient and effective. However the essence of accurately implementing Reliability Directives is accomplished by use of 3-part communications. The RCSdT believes Reliability Directives issued in mass should be defined by procedure, and that the procedure would establish a method of affirmation and notice of implementation. COM-002-3 R2 needs to be rewritten as it is too verbose. The point is for the recipient of the original message to get the issuer to confirm that the message was understood. We suggest rewording R2 to “Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive.” Once the receiver has completed this requirement, the ball is in the issuer’s court per Requirement R3. No additional words are necessary in the requirement. Response: The RCSdT believes that the additional verbiage is necessary to ensure that an entity understands the Reliability Directive and is able to communicate that understanding back to the Reliability

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		Coordinator. It is not necessary to repeat the exact same verbiage of the Reliability Directive, but rather the intent of the actions required. Having to repeat verbiage of the Reliability Directive word-for-word could be an impediment to achieving the reliability intent of the Reliability Directive when the focus is on repeating verbatim. Per COM-002-3 R1, who decides that actions need to be issued as a Reliability Directive? Shouldn't it be the responsible entity? Thus, can we assume that if the responsible entity does not identify a communication as a Reliability Directive that it is not a Reliability Directive per the requirement? After all, why would an entity require actions but not issue a Reliability Directive. Following this logic, the VSL for R1 would never apply. Would a compliance auditor second guess if an action required a Reliability Directive? Response: Those orders issued as a Reliability Directive, and identified as such, will heighten awareness, tighten communications and require the receiver of the Reliability Directive to prioritize its response. Moreover, linking Reliability Directives to Emergencies establishes that normal non-Emergency operating communications or actions are not applicable to COM-002. Because the Project 2007-03 Real-Time Operations SDT proposed to utilize the definition of Adverse Reliability Impact in TOP-001-2 R5 during the last posting, the change to the definition should be coordinated with that team. Response: The RCSDT coordinated the use of Adverse Reliability Impacts with the Real-Time Operations team There is a text box in IRO-005-4 that indicates this standard will be retired. Yet, there still remain requirements in the standard and various other associated documentation indicates requirements are being move to this standard. Please delete the text box. Response: The text box has been removed. Please strike part IRO-014-2 Part 1.7. There is no need to have a weekly conference to discuss every Operating Procedure, Operating Process and Operating Plan. As this requirement is written, a conference call would be necessary for each. Furthermore, IRO-014-2 R4 already includes a requirement to have weekly conference calls that should suffice. IRO-014-2 R2 seems to recognize that these Operating Procedures, Processes and Plans likely will not need to be discussed weekly as it only requires an annual update. Response: The intent of R1 is for Reliability Coordinators to coordinate specific activities with other impacted

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		Reliability Coordinators, these activities are listed as sub requirements. R1.7 is requires you to have a procedure relating to weekly conference calls while R4 requires participation in weekly calls. Further the RCSDT believes that it is prudent that Reliability Coordinators talk at least once a week to verify viability of mutual plans, procedures or processes. IRO-014-2 R4 is overly broad and would require Reliability Coordinators that will not impact one another to participate on conference calls with one another without any reliability benefit. The issue is created by the addition of the clause “within the same Interconnection” to the requirement. ISO-NE, FRCC, Midwest ISO, and SPP are all in the same Interconnection. It is hard to fathom there being reliability benefit to SPP and ISO-NE conversing weekly or Midwest ISO and FRCC conversing weekly. We suggest limiting the requirement to adjacent Reliability Coordinators. Response: IRO-14-2 R4 is applicable to those Reliability Coordinators engaged in activities related to R1 and subsequently R1.7, it is unlikely that Reliability Coordinators whom are geographically and electrically distant will have <i>mutually agreed upon</i> operating procedures (per R1), and as such they are not applicable to R4. For IRO-014-2 R5, we suggest replacing “other” with “impacted” to limit the notification of Adverse Reliability Impacts to only those Reliability Coordinators that need to know. Because the definition of Adverse Reliability Impact includes “Bulk Electric System instability or Cascading”, it is possible that the cascading of 138 kV lines serving a load pocket or generator outlet stability issues could require a Reliability Coordinator to notify all other Reliability Coordinators regardless of impact. This would include Reliability Coordinators outside of the Interconnection with the problem. It would also include Reliability Coordinators that are not impacted. For instance, an issue in New England that would not pose a threat outside the northeast would require ISO-NE to notify SPP and FRCC and Reliability Coordinators in the Western Interconnection. There is no reliability benefit to this notification. Response: This requirement continues the current practice of informing all RCs of ARIs. Due to the nature of an ARI, this requirement is typically implemented as an RCIS message or a hotline call to all RC’s. This is intended to make all RCs aware of ARIs and support situational awareness. IRO-014-2 R6-R8 are problematic and need to be refined to make clear that the Reliability Coordinators shall operate to the most conservative limit. It should not require a Reliability Coordinator that disagrees with an action plan to implement the action plan. The Reliability Coordinator will be disagreeing with the action plan for reliability reasons. Assuming they are correct, the requirement to implement said action plan will actually put the Interconnection at greater risk. These requirements inappropriately attempt to codify the debate and analysis that occurs between and within Reliability Coordinators when there are differing results in reliability

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		analysis. This is part of the problem with having a Wide Area view that results in Reliability Coordinators having a view into other Reliability Coordinator Areas. Their results and conclusions may be different. There should be a hierarchical structure for whose results should be used. It should be the Reliability Coordinator with primary responsibility unless the other Reliability Coordinator has evidence to demonstrate that the Reliability Coordinator with primary responsibility is incorrect. What this should do is to trigger both to review their models and data to assess the problem. None of this needs to be codified in the standards though. Response: Requirements R6-R8 are translated from IRO-016-1, Requirement R1. If an RC sees a problem and another does not see the same problem, then there may be an issue with someone's model or processes or procedures. The RC's are supposed to have coordinated Operating Plans, Processes or Procedures to operate reliably. R6-R8 are only applicable if one of the two (or more) RCs do not see that a problem exists. It would be a detriment to reliability for both RCs to take no action. RCs are required to coordinate actions under existing IRO-016-1, R1. If one RC identifies a problem and provides an action plan to another RC to mitigate the problem, the second RC is obligated under R8 to implement it. We have revised the R8 to clarify this intent. In the definition of Reliability Directive, we suggest changing "to address an Emergency" to "to address a declared Emergency". This would help limit second guessing for a situation where a System Operator took action because he truly believed he was an Emergency but after the fact analysis demonstrates there really was not an Emergency. Response: Modifying Reliability Directive by including "declared Emergency" would add an unnecessary step in mitigation of the Emergency. The act of issuing a Reliability Directive to address an Emergency (per the proposed definition) is sufficient. The drafting team should expand its rationale for deleting IRO-002-1 R3. Currently, TOP-005 R1 is referenced. The Real-Time Operations drafting team proposed to retire TOP-005-2 R1 in its most recent posting. Response: The data provisions are covered in recently approved IRO-010-1, R1-R3 which replaced TOP-005-1, R1. The secure network provisions are covered in the CIP body of standards. We disagree with deleting IRO-002-1 R5 and R7 which establish tools and monitoring capabilities. There should be basic tools requirements established for Reliability Coordinators. Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities will be addressing these issues in more detail. Thus, it does not make sense to delete these requirements until that drafting team completes its task. Response: Each RC has been certified to continue operations as an RC or been certified prior to beginning operations as an RC. The minimum set of tools and capabilities for an RC are "checked off" during the certification process. The reliability objective of R5 and R7 is to perform analyses to ensure reliability of the

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		BES by specifying capability rather than mandating specific tools. The analysis provisions of R5 and R7 are covered under IRO-008-1, Requirements R1 (perform Operational Planning Analysis) and R2 (perform Real-time Analysis). It is anticipated that Project 2009-02 team will address this issue more fully.
MRO's NERC Standards Review Subcommittee		A. COM-002-3, R2 As stated in FERC Order 693, section 512, it is essential that RCs, BA's and TOP's have communications with DPs. R2 also applies to TSPs, LSEs and PSEs. There is no directive for this and it is going to be almost impossible to communicate with a DP since DPs are usually not operated 24 hours per day as like a RC, TOP, or BA. Many DPs have answering services that will relay a message once they receive it and then pass it along to someone. An answering company could repeat the directive word for word but this will not add to any reliability level. The SDT should reconsider the applicability section of this Standard to only apply to a RC, TOP and BA for the issuance of a Reliability Directive. BA's should have the responsibility to have an Interpersonal Communication medium with DPs in their BA area per COM-001-2. Response: The purpose of COM-002 is "To ensure emergency communications between operating personnel are <u>effective</u>." It is not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication, in many cases this may be via a receptionist, or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan. B. IRO-002-2, R1, Recommend that "System Operators" be replaced with "system operators" since NERC has defined System Operator to be an individual at a control center (BA, TOP, GOP, or RC). The lower cased system operator will only point to the RC system operator that will have this R1 authority. Response: IRO-002-2 is applicable only to Reliability Coordinators, as such the using System Operator as it defined by the NERC Glossary of terms is appropriate. C. The SDT did not address all of our concerns with COM-002-3 from the last posting. For entities registered as multiple functions, the combination of the definition of Reliability Directive and Requirement R1 could be confused to require a company to issue directives to itself. There are several organizations registered as a Reliability Coordinator, Transmission Operator and Balancing Authority. In these companies, it is not uncommon for those responsibilities to be distributed across multiple desks. Thus, for certain situations, a single System Operator may actually be the Reliability Coordinator and the Transmission Operator. In other situations, the System Operator serving the Reliability Coordinator function may be adjacent to the System Operator serving the as the Transmission Operator or Balancing Authority. We believe that it should never be necessary for these System Operators to issue Reliability Directives to themselves in the first example or to their co-worker in the second example to demonstrate compliance to NERC standards. How the entity

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		coordinates its actions among its Reliability Coordinator, Balancing Authority and Transmission Operator roles is a corporate governance issue that should not be confused or complicated by the NERC standards. Thus, we believe that standards should be made clear that the Reliability Directive is directed to another company. Response: COM-002 does not preclude text or other forms of communication for issuing Reliability Directives. However, entities still must comply with the requirements of COM-002. Further, the RCSDT believes it to be equally imperative that each NERC registered function hold the authority to issue Reliability Directives, and the ability to receive Reliability Directives, whether those Reliability Directives are issued to subordinate registered functions within a vertically integrated utility, or to registered entities that are corporately separate. The RCSDT believes the following response to draft 3 comments still holds true: “The way that COM-002 is crafted, it focuses on functional entity communication between and among functions. Face-to-face communication of Reliability Directives are subject to the requirements of COM-002 and can be measured for COM-002 by allowing Operator Logs as possible evidence to support compliance”. The use of operator logs to memorialize and provide evidence of compliance is directly specific to those Reliability Directives issued and received within the same control room or operations center. The RCSDT believes that any Registered Entity or person operating as such must understand the intent of the issued Reliability Directive, and that the issuer of the Reliability Directive believe that the Reliability Directive was correctly received. COM-002 should not be construed to mean that an individual serving in two functions be required to issue a Reliability Directive to himself, but rather it is expected that such an individual would appropriately address the reliability issues as required by the function they are serving and its subsequent responsibilities. D. We also are concerned about the need to conduct three-part communications for a Reliability Directive issued through a blast call. Under these circumstances, the need for immediate action of multiple parties may require a blast call and there may not be time for all parties to complete three-part communications before initiating actions. Thus, we believe blast calls should be treated separately and that should be made clear. Response: The RCSDT agrees that the use of Blast Calls to issue Reliability Directives, in mass, is efficient and effective. The RCSDT believes Reliability Directives issued in mass should be defined by procedure, and that the procedure would establish a method of affirmation and notice of implementation. E. COM-002-3 R2 needs to be rewritten as it is too verbose. The point is for the recipient of the original message to get the issuer to confirm that the message was understood. We suggest rewording R2 to “Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient

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		of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive.” Once the receiver has completed this requirement, the ball is in the issuer’s court per Requirement R3. No additional words are necessary in the requirement. Response: The RCSDT believes that the additional verbiage is necessary to ensure that an entity understands the Reliability Directive and is able to communicate that understanding back to the Reliability Coordinator. It is not necessary to repeat the exact same verbiage of the Reliability Directive, but rather the intent of the actions required. Having to repeat verbiage of the Reliability Directive word-for-word could be an impediment to achieving the reliability intent of the Reliability Directive when the focus is on repeating verbatim. F. Per COM-002-3 R1, who decides that actions need to be issued as a Reliability Directive? Shouldn’t it be the responsible entity? Thus, can we assume that if the responsible entity does not identify a communication as a Reliability Directive that it is not a Reliability Directive per the requirement? After all, why would an entity require actions but not issue a Reliability Directive. Following this logic, the VSL for R1 would never apply. Would a compliance auditor second guess if an action required a Reliability Directive? Response: Those orders issued as a Reliability Directive, and identified as such, will heighten awareness, tighten communications and require the receiver of the Reliability Directive to prioritize its response. Moreover, linking Reliability Directives to Emergencies establishes that normal non-Emergency operating communications or actions are not applicable to COM-002. G. Because the Project 2007-03 (“Real-Time Operations SDT”) proposed to utilize the definition of Adverse Reliability Impact in TOP-001-2 R5 during the last posting, the change to the definition should be coordinated with that team. Response: The RCSDT coordinated the use of Adverse Reliability Impacts with the Real-Time Operations team H. There is a text box in IRO-005-4 that indicates this standard will be retired. Yet, there still remain requirements in the standard and various other associated documentation indicates requirements are being move to this standard. Please delete the text box. Response: The text box has been removed. I. Please strike part IRO-014-2 Part 1.7. There is no need to have a weekly conference to discuss every Operating Procedure, Operating Process and Operating Plan. As this requirement is written, a conference call would be necessary for each. Furthermore, IRO-014-2 R4 already includes a requirement to have weekly conference calls that should suffice. IRO-014-2 R2 seems to recognize that these Operating Procedures,

Organization	Yes or No	Question 6 Comment
		Processes and Plans likely will not need to be discussed weekly as it only requires an annual update. Response: The intent of R1 is for Reliability Coordinators to coordinate specific activities with other impacted Reliability Coordinators, these activities are listed as sub requirements. R1.7 is requires you to have a procedure relating to weekly conference calls while R4 requires participation in weekly calls. Further the RCSDT believes that it is prudent that Reliability Coordinators talk at least once a week to verify viability of mutual plans, procedures or processes. J. IRO-014-2 R4 is overly broad and would require Reliability Coordinators that will not impact one another to participate on conference calls with one another without any reliability benefit. The issue is created by the addition of the clause “within the same Interconnection” to the requirement. ISO-NE, FRCC, Midwest ISO, and SPP are all in the same Interconnection. It is hard to fathom there being reliability benefit to SPP and ISO-NE conversing weekly or Midwest ISO and FRCC conversing weekly. We suggest limiting the requirement to adjacent Reliability Coordinators. Response: IRO-14-2 R4 is applicable to those Reliability Coordinators engaged in activities related to R1 and subsequently R1.7, it is unlikely that Reliability Coordinators whom are geographically and electrically distant will have <i>mutually agreed upon</i> operating procedures (per R1), and as such they are not applicable to R4. K. For IRO-014-2 R5, we suggest replacing “other” with “impacted” to limit the notification of Adverse Reliability Impacts to only those Reliability Coordinators that need to know. Because the definition of Adverse Reliability Impact includes “Bulk Electric System instability or Cascading”, it is possible that the cascading of 138 kV lines serving a load pocket or generator outlet stability issues could require a Reliability Coordinator to notify all other Reliability Coordinators regardless of impact. This would include Reliability Coordinators outside of the Interconnection with the problem. It would also include Reliability Coordinators that are not impacted. For instance, an issue in New England that would not pose a threat outside the northeast would require ISO-NE to notify SPP and FRCC and Reliability Coordinators in the Western Interconnection. There is no reliability benefit to this notification. Response: This requirement continues the current practice of informing all RCs of ARIs. Due to the nature of an ARI, this requirement is typically implemented as an RCIS message or a hotline call to all RC’s. This is intended to make all RCs aware of ARIs and support situational awareness. L. IRO-014-2 R6-R8 are problematic and need to be refined to make clear that the Reliability Coordinators shall operate to the most conservative limit. It should not require a Reliability Coordinator that disagrees with an action plan to implement the action plan. The Reliability Coordinator will be disagreeing with the action plan for a reliability reasons. Assuming they are correct, the requirement to implement said action plan will actually put the Interconnection at greater risk. These requirements inappropriately attempt to codify the debate and analysis that occurs between and within Reliability Coordinators when there are differing results in reliability analysis. This is part of the problem with having a Wide Area view that results in Reliability Coordinators

Organization	Yes or No	Question 6 Comment
		having a view into other Reliability Coordinator Area. Their results and conclusions may be different. There should be a hierarchical structure for whose results should be used. It should be the Reliability Coordinator with primary responsibility unless the other Reliability Coordinator has evidence to demonstrate that the Reliability Coordinator with primary responsibility is incorrect. What this should do is, to trigger both to review their models and data to assess the problem. None of this needs to be codified in the standards though. Response: Requirements R6-R8 are translated from IRO-016-1, Requirement R1. If an RC sees a problem and another does not see the same problem, then there may be an issue with someone's model or processes or procedures. The RC's are supposed to have coordinated Operating Plans, Processes or Procedures to operate reliably. R6-R8 are only applicable if one of the two (or more) RCs do not see that a problem exists. It would be a detriment to reliability for both RCs to take no action. RCs are required to coordinate actions under existing IRO-016-1, R1. If one RC identifies a problem and provides an action plan to another RC to mitigate the problem, the second RC is obligated under R8 to implement it. We have revised the R8 to clarify this intent. M. In the definition of Reliability Directive, we suggest changing "to address an Emergency" to "to address a declared Emergency". This would help limit second guessing for a situation where a System Operator took action because he truly believed he was in an Emergency but after the fact analysis demonstrates there really was not an Emergency. Response: Modifying Reliability Directive by including "declared Emergency" would add an unnecessary step in mitigation of the Emergency. The act of issuing a Reliability Directive to address an Emergency (per the proposed definition) is sufficient. N. The drafting team should expand its rationale for deleting IRO-002-1 R3. Currently, TOP-005 R1 is referenced. The project 2007-03 ("Real-Time Operations SDT") proposed to retire TOP-005-2 R1 in its most recent posting. Response: The data provisions are covered in recently approved IRO-010-1, R1-R3 which replaced TOP-005-1, R1. The secure network provisions are covered in the CIP body of standards. O. We disagree with deleting IRO-002-1 R5 and R7 which establishes tools and monitoring capabilities. There should be basic tool requirements established for Reliability Coordinators. The project 2009-02 ("Real-time Reliability Monitoring and Analysis Capabilities") will be addressing these issues in more detail. Thus, it does not make sense to delete these requirements until that drafting team completes its task. Response: Each RC has been certified to continue operations as an RC or been certified prior to beginning

Organization	Yes or No	Question 6 Comment
		operations as an RC. The minimum set of tools and capabilities for an RC are “checked off” during the certification process. The reliability objective of R5 and R7 is to perform analyses to ensure reliability of the BES by specifying capability rather than mandating specific tools. The analysis provisions of R5 and R7 are covered under IRO-008-1, Requirements R1 (perform Operational Planning Analysis) and R2 (perform Real-time Analysis). It is anticipated that Project 2009-02 team will address this issue more fully.
Response: The RCS DT thanks you for your comments.		
FirstEnergy		FirstEnergy offers the following additional comments: 1. The effective dates of the standards indicate an effective date of the first day of the first calendar quarter following regulatory approval. The changes to these standards will require changes to existing compliance evidence, as well as the creation of compliance evidence for some entities such as the Generator Operator which is a new applicable entity in COM-001. Therefore, to give entities ample time to get their compliance evidence in place, we suggest the effective state “the first day of the second quarter after regulatory approval”. Response: The RCS DT agrees and will change the implementation plan to reflect the “first day of the second quarter after regulatory approval.” 3. With regard to the requirements for Alternative Interpersonal Communications, we question why the Generator Operator or Distribution Provider is not required to have backup communication. It would be difficult for a Reliability Coordinator, for instance, to contact a Generator Operator whose primary communications have been disabled if that entity does not have a backup. We suggest that the drafting team consider adding the GOP and DP as applicable entities requiring alternative communications. Response: The RCS DT asserts the standard meets FERC Order 693 regarding DP and GOP entities by requiring these entities to have Interpersonal Communication capability. Not requiring DP and GOP entities to have Alternative Interpersonal Communication capability meets FERC’s intention as stated here: “We (FERC) clarify that the NOPR did not propose to require redundancy on generator operators’ or distribution providers’ telecommunication facilities...” (Order 693, RM06-16-000, Paragraph 487).
Response: The RCS DT thanks you for your comments.		
SPP Standards Development		IRO-001-2, R2 implies that the RC could interrupt the normal chain of command from the TOP and/or BA to their respective GOPs, ICs and DPs thereby circumventing the coordinating process that currently exists. In fact, these entities may not even know their RCs nor be able to identify them and as such any directive from

Organization	Yes or No	Question 6 Comment
		the RC may not be implemented in a timely manner. We would like to see a qualifier on this requirement that does not remove the normal coordination role from the TOP with his DP, etc. Response: There may be unusual circumstances whereby the requirement may indeed circumvent the normal coordinating process in the interest of time / reliability. The RC has the ultimate authority with respect to BES reliability. We would suggest that "with enough details that the accuracy of the message has been confirmed" be deleted from COM-002-3, R2. Response: The RCSDT believes that the additional verbiage is necessary to ensure that an entity understands the Reliability Directive and is able to communicate that understanding back to the Reliability Coordinator. It is not necessary to repeat the exact same verbiage of the Reliability Directive, but rather the intent of the actions required. Having to repeat verbiage of the Reliability Directive word-for-word could be an impediment to achieving the reliability intent of the Reliability Directive when the focus is on repeating verbatim. We would suggest the use of the term 'instruction' and its derivatives rather than 'direct' in IRO-001-2, R2, R3 and R4. Response: This proposed change is stylistic in nature. Stakeholder consensus indicates that this is not an issue for the overwhelming majority of commenters. Delete 'issue an alert to' in IRO-005-4, R1. There are yellow boxes in IRO-005-4, redline versions, which indicate that this standard is being retired, but it isn't because two requirements from IRO-001 are being returned to this standard. Response: These are typos and have been corrected as noted.
Response: The RCSDT thanks you for your comments.		
Kansas City Power & Light		There are more requirements that are being removed in the IRO standards than are currently proposed. It would be helpful if the SDT would consider a mapping of each requirement that is being eliminated and whether the requirement is duplicated elsewhere, moved elsewhere and where, or is deemed not needed would be helpful in judging if the changes are appropriate. Without this mapping it is difficult to fully support all the proposed changes to all these Standards.

Organization	Yes or No	Question 6 Comment
Response: The RCSDT thanks you for your comments. The implementation plan contains the requested mapping.		
Competitive Suppliers		EPSA is the trade association for competitive suppliers including both generators and marketers that represent over 700 entities in the NERC compliance registry. As such, the EPSA membership includes members registered as Purchasing Selling Entities (PSE) in each NERC region. Moreover, many of EPSA's members are also registered as LSEs in several regions. In general, EPSA supports the progress made in revising COM-001, COM-002 and IRO-001 in Project 2006-06, particularly the improvements made to the definition of Reliability Directive. However, EPSA also has concerns with some proposed changes to the applicability sections of the revised standards. In addition, EPSA requests that the implementation plans be changed so that they are consistent with the standard. Regarding applicability, EPSA agrees that COM-001 should continue to not apply to Purchasing Selling Entity (PSE) and Load Serving Entity (LSE) functions. However, the implementation plan for COM-001-2 still includes a reference that PSEs and LSEs must comply (page 11 of the implementation plan). Additionally, EPSA supports the removal of LSEs and PSEs from IRO-001-2. Much like the situation with COM-001-2, the implementation plan for IRO-001-2 still includes a reference that LSEs and PSEs must comply (page 11 of the implementation plan). In both the implementation plans for COM-001-2 and IRO-001-2 these references should be removed. For reasons similar to those underlying why COM-001-2 and IRO-001-2 do not apply to PSEs and LSEs, EPSA opposes the addition of PSEs to the COM-002-3 applicability. The purpose of the emergency communications in these standards is "To ensure emergency communications between operating personnel are effective." The removal would recognize that PSEs and LSEs do not play an active role in reliability coordination under this standard since they have no authority, nor ability to assume or perform responsibilities associated with reliability coordination. When a RC, TOP, or BA needs to address an Emergency they do not contact, consult, or direct a PSE to take action to address the Emergency. Reliability is neither improved nor degraded by having these Standards applicable to PSEs or LSEs; therefore, COM-001, COM-002 and IRO-001 need not be applicable to PSEs or LSEs. Thanks to the drafting team members for their effort on revising the Project 2006-06 standards.
Response: The RCSDT thanks you for your comments. The RCSDT has removed the PSE and LSE from the COM-001-2 and IRO-001-2 implementation plans. For COM-002, the RCSDT believes that all registered NERC entities engaged in daily operational activities must adhere to requirements related to Reliability		

Organization	Yes or No	Question 6 Comment
Directives. While LSE and PSE's are not engaged in coordination activities, they are engaged in load serving, as well as purchasing and selling activities on a daily basis. These activities could be subject to Reliability Directives, either in the form of load reduction, or schedule curtailments.		
Exelon		1. COM-002-2, R2 - Remove the word "recapitulate", feel that "restate or rephrase" is adequate. The word "recapitulate" is not commonly used and is somewhat obscure. Response: The proposed changes are stylistic in nature. The RCSDT included the phrase including "recapitulate" at the suggestion of another stakeholder, and has decided to leave the phrase "restate, rephrase, or recapitulate" intact as suggested by the other stakeholder. 2. COM-002-2, R3 - Suggest using the words "repeat back" rather than "state or respond that" to more clearly identify the expectation with more commonly used language. Response: The proposed changes are stylistic in nature. The RCSDT included the phrase including "recapitulate" at the suggestion of another stakeholder, and has decided to leave the phrase "restate, rephrase, or recapitulate" intact as suggested by the other stakeholder. 3. IRO-001-2, R3 - While we appreciate that the SDT has defined the term "directive" as a much needed definition, IRC-001-2 R.3 now introduces a new term "direction", what is a "direction" and how does it differ from "directive"? If a new term is going to be introduced it needs to be defined, if the intent was to use the word "directive" then "direction" should be replaced with "directive." Response: The requirement language specifically ties back to Requirement R2 which states that the RC "shall take actions or direct actions, which could include issuing Reliability Directives, ". This is the "direction in accordance with Requirement R2" stated in R3 and the "direction in accordance with Requirement R3" stated in R4. 3. IRO-001-2, R4 - Again the term "as directed" is confusing, recommend that the text be changed to align with the term directive, "unable to perform the directive per Requirement R3." Response: The requirement language specifically ties back to Requirement R2 which states that the RC "shall take actions or direct actions, which could include issuing Reliability Directives, ". This is the "direction in accordance with Requirement R2" stated in R3 and the "direction in accordance with Requirement R3" stated in R4.
Response: The RCSDT thanks you for your comments.		
PacifiCorp		

Organization	Yes or No	Question 6 Comment
Arizona Public Service Company		
LG&E and KU Energy		1) LG&E/KU suggests that the definitions and related Reliability Standards be edited to provide a clearer understanding of what is required. When used in the requirements of COM-001, the proposed definitions for Interpersonal Communication and Alternative Interpersonal Communication read improperly (i.e., a “medium capability”). This may cause confusion as to what is required by the Applicable entities. Any further use of these terms may cause greater confusion. Suggested Alternative: Interpersonal Communication: Any instance where two or more individuals interact, consult, or exchange information. The definition of “Alternative Interpersonal Communication” would not have to be changed since it is dependent upon the definition of “Interpersonal Communication.” The change of the definitions of Interpersonal Communication and Alternative Interpersonal Communication shifts their focus to the communication itself-the event. This makes the Requirements themselves much clearer since the Requirements focus on the need that entities have the capabilities-the medium. It appears the SDT’s intent is to ensure that the event takes place by requiring that the medium for those events are in place. This is much clearer if there is a distinction between the two (the event and the medium) than if they have similar definitions (a medium and a “medium capability”). Response: The RCSDT chose to use “medium” so as to not preclude the use of text, voice, electronic or other technology. The intent of the definition as well as the requirements is to require that functional entities have a means to communicate. 2) LG&E/KU question the consistency of the Applicability sections as they pertain to the TSP, LSE and PSE functions between COM-001 and COM-002. The deletion of the TSP, LSE and PSE from COM-001 is supported, but if these entities are not required to establish Interpersonal Communication (or Alternative Interpersonal Communication) capability with reliability entities (RC, BA, TOP), should they still be required to follow the reliability directive process of COM-002? If the probability of issuing a Reliability Directive to a TSP, LSE or PSE is so low that Interpersonal Communications capabilities with reliability entities is not justified under COM-001, why are the TSP, LSE and PSE still held to the 3 way communication requirements of COM-002? Suggest the Applicability of COM-002 to TSP, LSE and PSE and associated requirements be deleted. Response: The RCSDT has revised the applicability of COM-001 and COM-002 such that they contain the same functional entities. These are: RC, TOP, BA, GOP, and DP.
Response: The RCSDT thanks you for your comments.		

Consideration of Comments on Reliability Coordination — Project 2006-06

Organization	Yes or No	Question 6 Comment
Southern Company		Comments: It appears that the requirements for entities designated in the IRO standards to have tools to access and/or monitor the system have been moved to pending standards that are not enforceable. It seems that if the newest revisions of the IRO standards are not implemented as a group there will be either missing requirements or duplicate requirements in the IRO standards.
Response: The RCSDT thanks you for your comments. The implementation plans note prerequisite approvals that must occur prior to retiring requirements. FERC recently approved IRO-008, 009 and 010. The standards under this project will be filed together with FERC.		
Green Country Energy, Green Country Operating Services		IRO-001-2 as proposed does not include the PSE in the applicability, nor does it require the PSE to respond to a directive. However, COM-002 requires them to repeat the directive back... If the directive is that important to repeat back should they not have to act upon the directive? I think the PSE should be included in IRO-001-2 this standard as they represent and direct generation facility deployment in many cases. Including the PSE in COM-001 may be a good idea too, just for the situations listed above.
Response: The RCSDT thanks you for your comments. The RCSDT has revised the applicability of COM-001 and COM-002 such that they contain the same functional entities. These are: RC, TOP, BA, GOP, and DP.		
Central Lincoln		The stated purpose of COM-002 is: “To ensure emergency communications between operating personnel are effective.” As written, the standard fails to meet this purpose because the three requirements only deal with communications at the entity level. There is no requirement for the directing entity to even try to reach operating personnel at the receiving entity. The directing entity may follow all the requirements of this standard by following R1 and R3 with the receiving entity's receptionist, answering service, janitor, night watchman, etc. The receiving entity only needs to meet R2, parroting the directive. Again this could be accomplished by anyone with no assurance the directive reaches the operating personnel who can implement it. When we stated a similar objection during the last comment period, The SDT's answer suggested this was a PER staffing issue, but none of the PER requirements even apply to DP/LSE directive recipients. We suggest the entity issuing the directive should be required to make an attempt to get it to those who are competent to understand and implement the directive. This is not a staffing, training, or credentials issue; it is a performance issue that falls squarely within the stated purpose of this standard. COM-001 R10 presents a paradoxical situation to an entity attempting to comply. Consider an interpersonal communication capability failure that lasts longer than 60 minutes past initial detection. At or before 60 minutes, the affected entity is expected to notify impacted entities. If it has no interpersonal communication capability, how shall it make this notification? And if the entity does manage to make such a notification, it has thereby proven that it does have interpersonal communication capability making such notification

Organization	Yes or No	Question 6 Comment
		unnecessary. Response: The DP or GOP has access to additional Interpersonal Communications, in all likelihood, to make notifications for failure. There is not a requirement for an alternative, but it is highly unlikely that someone couldn't use their cell phone to make the notification. We again ask the SDT to consider that not all the entities in the applicability sections of COM-001 and 002 have 24/7 dispatch centers. These are typically smaller entities that were required to register because they exceed 25 MW or were asked in the past to voluntarily provide UFLS. They do not and do not need to continuously communicate with TOPs, BAs, RCs, etc; and a "reliability directive" is a theoretical thing that has never happened during the memories of thirty year employees. The directive issuing entities simply realize the limitations around the receiving entities and work around them. The financial burden on these small entities and their customers to go to 24/7 dispatch will not have a corresponding reliability benefit. And while the two COM standards do not explicitly state that entities must maintain 24/7 dispatch, when all the requirements and definitions and time horizons are taken together 24/7 continuous competent communication is implied. During the last comment period, the SDT suggested this was a registration issue beyond their control. We submit instead that this is a standard applicability question that the SDT does have control over, since it is right there in Section A.4 of the two COM standards. While we appreciate that the SDT is responding to FERC order 693 to include DPs, we note that FERC also stated: Paragraph 487: "We expect the telecommunication requirements for all applicable entities will vary according to their roles and that these requirements will be developed under the Reliability Standards development process." Paragraph 6: "A Reliability Standard may take into account the size of the entity that must comply and the costs of implementation" Paragraph 141: "...the Commission clarifies that it did not intend to ... impose new organizational structures..." Paragraph 31: "We emphasize that we are not, at this time, mandating a particular outcome by way of these directives, but we do expect the ERO to respond with an equivalent alternative and adequate support that fully explains how the alternative produces a result that is as effective as or more effective than the Commission's example or directive. We ask the SDT to exclude DPs, LSEs, and PSEs that do not have 24/7 dispatch centers from the applicability of these two standards in order to meet FERC order 693.
Response: The RCSDT thanks you for your comments. There is no requirement for 24/7 support - the requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard and the standard is designed not to impose needless communications requirements. The purpose of COM-002 is "To ensure emergency communications between operating personnel are <u>effective</u>." It is not a proxy requirement to establish 24/7 operating personnel at small distribution providers. The intent is to establish a <u>method</u> of communicating Reliability Directives during Emergencies. While it is true that many small Distribution Providers are not staffed 24x7, it is typical that they have a means of communication, in many cases this may be via a receptionist, or answering service. It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive. If this return call would not be timely enough, then the issuer would determine a different mitigation plan.		

Consideration of Comments on Reliability Coordination — Project 2006-06

Organization	Yes or No	Question 6 Comment
Lakeland Electric		COM-002-3 R2. Each Balancing Authority, Transmission Operator, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message can be confirmed by the originator. (Replace 'has been' with 'can be' and add 'by the originator' to better fit into the sequence with R3.)
Response: The RCSDT thanks you for your comments. The RCSDT agrees with the intent of your comment and has modified R2 as: R2. Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of a Reliability Directive issued in accordance with Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message is confirmed.		
Manitoba Hydro		-The current data retention requirement of 90 days is more than adequate. Increasing this period to 12 months would result in a significant amount of work with no benefit to reliability. -Clarification required on the VSL for R9 - there appears to be no
Response: The RCSDT thanks you for your comment. The data retention periods for the set of standards proposed is consistent with the guidelines provided in the NERC Drafting team Guidelines. Your second comment is incomplete and does not reference specific standard(s) or requirement(s).		
NextEra Energy, Inc.		At this stage in evolution of compliance with the mandatory Reliability Standards, it is important that any new or revised Reliability Standard clearly articulate all compliance obligations and tasks consistent with Sections 302 (6) and (8) of the NERC Rules of Procedure. COM-002, IRO-001, IRO-002 and IRO-014 do not meet this threshold. Thus, NextEra has numerous recommended corrections to provide clarity and completeness to these Reliability Standards.COM-002 R1The addition of defined terms for Reliability Directive and Emergency is a very good approach that helps provides clarity. Hence, it is also be appropriate to make the language in the requirement as clear as possible, and not add other implied or unexplained notions. Also, at times, in those regions with markets, it is not always clear whether a requirement to curtail for reliability reasons is being issued pursuant to market rules or from the Reliability Coordinator or Transmission Operator under the Reliability Standards. Therefore, it is also appropriate that the Reliability Coordinator, Transmission Operator, Balancing Authority be required to identify themselves;; and if they fail to identify themselves or fail to use the term Reliability Directive, the registered entity receiving the flawed issuance should not be consider in violation of a Reliability Standard for failing to act. Accordingly, R1 would be clearer and have the same intent, if it stated as follows:"A Reliability Coordinator, Transmission Operator or Balancing Authority have the authority to issue an oral or written Reliability Directive as authorized in [list the specific Reliability Standard requirements such as IRO-001 R8 and TOP-001 R3]. The issuance of an oral of written Reliability Directive,

Organization	Yes or No	Question 6 Comment
		by a Reliability Coordinator, Transmission Operator or Balancing Authority shall: (1) use the term ‘Reliability Directive;’ and (2) identify the issuer of the Reliability Directive as a Reliability Coordinator, Transmission Operator or Balancing Authority. If a Reliability Coordinator, Transmission Operator or Balancing Authority issues an oral or written directive without using the term “Reliability Directive” or failing to identify itself as a Reliability Coordinator, Transmission Operator or Balancing Authority, the registered entity receiving the directive cannot be considered in violation for its failure to act.” Response: Only reliability entities can issue Reliability Directives and only reliability entities are held compliant to NERC reliability standards. COM-002, R1 requires the issuer of a Reliability Directive to identify the action as a “Reliability Directive”, it is incumbent on the issuer or receiver to identify themselves in order establish authority, the RCSDT disagrees that identification should be part of the COM-002 standard, however, the RCSDT will pass this concern to Project 2007-02, Operating Personnel Communications Protocols SDT. Furthermore, your suggested revision is a compound requirement, making the requirement indistinct and difficult to measure and in contradiction with SAR. The RCSDT agrees that if an action is not identified as a “Reliability Directive” then the receiving entity cannot be held in violation of failing to follow a Reliability Directive. IRO-001The definition of Adverse Reliability Impacts uses the term “instability.” It is important that this term be technically defined in the same way “Cascading” is defined, otherwise the new requirement is not adding clarity; rather, it is maintaining the ambiguous term “instability” that will likely lead to confusion and debate. Response: The RCSDT disagrees that the term “instability” is ambiguous, and further believes the term is understood in the industry. The majority of stakeholder comments do not indicate that the definition is confusing. R1 Similar to the comments set forth with respect to COM-001 (question #1), the term “at least” should be deleted from R1 - it serves no useful purpose from a technical or compliance perspective; instead, it will add unnecessary ambiguity to the requirement. Response: The RCSDT agrees and has removed “at least” for IRO-001, R1. R2, as drafted, states:”Each Reliability Coordinator shall take actions or direct actions, which could include issuing oral or written Reliability Directives, of Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse

Organization	Yes or No	Question 6 Comment
		Reliability Impacts. “This long sentence has several significant grammatical errors that result in the reader not being able to discern the meaning of the requirement. It also unnecessarily adds verbiage that detracts from its primary focus. It is, therefore, recommended that R2 be revised as follows: “Each Reliability Coordinator shall take all necessary actions to prevent identified Emergencies or Adverse Reliability Impacts. These Reliability Coordinator actions shall include, to the extent necessary, the issuing of oral or written Reliability Directives to Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers located within its Reliability Coordinator Area. Response: The RCSDT disagrees that the suggested revisions adds clarity, and in fact removes directing actions “to mitigate the magnitude or duration of actual events” which weakens the requirement. Phrases such as “to the extent necessary” and “necessary actions” are not measurable and lead to a more confusing requirement. Stakeholders generally agree with the proposed verbiage of the proposed requirement. “R3, as drafted, is confusing and inconsistent with R2, and, thus, R3 should be revised to read as follows: ”Upon receipt of a Reliability Directive issued pursuant to R2, a Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator and Distribution Provider shall comply with the Reliability Directive, unless compliance would violate safety, equipment, regulatory or statutory requirements. In the event that a Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator or Distribution Provider determines that compliance with a Reliability Directive would violate safety, equipment, regulatory or statutory requirements, the Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator or Distribution Provider shall, within 10 minutes after the determination, inform the Reliability Coordinator of its inability to comply.” Response: The RCSDT disagrees with the suggested revision to R3. The revision creates a compound requirement with a specific time requirement. Upon recognition of the inability to perform a directed action, the receiver should immediately inform the Reliability Coordinator. Typically this would be during the original communication of the directive. The suggested 10 minute time is not technically justified and provides no reliability benefit beyond the currently worded requirement and only serves to extend the time before an RC is notified. IRO-002R1 and R2, as written, are confusing. It is recommended that R1 and R2 be combined to read as follows: “Pursuant to a written procedure to mitigate the impact of a Reliability Coordinator’s analysis tool outage, a Reliability Coordinator’s System Operator shall also have the authority to approve, deny or cancel a

Organization	Yes or No	Question 6 Comment
		planned outage for its analysis tool.” Response: The suggested revision to IRO-002-2 creates a compound requirement, which is indistinct and difficult to measure and in contradiction with SAR. The SAR for this project directs the team to “Improve clarity of, improve measurability of, and remove ambiguity from the requirement”. IRO-014It is unclear why the terms Operating Procedure, Operating Process or Operating Plan needs to be plural, as currently written in the Standard. Hence, it is recommended that these terms be made singular, otherwise a violation may be inferred for not having more than one Procedure, Process or Plan. Response: IRO-014, R1, The RCSDT disagrees with making Procedures, Processes, or Plans non-plural; this could lead to entities being audited on a procedure by procedure basis. In other words, it is meant that the weekly conference calls create an opportunity to discuss all of the Procedures, Processes, or Plans, and to not require a call for each. 1.1 Insert the word “applicable” before “Reliability Coordinator.” Response: The RCSDT disagrees with the use of applicable, as the 1.1 is subordinate to R1, which notes impacted Reliability Coordinators. 2.1, as written, is confusing. Recommend that 2.1 read as follows: ”Review and update, if an update is necessary, on an annual basis. Annual basis means the review shall be within one month plus or minus that date of the last review.” Response: The RCSDT disagrees, and believes the suggested revision is unclear. In its current draft form, the plan or procedure is required to be reviewed every 15 months, if the review indicates that there are no changes required, and then the update would simply be to change the revision date on the published procedure. R3 This requirement uses a very vague term “reliability-related information,” which, also, does not track the language used in R1 -- “information.” It is recommended that R1 and R3 use the same terms and read “. . . information, as defined by the Reliability Coordinator, . . .” Response: The RCSDT believes the reference to R1 within R3 clearly is representative of exchange of information related to R1. R4 As stated above, “at least” does not add value, and, therefore, should be deleted.

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		Response: The RCSDT disagrees. The inclusion of “at least” allows the calls take place every day or multiple times within a week if desired, and adds flexibility. e.g. if there was scheduled weekly call, however due to system conditions an interim call was held, during this interim call all of the necessary information for the week was exchanged, thus removing the need to the scheduled call, the use of “at least” allows for this kind of flexibility. R4 is applicable to those Reliability Coordinators engaged in activities related to R1 and subsequently R1.7, it is unlikely that Reliability Coordinators whom are geographically and electrically distant will have <i>mutually agreed upon</i> operating procedures (per R1), and as such they are not applicable to R4. R5, as written, is confusing. The recommended fix is to delete “all other” and replace with “impacted”. Response: This requirement continues the current practice of informing all RCs of ARIs. Due to the nature of an ARI, this requirement is typically implemented as an RCIS message or a hotline call to all RC’s. This is intended to make all RCs aware of ARIs and support situational awareness.
Response: The RCSDT thanks you for your comments.		
United Illuminating Company		Comments: 1. COM-002 R2 seems awkwardly worded. R2. Each [Entity] that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message has been confirmed. " R2 as it is written says the repeat is confirming the accuracy of the message itself. I think it is agreed that the repeat back in R2 is to allow the issuer of the Directive to confirm that the message was received accurately understood by the recipient. I suggest:R2. Each [Entity] that is the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details to allow the Issuer to confirm that the directive recipient accurately understands the Directive" Response: The RCSDT agrees with the intent of your comment and has modified COM-002-3, R2 as: R2. Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of a Reliability Directive issued in accordance with Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive. 2. The VSL for R2 is severe and states "The responsible entity that was the recipient of a Reliability Directive failed to repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message was confirmed." The purpose of the R2 repeat-back is to allow the Issuer verify the message

Organization	Yes or No	Question 6 Comment
		was accurately received. This VSL penalizes the responsible entity for not accurately receiving the message. The VSL should penalize the refusal of the registered entity to repeat back the message not for receiving the message incorrectly. Suggested rewording: "The responsible entity that was the recipient of a Reliability Directive failed to repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message can be evaluated by the entity issuing the Reliability Directive"3. United Illuminating does agree with the definition of Reliability Directive and Emergency. Response: The RCSDT agrees and has revised the VSL to: The responsible entity that was the recipient of a Reliability Directive failed to repeat, restate, rephrase or recapitulate the Reliability Directive. ~~with enough details that the accuracy of the message was confirmed.~~
Response: The RCSDT thanks you for your comments.		
Shell Energy North America (US), L.P.		The introduction of the definition of "Reliability Directive" and its connection to the definition of "Emergency" within this Project brings much needed clarity for the sector and will promote consistency between Regional Entities and within the audits of Registered Entities. Shell Energy supports the removal of Purchasing Selling Entities as a function to which IRO-001 applies. This removal recognizes that PSEs do not play a role in reliability coordination under this standard since they have no authorities and no abilities to assume or perform responsibilities associated with reliability coordination. This conclusion is reinforced by the adoption of the defined term "Reliability Directive". Where a RC, TOP, or BA needs to address an Emergency they do not contact, consult, or direct a PSE to take action that would address the Emergency. Rather, where the PSE is a user of the grid to perform or execute transactions, it is subject to the actions of these other entities that have the authority to stop, curtail, or alter the submitted transactions of the PSE in a way that aids in resolving the problem. With the fitting adoption of "Reliability Directive" into COM-002 as well, Shell Energy does not believe it is necessary or appropriate for the applicability of this standard to include Purchasing Selling Entities, as is contained in the current draft proposal. This standard does not apply to PSEs today, however, during the progression of Project 2006-06 this applicability was added to an early draft version that preceded the discussions and clarification that comes from the definition of a Reliability Directive in the standard. Shell Energy does not support the inclusion of PSEs in the current draft version of COM-002, and feels that it should be removed. The purpose of this standard is, "To ensure Emergency communications between operating personnel are effective" and relates directly to the capabilities and authorities established for the RC, TOP, or BA that requires actions to be taken by a recipient of a Reliability Directive. As noted previously, PSEs are acted upon by the entities with the necessary authority, and are not in a role that would initiate or fulfill the required actions. As additional matters related to the clarification and cleanup of the standards in this project, the implementation plans for both IRO-001 and COM-001 erroneously contain references to PSEs in the sections "Functions that Must Comply with the Requirements". These references

Organization	Yes or No	Question 6 Comment
		need to be removed.
Response: The RCSDT thanks you for your comments. The applicability of COM-001 and COM-002 were revised to be consistent and only include the RC, TOP, BA, DP and GOP.		
American Electric Power		The language used in COM-002-3 R2 including “with enough details that the accuracy of the message has been confirmed” is subjective and ambiguous. Response: The RCSDT agrees with the intent of your comment and has modified COM-002-3, R2 as: R2. Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of a Reliability Directive issued in accordance with Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive. IRO-001 R2, R3, and R4 have replaced “Directives” with the word direction in lower case (while it appears that “Directives” is a subset of “directions”). We believe that this muddies the waters and could bring numerous conversations and dialog into scope unnecessarily. The end result is that the RC has the right to issue and use “Directives” and anything short of this could just be communications. For example, a number of entities that are Reliability Coordinators also facilitate energy markets. There are many communications related to markets that probably should be out of scope with respect to the standards. Furthermore, it might not be clear what role (eg Reliability Coordinator, market operator, etc) the staff at these entities are fulfilling. Response: IRO-001 is written so that typical daily operating orders or directives could be used, and also to cover emergency scenarios, but stating the use of Reliability Directives is included. The requirement language specifically ties back to Requirement R2 which states that the RC “shall take actions or direct actions, which could include issuing Reliability Directives, “. This is the “direction in accordance with Requirement R2” stated in R3 and the “direction in accordance with Requirement R3” stated in R4.
Response: The RCSDT thanks you for your comments.		
American Transmission Company		None

Organization	Yes or No	Question 6 Comment
ISO New England		The SDT did not address all of our concerns with COM-002-3 from the last posting. For entities registered as multiple functions, the combination of the definition of Reliability Directive and Requirement R1 could be confused to require a company to issue directives to itself. There are several organizations registered as a Reliability Coordinator, Transmission Operator and Balancing Authority. In these companies, it is not uncommon for those responsibilities to be distributed across multiple desks. Thus, for certain situations, a single System Operator may actually be the Reliability Coordinator and the Transmission Operator. In other situations, the System Operator serving the Reliability Coordinator function may be adjacent to the System Operator serving the as the Transmission Operator or Balancing Authority. We believe that it should never be necessary for these System Operators to issue Reliability Directives to themselves in the first example or to their co-worker in the second example to demonstrate compliance to NERC standards. How the entity coordinates its actions among its Reliability Coordinator, Balancing Authority and Transmission Operator roles is a corporate governance issue that should not be confused or complicated by the NERC standards. Thus, we believe that standards should be made clear that the Reliability Directive is directed to another company. We believe that, in place of requiring an operator, in real-time, to state "this is a Reliability Directive," there should be an allowance for an entity to develop procedures indicating, in advance, their expectations of three-part to their sub-operating entities. Therefore, we suggest modifying R1 to be "When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action, either verbally, when the communication is issued, or in advance through documented procedures, as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time.]" Also, we believe that the definition of Emergency, as currently cited in these draft Standards and included in the existing NERC Glossary should be modified to include the NERC Glossary term Adverse Reliability Impact to make the Standards more crisp, clear and enforceable. Because the Project 2007-03 Real-Time Operations SDT proposed to utilize the definition of Adverse Reliability Impact in TOP-001-2 R5 during the last posting, the change to the definition should be coordinated with that team. There is a text box in IRO-005-4 that indicates this standard will be retired. Yet, there still remain requirements in the standard and various other associated documentation indicates requirements are being move to this standard. Please delete the text box. IRO-014-2 R4 already includes a requirement to have weekly conference calls that should suffice. IRO-014-2 R2 seems to recognize that these Operating Procedures, Processes and Plans likely will not need to be discussed weekly as it only requires an annual update. In the definition of Reliability Directive, we suggest changing "to address an Emergency" to "to address a reliability constraint or a declared Emergency". Further, Requirement R2 in IRO-001 contains the words "which could include issuing Reliability Directives" but Reliability Directives are not referenced anywhere else in the standard. This inclusion seems unnecessary since without it, R2 already requires that the RC take actions or direct actions by others to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. Whether or not a Reliability Directive is issued is irrelevant in this requirement. We suggest that these words be removed. Note that COM-002 already stipulates the requirement for 3-part communication when a

Organization	Yes or No	Question 6 Comment
		Reliability Directive is issued. The inclusion of “which could include issuing Reliability Directives” in IRO-001 is unnecessary.
Response: The RCSDT thanks you for your comments. See response to MRO above.		
ERCOT ISO		The SDT did not address all of our concerns with COM-002-3 from the last posting. For entities registered as multiple functions, the combination of the definition of Reliability Directive and Requirement R1 could be confused to require a company to issue directives to itself. There are several organizations registered as a Reliability Coordinator, Transmission Operator and Balancing Authority. In these companies, it is not uncommon for those responsibilities to be distributed across multiple desks. Thus, for certain situations, a single System Operator may actually be the Reliability Coordinator and the Transmission Operator. In other situations, the System Operator serving the Reliability Coordinator function may be adjacent to the System Operator serving the as the Transmission Operator or Balancing Authority. We believe that it should never be necessary for these System Operators to issue Reliability Directives to themselves in the first example or to their co-worker in the second example to demonstrate compliance to NERC standards. How the entity coordinates its actions among its Reliability Coordinator, Balancing Authority and Transmission Operator roles is a corporate governance issue that should not be confused or complicated by the NERC standards. Thus, we believe that standards should be made clear that the Reliability Directive is directed to another company. We believe that, in place of requiring an operator, in real-time, to state “this is a Reliability Directive,” there should be an allowance for an entity to develop procedures indicating, in advance, their expectations of three-part to their sub-operating entities. Therefore, we suggest modifying R1 to be “When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action, either verbally, when the communication is issued, or in advance through documented procedures, as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time.]” Also, we believe that the definition of Emergency, as currently cited in these draft Standards and included in the existing NERC Glossary should be modified to include the NERC Glossary term Adverse Reliability Impact to make the Standards more crisp, clear and enforceable. Because the Project 2007-03 Real-Time Operations SDT proposed to utilize the definition of Adverse Reliability Impact in TOP-001-2 R5 during the last posting, the change to the definition should be coordinated with that team. There is a text box in IRO-005-4 that indicates this standard will be retired. Yet, there still remain requirements in the standard and various other associated documentation indicates requirements are being move to this standard. Please delete the text box. IRO-014-2 R4 already includes a requirement to have weekly conference calls that should suffice. IRO-014-2 R2 seems to recognize that these Operating Procedures, Processes and Plans likely will not need to be discussed weekly as it only requires an annual update. In the definition of Reliability Directive, we suggest changing “to address an Emergency” to “to address a reliability constraint or a declared Emergency”. Further, Requirement R2 in IRO-001 contains the words “which could include issuing Reliability Directives” but Reliability Directives

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Organization	Yes or No	Question 6 Comment
		are not referenced anywhere else in the standard. This inclusion seems unnecessary since without it, R2 already requires that the RC take actions or direct actions by others to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. Whether or not a Reliability Directive is issued is irrelevant in this requirement. We suggest that these words be removed. Note that COM-002 already stipulates the requirement for 3-part communication when a Reliability Directive is issued. The inclusion of “which could include issuing Reliability Directives” in IRO-001 is unnecessary.
Response: The RCSDT thanks you for your comments. See response to MRO above.		
WECC		Suggested minor revision to the definition of Reliability Directive as follows (change in caps)A communication, IDENTIFIED AS A RELIABILITY DIRECTIVE, initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where action by the recipient is necessary to address an Emergency. Clearly identifying a communication as a Reliability Directive provides immediate information to the recipient as to the nature of the communications.
Response: The RCSDT thanks you for your comments. The RCSDT believes embedding the term in “Reliability Directive” in the definition is a not proper method for defining a term.		
BGE		BGE has no additional comments.
Duke Energy		o COM-002-3 contains the proposed definition “Reliability Directive”. We continue to believe Requirement R1 should be deleted and that this definition should contain the phrase “identified as a Reliability Directive to the recipient”. Otherwise, compliance controversies will arise when auditors second-guess the RC, TOP or BA's judgment regarding whether or not an abnormal system condition met the definition of “Emergency”, and warranted a “Reliability Directive” with 3-part communication. A conforming change will need to be made to R2, since it refers to R1. This change in the definition of “Reliability Directive” is also needed because this term is used in other standards such as IRO-001-2, and without repeating a similar requirement to COM-002-3 requirement R1 in IRO-001-2, there is potential for confusion. Response: The RCSDT disagrees as the suggestion embeds a requirement in a definition. The SDT believes the requirements of COM-002 are clear as written. o We disagree with the VSL for COM-002-3. This is clearly a requirement with two possible compliance failures: Failure to acknowledge a correct repeat-back, and failure to resolve an incorrect repeat-back. These failures have dramatically different consequences, which the drafting team should recognize via a graduated VSL. We think that the failure to acknowledge should either be “Lower” or “Medium”. Response: The RCSDT contends that missing the requirement is a binary violation that results in a severe

Organization	Yes or No	Question 6 Comment
		VSL. You are including risk to the BES in your proposal for the VSL. Risk to the BES is captured in VRFs, while VSLs consider the degree to which the entity failed to meet the Requirement.. O Requirement R2 of IRO-001-2 is unclear and should be reworded as follows: “Each Reliability Coordinator shall take actions or direct actions (which could include issuing Reliability Directives to Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers within its Reliability Coordinator Area) to either prevent identified events that could result in an Adverse Reliability Impact, or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts.” Response: The RCSDT believes that the suggested revision does not add further clarity to the requirement. o Various changes have been made to the defined term “Adverse Reliability Impact” as this project has progressed. We believe the latest change should not be made, and the Phrase “uncontrolled separation” should be reinserted in the definition, because that phrase is part of the EPAct 2005 legislation definition of “reliable operation”. Here is the text from the legislation: “The term ‘reliable operation’ means operating the elements of the bulk-power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements.” Response: During the last posting of the proposed definition, the RCSDT received the following comment and revised the definition appropriately: “This change is problematic in that any automatic protective element operation that trips a BES element could be construed to be an Adverse Reliability Impact.”. The modification eliminated the phrase “that affects a widespread area of the Interconnection” which clarified the scope of the definition. “Uncontrolled separation” has been deleted from the definition, as it is included in the definition of Cascading.
Response: The RCSDT thanks you for your comments. Please see responses above.		
CECD		1. COM-002 R2 states that "the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the accuracy of the message has been confirmed." Recommend a change to "the recipient of a Reliability Directive issued per Requirement R1, shall repeat, restate, rephrase or recapitulate the Reliability Directive with enough details that the desired outcome of the message is clear". Response: The RCSDT agrees with the intent of your comment and has modified COM-002-3, R2 as: R2. Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of a Reliability Directive issued in accordance with Requirement R1, shall repeat, restate,

Organization	Yes or No	Question 6 Comment
		rephrase or recapitulate the Reliability Directive. 2. IRO-001 R2 states "Each Reliability Coordinator shall take actions or direct actions which could include issuing Reliability Directives of Transmission Operators, ..." Recommend a change to "Each Reliability Coordinator shall take actions or direct actions which could include issuing Reliability Directives [See COM-002] to Transmission Operators, ..." Response: Based on feedback from other stakeholders, the RCSDT believes that the existing verbiage is clear and does not require further revision. 3. IRO-001 R4 states entities "shall inform its Reliability Coordinator upon recognition of its inability to perform as directed per Requirement R3." Recommend a change to, entities "shall inform its Reliability Coordinator upon recognition of its inability to perform as directed." Response: Based on feedback from other stakeholders, the RCSDT believes that the existing verbiage is clear and does not require further revision.
Response: The RCSDT thanks you for your comments.		
Indeck Energy Services		
City of Springfield, IL - City Water Light and Power (CWLP)		CWLP generally concurs with and supports comments previously submitted by the SERC Operating Committee where those comments are not in conflict with the specific comments above.
Response: The RCSDT thanks you for your comments.		
South Carolina Electric and Gas		1. Reliability Directives may be issued by blast calls from Reliability Coordinators. It is inefficient and may be a hindrance to reliability to require 3-part communications in these instances. Response: The RCSDT agrees that the use of Blast Calls to issue Reliability Directives, in mass, is efficient and effective. The RCSDT believes Reliability Directives issued in mass should be defined by procedure, and that the procedure would establish a method of affirmation and notice of implementation. 2. There are several organizations registered as BAs, RCs and TOPs. It is not uncommon for those entities to be distributed across multiple desks in the same control room without regard to how an entity is registered. Thus, a single System Operator may perform functions that are categorized under two or more of those functional entities. The drafting team should clarify that under no circumstances should that System Operator be required to issue a Reliability Directive to himself. This is a corporate governance

Organization	Yes or No	Question 6 Comment
		issue. Response: The RCSDT believes that any Registered Entity or person operating as such must understand the intent of the issued Reliability Directive, and that the issuer of the Reliability Directive believe that the Reliability Directive was correctly received. COM-002 should not be construed to mean that an individual serving in two functions be required to issue a Reliability Directive to himself, but rather it is expected that such an individual would appropriately address the reliability issues as required by the function they are serving and its subsequent responsibilities 3. In IRO-014, R1, delete sub-requirement 1.7. The requirement for weekly conference calls related to operating procedures is duplicative to R4 and could be burdensome while adding very little value under certain circumstances. Response: R1, Part 1.7 requires an entity to address how and when they will hold conference calls in their Operating Plans, Processes or Procedures. R4 requires the participation in those calls. 4. In IRO-014, R4, delete the phrase “(per Requirement 1, Part 1.7)” as a conforming change. Response: R1, Part 1.7 requires an entity to address how and when they will hold conference calls in their Operating Plans, Processes or Procedures. R4 requires the participation in those calls. 5. In IRO-014, Requirements R6-R8 allow at least the theoretical possibility that an RC may determine an Adverse Reliability Impact in another RC’s area that the other RC neither can see nor believes that any action should be taken. R7 puts the burden on the first RC to develop a plan that it cannot implement because it has no agreement with the BAs and TOPs in the other RC area. As such, this requirement is unenforceable. Response: You are correct. Requirements R6-R8 are translated from IRO-016-1, Requirement R1. If an RC sees a problem and another does not see the same problem, then there may be an issue with someone’s model or processes or procedures. The RC’s are supposed to have coordinated Operating Plans, Processes or Procedures to operate reliably. R6-R8 are only applicable if one of the two (or more) RCs do not see that a problem exists. It would be a detriment to reliability for both RCs to take no action. RCs are required to coordinate actions under existing IRO-016-1, R1. If one RC identifies a problem and provides an action plan to another RC to mitigate the problem, the second RC is obligated under R8 to implement it. We have revised the R8 to clarify this intent. Revised R8. During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, each Reliability Coordinator shall implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact unless such actions would violate safety, equipment, regulatory or statutory requirements.

Organization	Yes or No	Question 6 Comment
		6. Please review all the implementation plans to be sure the applicable entities match those in the standards. Response: We have revised the implementation plans to reflect the appropriate applicability.
Response: The RCSDT thanks you for your comments.		
Independent Electricity System Operator		1. IRO-001: Reliability Directive: We do not agree with the proposed definition since it addresses Emergencies only. There are situations where a Reliability Directive is issued such that the directed action must be taken by the receiving entity to address a reliability constraint or any condition on the BES which if left unattended could, in the judgment of the issuing entity, lead to an Emergency. These conditions themselves do not constitute an Emergency which is defined as “Any abnormal system condition that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System.” There could be no abnormal condition but the actions must nevertheless be taken promptly to prevent the bulk electric system from entering into an abnormal condition. We therefore suggest the term Reliability Directive be revised to: Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address a reliability constraint or an Emergency. Response: The RCSDT believes that your comment concerns “directives” or “instructions” for normal operational activities rather than a Reliability Directive. There is no requirement preventing an entity from issuing either directives or instructions for the situations you mention. The intent of creating a Reliability Directive definition is to ensure that communications is tightened during Emergencies (per blackout report). When an RC issues a Reliability Directive, the RC has made a deliberate decision to formally end collaboration and require specific action(s). 2. IRO-001, Requirement R2: This requirement contains the words “which could include issuing Reliability Directives” which is not referenced anywhere else in the standard. We do not think this inclusion is necessary since without it, R2 already requires that the RC take actions or direct actions by others to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. Whether or not a Reliability Directive is issued is irrelevant in this requirement. We suggest to remove these words. Note that COM-002 already stipulates the requirement for 3-part communication when a Reliability Directive is issued. The inclusion of “which could include issuing Reliability Directives” in IRO-001 is unnecessary. We suggest replacing “identified events” with “anticipated events”. This requirement also lists Interchange Coordinators as one of the recipients of Reliability Directives which is not consistent with the

Organization	Yes or No	Question 6 Comment
		implementation plan. Response: R2 requires the Reliability Coordinator to act. These actions could include Reliability Directives in the case of an Emergency. However, issuing Reliability Directives might not always be necessary, as the Reliability Coordinator may be acting proactively well in advance of an emergency. R2 promotes this proactive approach, but reserves the use of Reliability Directives for circumstances that require its use. Your suggested edits are not supported by the majority of stakeholder comments. The Interchange Coordinator has been removed from the standard. 3. IRO-014: R4 as written creates unnecessary requirements for an RC to participate in conference calls for issues that may not affect the RC itself. We suggest to reinstate the original word “impacted” as opposed to “other”, and remove the words “within the same Interconnection” since such calls and coordination may be required for RCs on both side of the Interconnection boundary. Same change suggested for R5, i.e. replace “other” with “impacted”. Response: The requirement for weekly conference calls exists in IRO-015-1. The RCSDT has revised the requirement and incorporated it into proposed IRO-014-2. IRO-14-2, R4 is applicable to those Reliability Coordinators engaged in activities related to R1 and subsequently R1.7, it is unlikely that Reliability Coordinators that are geographically and electrically distant will have mutually agreed upon operating procedures (per R1), and as such they are not applicable to R4. If RCs in different interconnections have operating procedures (per R1) with each other, then these operating procedures may include specifications for conference calls at least weekly. 4. If an entity provides Interpersonal Communication for day-to-day communication using two different media, e.g. radio and telephone, the proposed definition of Alternative Interpersonal Communication suggests that it would not be possible for one medium to be used as the Alternative Interpersonal Communication for the other since the two media are both used every day. Response: The intent of AIC is to make sure there is an alternative in case the IC fails. If you have two, you may designate one as the AIC regardless of how often you use it. 5. COM-001-2 R10 suggests that the responsible entity must wait for at least 30 minutes before notifying other entities of the failure of its Interpersonal Communication capability. We recommend changing “that lasts 30 minutes” to “that lasts or is expected to last 30 minutes”. This allows responsible entities to start notifying other entities earlier.

Organization	Yes or No	Question 6 Comment
		Response: The requirement is written such that an outer bound is set for notifications. An entity does not have to wait and can begin notifications immediately if it knows that an outage will last more than 30 minutes. 6. In IRO-005-4 R1: Delete “notify”. Response: The phrase “issue an alert” was removed in the redline version but was not removed from the clean version. This was corrected.
Response: The RCSDT thanks you for your comments.		

Standard Development Roadmap

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed:

1. Draft SAR Version 1 posted January 15, 2007
2. Draft SAR Version 1 Comment Period ended February 14, 2007
3. Draft SAR Version 2 and comment responses on SAR version 1 posted March 19, 2007
4. Draft Version 2 SAR comment period ended April 17, 2007
5. SAR version 2 and comment responses for SAR version 2 accepted by SC and SDT appointed in June 2007.
6. First posting of revised standards on August 5, 2008 with comment period closed on September 16, 2008.
7. Draft Version 2 of standards and response to comments September 16, 2008–May 26, 2009.
8. Second posting of revised standards on July 10, 2009 with comment period closed on August 9, 2009. (Note that as part of the second posting, the sole requirements retained from IRO-002 were posted for the second time within IRO-001 with a suggestion to retire IRO-002.)
9. RC SDT coordinated with OCP SDT and RTO SDT on definitions relating to directives and three part communication and Draft Version 3 of standards and response to comments August 9–November 20, 2009.
10. Third posting of revised standards on January 4, 2010 with comment period closed on February 18, 2010. (Note that in this posting, the requirements for IRO-002 were posted in IRO-001.)
11. Fourth posting of revised standards for a comment period with an initial ballot from January 18, 2011 through March 7, 2011. (Note that in this posting, the requirements for IRO-002 were moved from IRO-001 back into IRO-002.)

Proposed Action Plan and Description of Current Draft:

This is the fifth draft of the requirements in this standard posted for a recirculation ballot. The standards that did not receive comments in the initial ballot will move forward for a recirculation ballot; standards needing significant revision will move forward to another comment period and a successive ballot. IRO-005-4 did not have any significant changes following the initial ballot and is being posted for a recirculation ballot.

Future Development Plan:

Anticipated Actions	Anticipated Date
1. Standard posted for recirculation ballots.	July 2011
1. Standard sent to BOT for approval.	August 2011
2. Standard filed with regulatory authorities.	September 2011

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

None

A. Introduction

1. **Title:** **Reliability Coordination – Analysis Tools**
2. **Number:** IRO-002-3
3. **Purpose:** To ensure that Reliability Coordinators provide their System Operators with authority with respect to analysis tool outages and to have procedures to mitigate effects of analysis tool outages.
4. **Applicability**
 - 4.1. Reliability Coordinator
5. **Effective Date:** In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees approval.

B. Requirements

- R1. Each Reliability Coordinator shall provide its System Operators with the authority to approve, deny or cancel planned outages of its own analysis tools. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*
- R2. Each Reliability Coordinator shall have procedures in place to mitigate the effects of analysis tool outages. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

C. Measures

- M1. Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a documented procedure or equivalent evidence that will be used to confirm that the Reliability Coordinator has provided its System Operators with the authority to approve, deny or cancel planned outages of its own analysis tools. (R1)
- M2. Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a documented procedure or equivalent evidence that will be used to confirm that the Reliability Coordinator has procedures in place to mitigate the effects of analysis tool outages. (R2)

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

The Regional Entity is the Compliance Enforcement Authority except where the Reliability Coordinator works for the Regional Entity. Where the Reliability Coordinator works for the Regional Entity, the Regional Entity will establish an agreement with the ERO or another entity approved by the ERO and FERC (i.e. another Regional Entity), to be responsible for compliance enforcement.

1.2. Compliance Monitoring and Enforcement Processes:

Compliance Audit

Self-Certification

Spot Checking

Compliance Violation Investigation

Self-Reporting

Complaint

1.3. Data Retention

The Reliability Coordinator shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- The Reliability Coordinator shall retain its current, in force document and any documents in force for the current year and previous calendar year for Requirements R1 and R2 and Measures M1 and M2.
- o If a Reliability Coordinator is found non-compliant, it shall keep information related to the non-compliance until found compliant.
- o The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

1.4. Additional Compliance Information

None.

2. Violation Severity Levels

Violation Severity Levels				
R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	N/A	N/A	N/A	The Reliability Coordinator failed to provide its System Operator with the authority to approve, deny or cancel planned outages of its own analysis tools.
R2	N/A	N/A	N/A	The Reliability Coordinator failed to have a procedure to mitigate the effects of analysis tool outages.

E. Regional Variances

None identified.

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	
1	April 4, 2007	Replaced Levels of Non-compliance with the Feb 28, BOT approved Violation Severity Levels (VSLs) Corrected typographical errors in BOT approved version of VSLs	Revised to add missing measures and compliance elements
2	October 17, 2008	Deleted R2, M3 and associated compliance elements as conforming changes associated with approval of IRO-010-1	Revised as part of IROL Project
2	October 17, 2008	Adopted by NERC Board of Trustees	IROL Project
2	March 23, 2011	Order issued by FERC approving IRO-002-2 (approval effective 5/23/11)	
3	To be determined	Retired R1-R8 under Project 2006-06.	Project 2006-06

Standard Development Roadmap

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1. Standard posted for recirculation ballots.	July 2011
1. Standard sent to BOT for approval.	August 2011
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None

A. Introduction

1. **Title:** Reliability Coordination – Analysis Tools
2. **Number:** IRO-002-~~23~~
3. **Purpose:** To ensure that Reliability Coordinators provide their System Operators with authority with respect to analysis tool outages and to have procedures to mitigate effects of analysis tool outages.
4. **Applicability**
 - 4.1. Reliability Coordinators~~s~~.
5. **Effective Date:** In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees approval.

B. Requirements

- R1. Each Reliability Coordinator shall provide its System Operators with the authority to approve, deny or cancel planned outages of its own analysis tools. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*
- R2. Each Reliability Coordinator shall have procedures in place to mitigate the effects of analysis tool outages. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

C. Measures

- M1. Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a documented procedure or equivalent evidence that will be used to confirm that the Reliability Coordinator has provided its System Operators~~s~~ with the authority to approve, deny or cancel planned outages of its own analysis tools. (R1)
- M2. Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a documented procedure or equivalent evidence that will be used to confirm that that the Reliability Coordinator has procedures in place to mitigate the effects of analysis tool outages. (R2)

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

~~Regional Entity~~

The Regional Entity is the Compliance Enforcement Authority except where the Reliability Coordinator works for the Regional Entity. Where the Reliability Coordinator works for the Regional Entity, the Regional Entity will establish an agreement with the ERO or another entity approved by the ERO and FERC (i.e. another Regional Entity), to be responsible for compliance enforcement.

1.2. Compliance Monitoring and Enforcement Processes:

Compliance Audits~~s~~

Self-Certifications~~s~~

Spot Checking

Compliance Violation Investigations~~s~~

Self-Reporting

Complaints~~s~~**1.3. Data Retention**

The Reliability Coordinator shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- The Reliability Coordinator shall retain its current, in force document and any documents in force for the current year and previous calendar year for Requirements R1 and R2 and Measures M1 and M2.
- If a Reliability Coordinator is found non-compliant, it shall keep information related to the non-compliance until found compliant.
- The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

1.4. Additional Compliance Information

None.

2. Violation Severity Levels

<u>Violation Severity Levels</u>				
Violation Severity Levels R#R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	N/A	N/A	N/A	The Reliability Coordinator failed to provide its System Operator with the authority to approve, deny or cancel planned outages of its own analysis tools.
R2	N/A	N/A	N/A	The Reliability Coordinator failed to have a procedure to mitigate the effects of analysis tool outages.

E. Regional Variances

None identified.

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
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1	November 1, 2006	Adopted by Board of Trustees	~~Revised~~ <u>Revised to add missing measures and compliance elements</u>
1	April 4, 2007	Regulatory Approval — Effective Date	New
<u>2</u>	<u>October 17, 2008</u>	<u>Retired R2 as a conforming change associated with approval of IRO-010-1 – Approved by Board of Trustees</u>	<u>IROL Project</u>
<u>23</u>	<u>To be determined</u>	Retired R1, R3-8 <u>under Project 2006-06.</u>	Revised <u>under Project 2006-06</u>

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None

A. Introduction

1. **Title:** Reliability Coordination —~~Facilities~~Analysis Tools
2. **Number:** IRO-002-~~23~~
3. **Purpose:** To ensure that Reliability Coordinators need information, tools and other capabilities to perform provide their responsibilitiesSystem Operators with authority with respect to analysis tool outages and to have procedures to mitigate effects of analysis tool outages.
4. **Applicability**
 - 4.1. Reliability ~~Coordinators~~Coordinator

Proposed Effective Date: In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, ~~the~~this standard shall become effective on the ~~latter of either April 1, 2009 or the~~ first day of the first calendar quarter, ~~three months~~ after Board of ~~Trustee~~adoption.
5. ~~In those jurisdictions where regulatory approval is required, the standard shall become effective on the latter of either April 1, 2009 or the first day of the first calendar quarter, three months after applicable regulatory approval.~~Trustees approval.

B. Requirements

- ~~R1.~~ Each Reliability Coordinator shall have adequate communications facilities (voice and data links) to appropriate entities within its Reliability Coordinator Area. These communications facilities shall be staffed and available to act in addressing a real-time emergency condition.
- ~~R2.~~ Each Reliability Coordinator — or its Transmission Operators and Balancing Authorities — shall provide, or arrange provisions for, data exchange to other Reliability Coordinators or Transmission Operators and Balancing Authorities via a secure network.
- ~~R3.~~ Each Reliability Coordinator shall have multi-directional communications capabilities with its Transmission Operators and Balancing Authorities, and with neighboring Reliability Coordinators, for both voice and data exchange as required to meet reliability needs of the Interconnection.
- ~~R4.~~ Each Reliability Coordinator shall have detailed real-time monitoring capability of its Reliability Coordinator Area and sufficient monitoring capability of its surrounding Reliability Coordinator Areas to ensure that potential or actual System Operating Limit or Interconnection Reliability Operating Limit violations are identified. Each Reliability Coordinator shall have monitoring systems that provide information that can be easily understood and interpreted by the Reliability Coordinator's operating personnel, giving particular emphasis to alarm management and awareness systems, automated data transfers, and synchronized information systems, over a redundant and highly reliable infrastructure.
- ~~R5.~~ Each Reliability Coordinator shall monitor Bulk Electric System elements (generators, transmission lines, buses, transformers, breakers, etc.) that could result in SOL or IROL violations within its Reliability Coordinator Area. Each Reliability Coordinator shall monitor both real and reactive power system flows, and operating reserves, and the status of Bulk Electric System elements that are or could be critical to SOLs and IROLs and system restoration requirements within its Reliability Coordinator Area.

- ~~R6.~~ Each Reliability Coordinator shall have adequate analysis tools such as state estimation, pre- and post-contingency analysis capabilities (thermal, stability, and voltage), and wide-area overview displays.
- ~~R7.~~ Each Reliability Coordinator shall continuously monitor its Reliability Coordinator Area. Each Reliability Coordinator shall have provisions for backup facilities that shall be exercised if the main monitoring system is unavailable. Each Reliability Coordinator shall ensure SOL and IROL monitoring and derivations continue if the main monitoring system is unavailable.
- ~~R1.~~ Each Reliability Coordinator shall ~~control~~provide its Reliability Coordinator System Operators with the authority to approve, deny or cancel planned outages of its own analysis tools, including approvals for planned maintenance. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*
- ~~R8.~~R2. Each Reliability Coordinator shall have procedures in place to mitigate the effects of analysis tool outages. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

C. Measures

- ~~M1.~~ Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a document that lists its voice communications facilities with Transmission Operators, Balancing Authorities and Generator Operators within its Reliability Coordinator Area and with neighboring Reliability Coordinators, that will be used to confirm that it has communication facilities in accordance with Requirements 1 and 3.
- ~~M2.~~ Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a data link facility description document, computer print out, training document, or other equivalent evidence that will be used to confirm that it has data links with entities within its Reliability Coordinator Area and with neighboring Reliability Coordinators, as specified in Requirements 1 and 3.
- ~~M3.~~ Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, Energy Management System description documents, computer printouts, SCADA data collection system communications performance or equivalent evidence to demonstrate that it has real-time monitoring capability of its Reliability Coordinator Area and monitoring capability of its surrounding Reliability Coordinator Areas to identify potential or actual System Operating Limit or Interconnection Reliability Operating Limit violations.
- ~~M4.~~ Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, documentation from suppliers, operating and planning staff training documents, examples of studies, or other equivalent evidence to show that it has analysis tools in accordance with Requirement 6.
- ~~M5.~~ Each Reliability Coordinator shall provide evidence such as equipment specifications, operating procedures, staff records of their involvement in training, or other equivalent evidence to show that it has a backup monitoring facility that can be used to identify and monitor SOLs and IROLs. (Requirement 7)
- ~~M6.~~M1. Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a documented procedure or equivalent evidence that will be used to confirm that the Reliability Coordinator has provided its System Operators with the authority to ~~vet~~approve, deny or cancel planned outages ~~to~~of its own analysis tools, ~~including final approvals for planned maintenance as specified in Requirement 8 Part 1.~~ (R1)
- ~~M7.~~M2. Each Reliability Coordinator shall have and provide upon request ~~its~~ current evidence that could include, but is not limited to, a documented procedure or equivalent

~~evidence that will be used to confirm that that the Reliability Coordinator has procedures used in place to mitigate the effects of analysis tool outages as specified in Requirement 8 Part 2. (R2)~~

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance ~~Monitoring Responsibility~~ Enforcement Authority

~~The Regional Entity is the Compliance Enforcement Authority except where the Reliability Coordinator works for the Regional Entity. Where the Reliability Coordinator works for the Regional Entity, the Regional Entity will establish an agreement with the ERO or another entity approved by the ERO and FERC (i.e. another Regional Entity), to be responsible for compliance enforcement.~~

~~Regional Reliability Organizations shall be responsible for compliance. Monitoring.~~

~~Compliance~~ **Monitoring and Reset Time Frame**

~~One or more of the following methods will be used to assess compliance:~~

- ~~— Self-certification (Conducted annually with submission according to schedule.)~~
- ~~— Spot Check Audits (Conducted anytime with up to 30 days notice given to prepare.)~~
- ~~— Periodic Audit (Conducted once every three years according to schedule.)~~
- ~~— Triggered Investigations (Notification of an investigation must be made within 60 days of an event or complaint of noncompliance. The entity will have up to 30 days to prepare for the investigation. An entity may request an extension of the preparation period and the extension will be considered by the Compliance Monitor on a case-by-case basis.)~~

~~The Performance Reset Period shall be 12 months from the last finding of non-compliance.~~

1.2. Compliance Monitoring and Enforcement Processes:

Compliance Audit

Self-Certification

Spot Checking

Compliance Violation Investigation

Self-Reporting

Complaint

~~1.2.1.3.~~ Data Retention

~~Each~~The Reliability Coordinator shall ~~have~~keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement

Authority to retain specific evidence for a longer period of time as part of an investigation:

- The Reliability Coordinator shall retain its current, in -force document and any documents ~~used to show compliance within~~ force for the current year and previous calendar year for Requirements R1 and R2 and Measures ~~1 through 7~~ M1 and M2.

If ~~an entity~~ a Reliability Coordinator is found non-compliant ~~the entity, it~~ shall keep information related to the ~~noncompliance non-compliance~~ until found compliant ~~or for two years plus the current year, whichever is longer.~~

- o ~~Evidence used as part of a triggered investigation shall be retained by the entity being investigated for one year from the date that the investigation is closed, as determined by the Compliance Monitor,.~~
- o The Compliance ~~Monitor~~ Enforcement Authority shall keep the last ~~periodic~~ audit ~~report~~ records and all requested and submitted subsequent ~~compliance~~ audit records.

1.3.1.4. Additional Compliance Information

None.

2. Violation Severity Levels:

<u>Violation Severity Levels</u>				
Requirement #	Lower <u>VSL</u>	Moderate <u>VSL</u>	High <u>VSL</u>	Severe <u>VSL</u>
R1	The Reliability Coordinator has demonstrated communication facilities for both voice and data exist to all appropriate entities and that they are staffed and available but they are less than adequate.	The Reliability Coordinator has failed to demonstrate that is has: 1) Voice communication links with one appropriate entity or 2) Data links with one appropriate entity.	The Reliability Coordinator has failed to demonstrate that is has: 1) Voice communication links with two appropriate entities or 2) Data links with two appropriate entities.	The Reliability Coordinator has failed to demonstrate that is has: 1) Voice communication links with more than two appropriate entities or 2) Data links with more than two appropriate entities or 3) Communication facilities are not staffed or 4) Communication facilities are not ready.
R2	N/A	The Reliability Coordinator or designated Transmission Operator and Balancing Authority has failed to demonstrate it provided or arranged provision for the exchange of data with one of the other Reliability Coordinators or Transmission Operators and Balancing Authorities.	The Reliability Coordinator or designated Transmission Operator and Balancing Authority has failed to demonstrate it provided or arranged provision for the exchange of data with two of the other Reliability Coordinators or Transmission Operators and Balancing Authorities.	The Reliability Coordinator or designated Transmission Operator and Balancing Authority has failed to demonstrate it provided or arranged provision for the exchange of data with three of the other Reliability Coordinators or Transmission Operators and Balancing Authorities.

~~R3~~	~~N/A~~	~~The Reliability Coordinator has failed to demonstrate multi-directional communication capabilities to one of the Transmission Operators and Balancing Authorities in its Reliability Coordinator Area and with neighboring Reliability Coordinators.~~	~~The Reliability Coordinator has failed to demonstrate multi-directional communication capabilities to two or more of the Transmission Operators and Balancing Authorities in its Reliability Coordinator Area and with neighboring Reliability Coordinators.~~	~~The Reliability Coordinator has failed to demonstrate multi-directional communication capabilities to all of the Transmission Operators and Balancing Authorities in its Reliability Coordinator Area and with all neighboring Reliability Coordinators.~~
~~R4~~	~~The Reliability Coordinator's monitoring systems provide information in a way that is not easily understood and interpreted by the Reliability Coordinator's operating personnel or particular emphasis was not given to alarm management and awareness systems, automated data transfers and synchronized information systems.~~	~~The Reliability Coordinator has failed to demonstrate that is has detailed real-time monitoring capabilities in its Reliability Coordinator Area and sufficient monitoring capabilities of its surrounding Reliability Coordinator Areas to ensure that one potential or actual SOL or IROL violation is not identified.~~	~~The Reliability Coordinator has failed to demonstrate that is has detailed real-time monitoring capabilities in its Reliability Coordinator Area and sufficient monitoring capabilities of its surrounding Reliability Coordinator Areas to ensure that two or more potential and actual SOL and IROL violations are not identified.~~	~~The Reliability Coordinator has failed to demonstrate that is has detailed real-time monitoring capabilities in its Reliability Coordinator Area and sufficient monitoring capabilities of its surrounding Reliability Coordinator Areas to ensure that all potential and actual SOL and IROL violations are identified.~~

R5	The Reliability Coordinator failed to monitor: 1) the status, real power flow or reactive power flow of Bulk Electric System elements that could result in one SOL violations or 2) or operating reserves for a small portion of the Reliability Authority Area.	The Reliability Coordinator failed to monitor: 1) the status, real power flow or reactive power flow of Bulk Electric System elements critical to assessing one IROL or to system restoration; 2) the status, real power flow or reactive power flow of Bulk Electric System elements that could result in multiple SOL violations, or 3) operating reserves.	The Reliability Coordinator failed to monitor: 1) the status, real power flow or reactive power flow of Bulk Electric System elements critical to assessing two or more IROLs; or one IROL and to system restoration; 2) the status, real power flow or reactive power flow of Bulk Electric System elements that could result in multiple SOL violations and operating reserves, or 3) the status, real power flow or reactive power flow of Bulk Electric System elements critical to assessing one IROL or system restoration and operating reserves.	The Reliability Coordinator failed to monitor: 1) the status, real power flow or reactive power flow of Bulk Electric System elements critical to assessing all IROLs and to system restoration, or 2) the status, real power flow or reactive power flow of Bulk Electric System elements critical to assessing all SOL violations and operating reserves.
R6	The Reliability Coordinator failed to demonstrate that it has: 1) analysis tools capable of assessing all pre-contingency flows; 2) analysis tools capable of assessing all post-contingency flows, or 3) all necessary wide-area overview displays exist.	The Reliability Coordinator failed to demonstrate that it has: 1) analysis tools capable of assessing the majority of pre-contingency flows; 2) analysis tools capable of assessing the majority of post-contingency flows, or 3) the majority of necessary wide-area overview displays exist.	The Reliability Coordinator failed to demonstrate that it has: 1) analysis tools capable of assessing a minority of pre-contingency flows; 2) analysis tools capable of assessing a minority of post-contingency flows, or 3) a minority of necessary wide-area overview displays exist.	The Reliability Coordinator failed to demonstrate that it has: 1) analysis tools capable of assessing any pre-contingency flows; 2) analysis tools capable of assessing any post-contingency flows, or 3) any necessary wide-area overview displays exist.

<u>R7</u>	~~The Reliability Coordinator failed to demonstrate that: 1) it or a delegated entity monitored SOLs when the main monitoring system was unavailable or 2) it has provisions to monitor SOLs when the main monitoring system is not available.~~	~~The Reliability Coordinator failed to demonstrate that: 1) it or a delegated entity monitored one IROL when the main monitoring system was unavailable or 2) it has provisions to monitor one IROL when the main monitoring system is not available.~~	~~The Reliability Coordinator failed to demonstrate that: 1) it or a delegated entity monitored two or more IROLs when the main monitoring system was unavailable, 2) it or a delegated entity monitored SOLs and one IROL when the main monitoring system was unavailable 3) it has provisions to monitor two or more IROLs when the main monitoring system is not available, or 4) it has provisions to monitor SOLs and one IROL when the main monitoring system was unavailable.~~	~~The Reliability Coordinator failed to demonstrate that it continuously monitored its Reliability Authority Area.~~
<u>R8R1</u>	Reliability Coordinator has approval rights for planned maintenance outages of analysis tools but does not have approval rights for work on analysis tools that creates a greater risk of an unplanned outage of the tools. <u>N/A</u>	Reliability Coordinator has approval rights for planned maintenance but does not have plans to mitigate the effects of outages of the analysis tools. <u>N/A</u>	Reliability Coordinator has approval rights for planned maintenance but does not have plans to mitigate the effects of outages of the analysis tools and does not have approval rights for work on analysis tools that creates a greater risk of an unplanned outage of the tools. <u>N/A</u>	<u>The Reliability Coordinator approval is not required for failed to provide its System Operator with the authority to approve, deny or cancel planned maintenance outages of its own analysis tools.</u>
<u>R2</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>The Reliability Coordinator failed to have a procedure to mitigate the effects of analysis tool outages.</u>

E. Regional Variances

None identified.

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	~~Revised~~
1	<u>April 4, 2007</u>	Replaced Levels of Non-compliance with the Feb 28, BOT approved Violation Severity Levels (VSLs) Corrected typographical errors in BOT approved version of VSLs	<u>Revised to add missing measures and compliance elements</u>
2	<u>October 17, 2008</u>	Deleted R2, M3 and associated compliance elements <u>as conforming changes associated with approval of IRO-010-1</u>	Revised <u>as part of IROL Project</u>
2	October 17, 2008	Adopted by NERC Board of Trustees	<u>IROL Project</u>
2	March 23, 2011	Order issued by FERC approving IRO-002-2 (approval effective 5/23/11)	
<u>3</u>	<u>To be determined</u>	<u>Retired R1-R8 under Project 2006-06.</u>	<u>Project 2006-06</u>

Implementation Plan
IRO-002-3 – Reliability Coordination – Analysis Tools

Approvals Required

IRO-002-3 – Reliability Coordination – Analysis Tools

Prerequisite Approvals

None

Revisions to Glossary Terms

None

Applicable Entities

Reliability Coordinator

Conforming Changes to Other Standards

None

Effective Dates

IRO-002-3 shall become effective on the first day of the first calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees approval.

Retirements

IRO-002-2 should be retired at midnight of the day immediately prior to the Effective Date of IRO-002-3 in the particular jurisdiction in which the new standard is becoming effective.

Summary of Changes

The RCSDT revised the standard and is proposing retiring several requirements (R1, R3, R4, R5, R6, R7 and R8). Changes were made to eliminate redundancies between standards (existing and proposed), align with NERCs Rules of Procedure, and to address the FERC Order 693 directive for IRO-002:

In addition we direct the ERO to develop a modification to IRO-002-1 through the Reliability Standards development process that requires a minimum set of tools that should be made available to reliability coordinators.

RCSDT response: The development of a minimum set of tools should be addressed through the work of the Real-Time Tools Best Practices Task Force. Their charge was to develop a list of tools required to perform real time operations functions and submit SARs based on their work. As requirements for these tools are developed, appropriate standards projects will be initiated to incorporate the tools within the NERC Organization Registration and Certification Process, and the applicable reliability standards. The RCSDT submits that this directive be addressed in that effort. This action is accommodated by the Standards Development Work Plan.

The following table identifies the sections of approved standards that shall be retired or revised when this standard is implemented.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-002-2 R1. Each Reliability Coordinator shall have adequate communications facilities (voice and data links) to appropriate entities within its Reliability Coordinator Area. These communications facilities shall be staffed and available to act in addressing a real-time emergency condition. [<i>Violation Risk Factor: High</i>]	The first sentence of this requirement should be retired because it is a basic facility issue that should be addressed in certification. The second sentence is redundant with PER-004, R1 which requires the RC to be staffed 24x7. PER-004-1 R1. Each Reliability Coordinator shall be staffed with adequately trained and NERC-certified Reliability Coordinator operators, 24 hours per day, seven days per week.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-002-2 R2. Each Reliability Coordinator — or its Transmission Operators and Balancing Authorities — shall provide, or arrange provisions for, data exchange to other Reliability Coordinators or Transmission Operators and Balancing Authorities via a secure network. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]	None. Retire requirement as it is redundant with: TOP-005-1 R1. Each Transmission Operator and Balancing Authority shall provide its Reliability Coordinator with the operating data that the Reliability Coordinator requires to perform operational reliability assessments and to coordinate reliable operations within the Reliability Coordinator Area. (This requirement will be retired upon the implementation of IRO-010-1) IRO-014-1 R1. Each Reliability Coordinator shall have Operating Procedures, Operating Processes, or Operating Plans for activities that require notification, exchange of information or coordination of actions that may impact other Reliability Coordinator Areas to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following: <i>[Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning]</i> R1.1. Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators. R1.2. Energy and capacity shortages. R1.3. Planned or unplanned outage information. R1.4. Control of voltage, including the coordination of reactive resources. R1.5. Coordination of information exchange to support reliability assessments. R1.6. Authority to act to prevent and mitigate system conditions which could cause Adverse Reliability Impacts to other Reliability Coordinator Areas. R1.7. Weekly conference calls

Already Approved Standard	Proposed Replacement Requirement(s)
Notes: The “secure network” provisions of IRO-002-2 R2 are covered under the NERC Rules of Procedure, Section 1002 which states: <i>NERC will provide tools and other support services for the benefit of reliability coordinators and other system operators, including the Area Control Error (ACE) and Frequency Monitoring System, NERC Hotline, Real-time Flows, System Data Exchange (SDX), Reliability Coordinator Information System (RCIS), Transmission Services Information Network (TSIN), Interchange Distribution Calculator (IDC), Interregional Security Network (ISN), and Central Repository for Security Events (CRC). To accomplish this goal, NERC will:</i> <i>1. Maintain the reliability and effectiveness of all mission-critical operating reliability support systems and services;</i> <i>2. Continue to support maintenance of a transmission provider curtailment report on the CRC site in response to Federal Energy Regulatory Commission Order 605;</i> <i>3. Investigate and analyze the use of high-speed real-time system measurements, including phasors, in predicting the behavior and performance of the Eastern Interconnection; and</i> <i>4. Facilitate real-time voice and data exchange services among reliability coordinators (e.g., Hotline, Interregional Security Network, NERCnet, System Data Exchange, etc.).</i>	
IRO-002-2 R3. Each Reliability Coordinator shall have multi-directional communications capabilities with its Transmission Operators and Balancing Authorities, and with neighboring Reliability Coordinators, for both voice and data exchange as required to meet reliability needs of the Interconnection. <i>[Violation Risk Factor: Medium]</i>	None. Retire this requirement. R3 is addressed in COM-001-1, R1 as well as the proposed revisions to COM-001-2, R1-R8.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-002-2 R4. Each Reliability Coordinator shall have detailed real-time monitoring capability of its Reliability Coordinator Area and sufficient monitoring capability of its surrounding Reliability Coordinator Areas to ensure that potential or actual System Operating Limit or Interconnection Reliability Operating Limit violations are identified. Each Reliability Coordinator shall have monitoring systems that provide information that can be easily understood and interpreted by the Reliability Coordinator's operating personnel, giving particular emphasis to alarm management and awareness systems, automated data transfers, and synchronized information systems, over a redundant and highly reliable infrastructure. R5. Each Reliability Coordinator shall monitor Bulk Electric System elements (generators, transmission lines, buses, transformers, breakers, etc.) that could result in SOL or IROL violations within its Reliability Coordinator Area. Each Reliability Coordinator shall monitor both real and reactive power system flows, and operating reserves, and the status of Bulk Electric System elements that are or could be critical to SOLs and IROLs and system restoration requirements within its Reliability Coordinator Area.	None. Both should be retired based on the notes below.
Notes: R4 is a basic facility requirement that should be addressed in certification. For R5, real-time monitoring is a supporting activity and is only one of several processes used to support operation within SOLs or IROLs. It is not practical to measure real-time monitoring, nor is this necessary. The real reliability objective is to operate within identified parameters, not to monitor.	
IRO-002-2 R6. Each Reliability Coordinator shall have adequate analysis tools such as state estimation, pre- and post-contingency analysis capabilities (thermal, stability, and voltage), and wide-area overview displays. <i>[Violation Risk Factor: High]</i>	None. Retire this requirement. R7 is a basic facility requirement that should be addressed in certification.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-002-2 R7. Each Reliability Coordinator shall continuously monitor its Reliability Coordinator Area. Each Reliability Coordinator shall have provisions for backup facilities that shall be exercised if the main monitoring system is unavailable. Each Reliability Coordinator shall ensure SOL and IROL monitoring and derivations continue if the main monitoring system is unavailable. <i>[Violation Risk Factor: High]</i>	None. This requirement should be retired because it is redundant with: EOP-008-0 R1. Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have a plan to continue reliability operations in the event its control center becomes inoperable. The contingency plan must meet the following requirements: The contingency plan shall not rely on data or voice communication from the primary control facility to be viable. R1.2. The plan shall include procedures and responsibilities for providing basic tie line control and procedures and for maintaining the status of all inter-area schedules, such that there is an hourly accounting of all schedules. R1.3. The contingency plan must address monitoring and control of critical transmission facilities, generation control, voltage control, time and frequency control, control of critical substation devices, and logging of significant power system events. The plan shall list the critical facilities. R1.4. The plan shall include procedures and responsibilities for maintaining basic voice communication capabilities with other areas. R1.5. The plan shall include procedures and responsibilities for conducting periodic tests, at least annually, to ensure viability of the plan. R1.6. The plan shall include procedures and responsibilities for providing annual training to ensure that operating personnel are able to implement the contingency plans. R1.7. The plan shall be reviewed and updated annually. R1.8. Interim provisions must be included if it is expected to take more than one hour to implement the contingency plan for loss of primary control facility.

Already Approved Standard	Proposed Replacement Requirement(s)
Notes: Real-time monitoring is a supporting activity and is only one of several processes used to support operation within SOLs or IROLs. It is not practical to measure real-time monitoring, nor is this necessary. The real reliability objective is to operate within SOLs and IROLs, not to monitor. The proposed revisions to EOP-008 require the RC to have specific backup capabilities sufficient to, among other things, provide visualization capabilities that ensure that operating personnel have situational awareness of the BES.	
IRO-002-2 R8. Each Reliability Coordinator shall control its Reliability Coordinator analysis tools, including approvals for planned maintenance. Each Reliability Coordinator shall have procedures in place to mitigate the effects of analysis tool outages. <i>[Violation Risk Factor: Medium]</i>	IRO-002-2 R2. Each Reliability Coordinator shall provide its System Operators with the authority to approve, deny or cancel planned outages of its own analysis tools ~~control its Reliability Coordinator analysis tools, including approvals for planned maintenance.~~ <i>[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i> R3. Each Reliability Coordinator shall have procedures in place to mitigate the effects of analysis tool outages. <i>[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i>

Implementation Plan~~Contents:~~
IRO-002-3 – Reliability Coordination – Analysis Tools

Approvals Required

IRO-002-3 – Reliability Coordination – Analysis Tools

Prerequisite Approvals

- ~~▪ Adoption of IRO-001-2, IRO-007-0, IRO-010-0, COM-001-2~~

~~**Conforming Changes to Requirements in Already
Approved Standards**~~

None

~~**Coordination with revisions proposed in other standards projects**~~

- ~~▪ The IROL SDT proposes retiring the following requirements when IRO-010 is approved:
R2~~

~~**Revision**~~ **Revisions to Glossary Terms**

None

Applicable Entities

Reliability Coordinator

Conforming Changes to Other Standards

None

Effective Dates

IRO-002-3 shall become effective on the first day of the first calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory

approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees approval.

Retirements

IRO-002-2 should be retired at midnight of the day immediately prior to the Effective Date of IRO-002-3 in the particular jurisdiction in which the new standard is becoming effective.

Summary of Changes

The RCSDT revised the standard and is proposing retiring several requirements (R1, R3, R4, R5, R6, R7 and R8). Changes were made to eliminate redundancies between standards (existing and proposed), align with NERCs Rules of Procedure, and to address ~~issues in FERC Order 693.~~

the FERC Order 693 directive for IRO-002:

In addition we direct the ERO to develop a modification to IRO-002-1 through the Reliability Standards development process that requires a minimum set of tools that should be made available to reliability coordinators.

RCSDT response: The development of a minimum set of tools should be addressed through the work of the Real-Time Tools Best Practices Task Force. Their charge was to develop a list of tools required to perform real time operations functions and submit SARs based on their work. As requirements for these tools are developed, appropriate standards projects will be initiated to incorporate the tools within the NERC Organization Registration and Certification Process, and the applicable reliability standards. The RCSDT submits that this directive be addressed in that effort. This action is accommodated by the Standards Development Work Plan.

Revisions or Retirements to Already Approved Standards

The following ~~tables identify~~ table identifies the sections of approved standards that shall be retired or revised when this standard is implemented. ~~If the drafting team is recommending the retirement or revision of a requirement, that text is blue.~~

Already Approved Standard		Proposed Replacement Requirement(s)
~~IRO-002-12~~ R1. Each Reliability Coordinator shall have adequate communications facilities (voice and data links) to appropriate entities within its Reliability Coordinator Area. These communications facilities shall be staffed and available to act in addressing a real-time emergency condition. <i>[Violation Risk Factor: High]</i>		The first sentence of this requirement should be retired because it is a basic facility issue that should be addressed in certification. The second sentence is redundant with PER-004, R1 which requires the RC to be staffed 24x7. PER-004-1 R1. Each Reliability Coordinator shall be staffed with adequately trained and NERC-certified Reliability Coordinator operators, 24 hours per day, seven days per week.
Notes:		
~~Already Approved Standard~~	~~Proposed Replacement Requirement(s)~~	
~~IRO-002-1~~ ~~R2.~~ Each Reliability Coordinator shall determine the data requirements to support its reliability coordination tasks and shall request such data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities, or adjacent Reliability Coordinators. <i>[Violation Risk Factor: Medium]</i>	~~None—this requirement should be retired as it is redundant with:~~ ~~IRO-010-1~~ ~~R1. The Reliability Coordinator shall have a documented data specification for data and information to build and maintain models to support Real-Time Monitoring, Operational Planning Analyses, and Real-Time Assessments. The specification shall include the following: (Violation Risk Factor: Low) (Time Horizon: Operations Planning)~~	

Implementation Plan for Reliability Coordination Standards

Already Approved Standard	Proposed Replacement Requirement(s)
Notes: ~~This requirement is redundant and will be retired upon the adoption of IRO-010-1, R1 (draft standard).~~	

Implementation Plan for Reliability Coordination Standards

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-002-12 ~~R3~~<u>R2</u>. Each Reliability Coordinator — or its Transmission Operators and Balancing Authorities — shall provide, or arrange provisions for, data exchange to other Reliability Coordinators or Transmission Operators and Balancing Authorities via a secure network. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]	None—<u>Retire</u> requirement as it is redundant with: TOP-005-1 R1. Each Transmission Operator and Balancing Authority shall provide its Reliability Coordinator with the operating data that the Reliability Coordinator requires to perform operational reliability assessments and to coordinate reliable operations within the Reliability Coordinator Area. (This requirement will be retired upon the implementation of IRO-010-1) IRO-014-1 ~~R1. The~~<u>Each</u> Reliability Coordinator shall have Operating Procedures, Operating Processes, or Operating Plans ~~in place~~ for activities that require notification, exchange of information or coordination of actions ~~with one or more that may impact~~ other Reliability ~~Coordinators~~<u>Coordinator Areas</u> to support Interconnection reliability. ~~These Operating Procedures, Processes, or Plans shall address Scenarios that affect other Reliability Coordinator Areas as well as those developed in coordination with other Reliability Coordinators.~~ R1. ~~R1.1.~~ These Operating Procedures, Processes, or Plans shall collectively address, ~~as a minimum,~~ the following: <u>[Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning]</u> R1.1. ~~R1.1.1.~~ Communications and notifications, including the ~~conditions~~<u>mutually agreed to conditions</u> under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators. R1.2. ~~R1.1.2.~~ Energy and capacity shortages. R1.3. ~~R1.1.3.~~ Planned or unplanned outage information. R1.4. ~~R1.1.4. Voltage control~~<u>Control of voltage</u>, including the coordination of reactive resources ~~for voltage control.~~ R1.5. ~~R1.1.5.~~ Coordination of information exchange to support reliability assessments. R1.6. ~~R1.1.6.~~ Authority to act to prevent and mitigate ~~instances of causing system conditions which could cause~~ Adverse Reliability Impacts to other Reliability Coordinator Areas.

Implementation Plan for Reliability Coordination Standards

Already Approved Standard	Proposed Replacement Requirement(s)
Notes: The “secure network” provisions of ~~R3~~<u>IRO-002-2 R2</u> are covered under the NERC Rules of Procedure, Section 1002 which states: <i>NERC will provide tools and other support services for the benefit of reliability coordinators and other system operators, including the Area Control Error (ACE) and Frequency Monitoring System, NERC Hotline, Real-time Flows, System Data Exchange (SDX), Reliability Coordinator Information System (RCIS), Transmission Services Information Network (TSIN), Interchange Distribution Calculator (IDC), Interregional Security Network (ISN), and Central Repository for Security Events (CRC). To accomplish this goal, NERC will:</i> <i>1. Maintain the reliability and effectiveness of all mission-critical operating reliability support systems and services;</i> <i>2. Continue to support maintenance of a transmission provider curtailment report on the CRC site in response to Federal Energy Regulatory Commission Order 605;</i> <i>3. Investigate and analyze the use of high-speed real-time system measurements, including phasors, in predicting the behavior and performance of the Eastern Interconnection; and</i> <i>4. Facilitate real-time voice and data exchange services among reliability coordinators (e.g., Hotline, Interregional Security Network, NERCnet, System Data Exchange, etc.).</i>	
~~Already Approved Standard~~	~~Proposed Replacement Requirement(s)~~
~~IRO-002-12~~ ~~R4R3.~~ Each Reliability Coordinator shall have multi-directional communications capabilities with its Transmission Operators and Balancing Authorities, and with neighboring Reliability Coordinators, for both voice and data exchange as required to meet reliability needs of the Interconnection. <i>[Violation Risk Factor: Medium]</i>	None—~~1.~~ Retire this requirement. ~~R4R3~~ is addressed in COM-001-~~(Interpersonal Communications capability)~~ and ~~IRO-010 (data)-1, R1~~ as well as the proposed revisions to COM-001-2, ~~R1-R8.~~
Notes:	

Already Approved Standard	Proposed Replacement Requirement(s)
~~IRO-002-12~~ ~~R5~~R4. Each Reliability Coordinator shall have detailed real-time monitoring capability of its Reliability Coordinator Area and sufficient monitoring capability of its surrounding Reliability Coordinator Areas to ensure that potential or actual System Operating Limit or Interconnection Reliability Operating Limit violations are identified. Each Reliability Coordinator shall have monitoring systems that provide information that can be easily understood and interpreted by the Reliability Coordinator's operating personnel, giving particular emphasis to alarm management and awareness systems, automated data transfers, and synchronized information systems, over a redundant and highly reliable infrastructure. <i>[Violation Risk Factor: High]</i> ~~R6~~R5. Each Reliability Coordinator shall monitor Bulk Electric System elements (generators, transmission lines, buses, transformers, breakers, etc.) that could result in SOL or IROL violations within its Reliability Coordinator Area. Each Reliability Coordinator shall monitor both real and reactive power system flows, and operating reserves, and the status of Bulk Electric System elements that are or could be critical to SOLs and IROLs and system restoration requirements within its Reliability Coordinator Area. <i>[Violation Risk Factor: High]</i>	None—<u> </u>. Both should be retired based on the notes below.
Notes: ~~R5~~ <u>R4</u> is a basic facility requirement that should be addressed in certification. ~~R6~~: ~~For R5~~, real-time monitoring is a supporting activity and is only one of several processes used to support operation within SOLs or IROLs. It is not practical to measure real-time monitoring, nor is this necessary. The real reliability objective is to operate within identified parameters, not to monitor.	
~~IRO-002-12~~ ~~R7~~R6. Each Reliability Coordinator shall have adequate analysis tools such as state estimation, pre- and post-contingency analysis capabilities (thermal, stability, and voltage), and wide-area overview displays. <i>[Violation Risk Factor: High]</i>	None—<u> </u>. Retire this requirement. R7 is a basic facility requirement that should be addressed in certification.
Notes:	

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-002-~~12~~ ~~R8~~R7. Each Reliability Coordinator shall continuously monitor its Reliability Coordinator Area. Each Reliability Coordinator shall have provisions for backup facilities that shall be exercised if the main monitoring system is unavailable. Each Reliability Coordinator shall ensure SOL and IROL monitoring and derivations continue if the main monitoring system is unavailable. <i>[Violation Risk Factor: High]</i>	None~~—~~. This requirement should be retired because it is redundant with: EOP-008-0 R1. Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have a plan to continue reliability operations in the event its control center becomes inoperable. The contingency plan must meet the following requirements: The contingency plan shall not rely on data or voice communication from the primary control facility to be viable. R1.2. The plan shall include procedures and responsibilities for providing basic tie line control and procedures and for maintaining the status of all inter-area schedules, such that there is an hourly accounting of all schedules. R1.3. The contingency plan must address monitoring and control of critical transmission facilities, generation control, voltage control, time and frequency control, control of critical substation devices, and logging of significant power system events. The plan shall list the critical facilities. R1.4. The plan shall include procedures and responsibilities for maintaining basic voice communication capabilities with other areas. R1.5. The plan shall include procedures and responsibilities for conducting periodic tests, at least annually, to ensure viability of the plan. R1.6. The plan shall include procedures and responsibilities for providing annual training to ensure that operating personnel are able to implement the contingency plans. R1.7. The plan shall be reviewed and updated annually. R1.8. Interim provisions must be included if it is expected to take more than one hour to implement the contingency plan for loss of primary control facility.

Implementation Plan for Reliability Coordination Standards

Already Approved Standard	Proposed Replacement Requirement(s)
Notes: Real-time monitoring is a supporting activity and is only one of several processes used to support operation within SOLs or IROLs. It is not practical to measure real-time monitoring, nor is this necessary. The real reliability objective is to operate within SOLs and IROLs, not to monitor. The proposed revisions to EOP-008 require the RC to have specific backup capabilities sufficient to, among other things, provide visualization capabilities that ensure that operating personnel have situational awareness of the BES.	
~~Already Approved Standard~~	~~Proposed Replacement Requirement(s)~~
~~IRO-002-12~~ ~~R9R8.~~ Each Reliability Coordinator shall control its Reliability Coordinator analysis tools, including approvals for planned maintenance. Each Reliability Coordinator shall have procedures in place to mitigate the effects of analysis tool outages. <i>[Violation Risk Factor: Medium]</i>	~~IRO-002-2~~ ~~R2.~~ Each Reliability Coordinator shall provide its System Operators with the authority to approve, deny or cancel planned outages of its own analysis tools ~~control its Reliability Coordinator analysis tools, including approvals for planned maintenance.~~ <i>[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i> ~~R3.~~ Each Reliability Coordinator shall have procedures in place to mitigate the effects of analysis tool outages. <i>[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i>
Notes: *—	

Standard	Functions that Must Comply With the Requirements							
	Reliability Coordinator	Balancing Authority	Interchange Authority	Transmission Operator	Transmission Owner	Generator Owner	Generator Operator	Load Serving Entity
~~IRO-002~~	X							

~~Effective Dates~~

TBD

VRFs and VSLs for IRO-002-3 - Reliability Coordination – Analysis Tools					
R#	VRF	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	Medium	N/A	N/A	N/A	The Reliability Coordinator failed to provide its System Operator with the authority to approve, deny or cancel planned outages of its own analysis tools.
R2	Medium	N/A	N/A	N/A	The Reliability Coordinator failed to have a procedure to mitigate the effects of analysis tool outages.

Standard Development Roadmap

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Proposed Action Plan and Description of Current Draft:

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Future Development Plan:

Anticipated Actions	Anticipated Date
1. Standard posted for recirculation ballots.	July 2011
2. Standard sent to BOT for approval.	August 2011
3. Standards filed with regulatory authorities.	September 2011

Definitions of Terms Used in Standard

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None

Introduction

1. **Title:** Reliability Coordination — Current Day Operations
2. **Number:** IRO-005-4
3. **Purpose:** To ensure that entities are notified when an expected or actual event with Adverse Reliability Impacts is identified.
4. **Applicability:**
 - 4.1. Reliability Coordinators.
5. **Effective Date:** In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees approval.

A. Requirements

- R1.** When the results of an Operational Planning Analysis or Real-time Assessment indicate an anticipated or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*
- R2.** Each Reliability Coordinator that identifies an anticipated or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when the problem has been mitigated. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

B. Measures

- M1.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it notified all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when it identified an anticipated or actual condition with Adverse Reliability Impacts, within its Reliability Coordinator Area. (R1)
- M2.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it notified all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when an anticipated or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area had been mitigated. (R2)

C. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

The Regional Entity is the Compliance Enforcement Authority except where the Reliability Coordinator works for the Regional Entity. Where the Reliability Coordinator works for the Regional Entity, the Regional Entity will establish an agreement with the ERO or another entity approved by the ERO and FERC (i.e. another Regional Entity), to be responsible for compliance enforcement.

1.2. Compliance Monitoring and Enforcement Processes:

Compliance Audit

Self-Certification

Spot Checking

Compliance Violation Investigation

Self-Reporting

Complaint

1.3. Data Retention

The Reliability Coordinator shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- The Reliability Coordinator shall retain its evidence for the most recent 90 days for voice recordings or 12 months for other documentation for Requirements R1 and R2 and Measures M1 and M2.
- If a Reliability Coordinator is found non-compliant, it shall keep information related to the non-compliance until found compliant.
- The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records or for the time period specified above, whichever is longer.

1.4. Additional Compliance Information

None.

2. Violation Severity Levels

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	The Reliability Coordinator who identified an anticipated or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to one, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.	The Reliability Coordinator who identified an anticipated or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to two, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.	The Reliability Coordinator who identified an anticipated or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to three, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.	The Reliability Coordinator who identified an anticipated or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to more than three impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. OR The Reliability Coordinator who identified an anticipated or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area (in cases where there are less than three impacted entities).
R2	The Reliability Coordinator failed to notify one, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.	The Reliability Coordinator failed to notify two, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.	The Reliability Coordinator failed to notify three, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.	The Reliability Coordinator failed to notify more than three impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated. OR The Reliability Coordinator failed to notify more all impacted

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
				Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated (in cases where there are less than three impacted entities).

D. Regional Differences

None identified.

E. Associated Documents**Version History**

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	August 28, 2006	Added three items that were inadvertently left out to “Applicability” section: 4.5 Generator Operators. 4.6 Load-Serving Entities. 4.7 Purchasing-Selling Entities.	Errata
1	February 7, 2006	BOT Approval	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New
2	November 1, 2006	BOT Approval	Revised under Missing Measures & Compliance Elements Project
3a	October 17, 2008	Retired R2, R3, R5, R16, R17 and revised R9, R13, R14 to eliminate redundancy or conflicts with IRO standards IRO-009-1, and IRO-010-1	IROL Project – conforming changes and interpretation
4	To be determined	Retired R1-R11; revised R12	Project 2006-06

Standard Development Roadmap

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Future Development Plan:

Anticipated Actions	Anticipated Date
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None

Introduction

1. **Title:** Reliability Coordination — Current Day Operations
2. **Number:** IRO-005-4
3. **Purpose:** To ensure that entities are notified when an expected or actual event with Adverse Reliability Impacts is identified.
4. **Applicability:**
 - 4.1. Reliability Coordinators.
5. **Effective Date:** In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees approval.

A. Requirements

- R1. When the results of an Operational Planning Analysis or Real-time Assessment indicate an ~~expected~~anticipated or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify ~~issue an alert to~~ all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*
- R2. ~~The~~ Each Reliability Coordinator that identifies an ~~expected~~anticipated or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when the problem has been mitigated. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

B. Measures

- M1. Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it notified all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when it identified ~~a real~~an anticipated or ~~potential~~actual condition with Adverse Reliability Impacts, within its Reliability Coordinator Area. (R1)
- M2. Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it notified all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when ~~a real~~an anticipated or ~~potential~~actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area had been mitigated. (R2)

C. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

~~Regional Entity~~

The Regional Entity is the Compliance Enforcement Authority except where the Reliability Coordinator works for the Regional Entity. Where the Reliability Coordinator works for the Regional Entity, the Regional Entity will establish an agreement with the ERO or another entity approved by the ERO and FERC (i.e. another Regional Entity), to be responsible for compliance enforcement.

1.2. Compliance Monitoring and Enforcement Processes:

Compliance Audits

Self-Certifications

Spot Checking

Compliance Violation Investigations

Self-Reporting

Complaints

1.3. Data Retention

The Reliability Coordinator shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- The Reliability Coordinator shall retain its evidence for the most recent 90 days for voice recordings or 12 months for other documentation for Requirements R1 and R2 and Measures M1 and M2.
- If a Reliability Coordinator is found non-compliant, it shall keep information related to the non-compliance until found compliant.
- The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records or for the time period specified above, whichever is longer. —

1.4. Additional Compliance Information

None.

2. Violation Severity Levels

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	The Reliability Coordinator who identified an ~~expected~~ <u>anticipated</u> or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to one, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.	The Reliability Coordinator who identified an ~~expected~~ <u>anticipated</u> or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to two, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.	The Reliability Coordinator who identified an ~~expected~~ <u>anticipated</u> or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to three, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.	The Reliability Coordinator who identified an ~~expected~~ <u>anticipated</u> or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to more than three impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. OR The Reliability Coordinator who identified an ~~expected~~ <u>anticipated</u> or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area (in cases where there are less than three impacted entities).~~).~~ <u>L</u>
R2	The Reliability Coordinator failed to notify one, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.	The Reliability Coordinator failed to notify two, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.	The Reliability Coordinator failed to notify three, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.	The Reliability Coordinator failed to notify more than three impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
				OR The Reliability Coordinator failed to notify more all impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated (in cases where there are less than three impacted entities).

D. Regional Differences

None identified.

E. Associated Documents**Version History**

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	August 28, 2006	Added three items that were inadvertently left out to “Applicability” section: 4.5 Generator Operators. 4.6 Load-Serving Entities. 4.7 Purchasing-Selling Entities.	Errata
1	February 7, 2006	BOT Approval	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New
2	~~August 3, 2010~~ <u>November 1, 2006</u>	~~Revised under Project 2006-06~~ <u>BOT Approval</u>	~~Revised~~ <u>Revised under Missing Measures & Compliance Elements Project</u>
<u>3a</u>	<u>October 17, 2008</u>	<u>Retired R2, R3, R5, R16, R17 and revised R9, R13, R14 to eliminate redundancy or conflicts with IRO standards IRO-009-1, and IRO-010-1</u>	<u>IROL Project – conforming changes and interpretation</u>
<u>4</u>	<u>To be determined</u>	<u>Retired R1-R11; revised R12</u>	<u>Project 2006-06</u>

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None

Introduction

1. **Title:** Reliability Coordination — Current Day Operations
 2. **Number:** IRO-005-~~3a4~~
 3. ~~Purpose: The Reliability Coordinator must be continuously aware of conditions within its Reliability Coordinator Area and include this information in its reliability assessments. The Reliability Coordinator must monitor Bulk Electric System parameters that may have significant impacts upon the Reliability Coordinator Area and neighboring Reliability Coordinator Areas.~~
 4. ~~Applicability~~
 3. **Purpose:** To ensure that entities are notified when an expected or actual event with Adverse Reliability Impacts is identified.
 4. **Applicability:**
 - 4.1. Reliability Coordinators.
 - 4.2. ~~Balancing Authorities.~~
 - 4.3. ~~Transmission Operators.~~
 - 4.4. ~~Transmission Service Providers.~~
 - 4.5. ~~Generator Operators.~~
 - 4.6. ~~Load-Serving Entities.~~
 - 4.7. ~~Purchasing-Selling Entities.~~
- Effective Date: In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, the standard shall become effective on the latter of either April 1, 2009 or the first day of the first calendar quarter, three months after BOT adoption.
5. ~~In those jurisdictions where regulatory approval is required, the this standard shall become effective on the latter first day of the first calendar quarter after Board of either April 1, 2009 or the first day of the first calendar quarter, three months after applicable regulatory approval. Trustees approval.~~

A. Requirements

- ~~**R1.** Each Reliability Coordinator shall monitor its Reliability Coordinator Area parameters, including but not limited to the following:~~
 - ~~**R1.1.** Current status of Bulk Electric System elements (transmission or generation including critical auxiliaries such as Automatic Voltage Regulators and Special Protection Systems) and system loading.~~
 - ~~**R1.2.** Current pre-contingency element conditions (voltage, thermal, or stability), including any applicable mitigation plans to alleviate SOL or IROL violations, including the plan's viability and scope.~~

- ~~R1.3.~~— Current post-contingency element conditions (voltage, thermal, or stability), including any applicable mitigation plans to alleviate SOL or IROL violations, including the plan's viability and scope.
- ~~R1.4.~~— System real and reactive reserves (actual versus required).
- ~~R1.5.~~— Capacity and energy adequacy conditions.
- ~~R1.6.~~— Current ACE for all its Balancing Authorities.
- ~~R1.7.~~— Current local or Transmission Loading Relief procedures in effect.
- ~~R1.8.~~— Planned generation dispatches.
- ~~R1.9.~~— Planned transmission or generation outages.
- ~~R1.10.~~— Contingency events.
- ~~R2.~~— Each Reliability Coordinator shall monitor its Balancing Authorities' parameters to ensure that the required amount of operating reserves is provided and available as required to meet the Control Performance Standard and Disturbance Control Standard requirements. If necessary, the Reliability Coordinator shall direct the Balancing Authorities in the Reliability Coordinator Area to arrange for assistance from neighboring Balancing Authorities. The Reliability Coordinator shall issue Energy Emergency Alerts as needed and at the request of its Balancing Authorities and Load-Serving Entities.
- ~~R3.~~— Each Reliability Coordinator shall ensure its Transmission Operators and Balancing Authorities are aware of Geo-Magnetic Disturbance (GMD) forecast information and assist as needed in the development of any required response plans.
- ~~R4.~~— The Reliability Coordinator shall disseminate information within its Reliability Coordinator Area, as required.
- R1. When the results of an Operational Planning Analysis or Real-time Assessment indicate an anticipated or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*
- ~~R5.~~— Each Reliability Coordinator shall monitor system frequency and its Balancing Authorities' performance and direct any necessary rebalancing to return to CPS and DCS compliance. The Transmission Operators and Balancing Authorities shall utilize all resources, including firm load shedding, as directed by its Reliability Coordinator to relieve the emergent condition.
- ~~R6.~~— The Reliability Coordinator shall coordinate with Transmission Operators, Balancing Authorities, and Generator Operators as needed to develop and implement action plans to mitigate potential or actual SOL, CPS, or DCS violations. The Reliability Coordinator shall coordinate pending generation and transmission maintenance outages with Transmission Operators, Balancing Authorities, and Generator Operators as needed in both the real time and next day reliability analysis timeframes.

- ~~R7.~~ As necessary, the Reliability Coordinator shall assist the Balancing Authorities in its Reliability Coordinator Area in arranging for assistance from neighboring Reliability Coordinator Areas or Balancing Authorities.
- ~~R8.~~ The Reliability Coordinator shall identify sources of large Area Control Errors that may be contributing to Frequency Error, Time Error, or Inadvertent Interchange and shall discuss corrective actions with the appropriate Balancing Authority. The Reliability Coordinator shall direct its Balancing Authority to comply with CPS and DCS.
- ~~R9.~~ Whenever a Special Protection System that may have an inter-Balancing Authority, or inter-Transmission Operator impact (e.g., could potentially affect transmission flows resulting in a SOL or IROL violation) is armed, the Reliability Coordinators shall be aware of the impact of the operation of that Special Protection System on inter-area flows. The Transmission Operator shall immediately inform the Reliability Coordinator of the status of the Special Protection System including any degradation or potential failure to operate as expected.
- ~~R10.~~ In instances where there is a difference in derived limits, the Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities shall always operate the Bulk Electric System to the most limiting parameter.
- ~~R11.~~ The Transmission Service Provider shall respect SOLs and IROLs in accordance with filed tariffs and regional Total Transfer Calculation and Available Transfer Calculation processes.
- ~~R12.~~R2. Each Reliability Coordinator who foresees a transmission problem (such as an SOL that identifies an anticipated or IROL violation, loss of reactive reserves, etc.) actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area shall ~~issue an alert to~~notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area ~~without delay.~~ The receiving Reliability Coordinator shall disseminate this information to its impacted Transmission Operators and Balancing Authorities. The Reliability Coordinator shall notify all impacted Transmission Operators, Balancing Authorities, when the transmission problem has been mitigated. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

B. Measures

- ~~M1.~~ The Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, Energy Management System description documents, computer printouts, a prepared report specifically detailing compliance to each of the bullets in Requirement 1, EMS availability, SCADA data collection system communications performance or equivalent evidence that will be used to confirm that it monitors the Reliability Coordinator Area parameters specified in Requirements 1.1 through 1.9.
- ~~M2.~~ If one of its Balancing Authorities has insufficient operating reserves, the Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to computer printouts, operating logs, voice recordings or transcripts of voice

~~recordings, or equivalent evidence that will be used to determine if the Reliability Coordinator directed and, if needed, assisted the Balancing Authorities in the Reliability Coordinator Area to arrange for assistance from neighboring Balancing Authorities. (Requirement 2 and Requirement 7)~~

~~M3. The Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, operator logs, voice recordings or transcripts of voice recordings, electronic communications or equivalent evidence that will be used to determine if it informed Transmission Operators and Balancing Authorities of Geo-Magnetic Disturbance (GMD) forecast information and provided assistance as needed in the development of any required response plans. (Requirement 3)~~

M1. The Each Reliability Coordinator shall have and provide **upon request** evidence **that could**which may include, but is not limited to, dated operator logs, dated voice recordings or dated transcripts of voice recordings, **Hot Line recordings**, electronic communications, or equivalent **evidence documentation**, that will be used to determine **if that** it **disseminated information** notified all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when it identified an anticipated or actual condition with Adverse Reliability Impacts, within its Reliability Coordinator Area **in accordance with Requirement 4.** (R1)

~~M1. The Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, computer printouts, operator logs, voice recordings or transcripts of voice recordings, electronic communications or equivalent evidence that will be used to confirm that it monitored system frequency and Balancing Authority performance and directed any necessary rebalancing, as specified in Requirement 5 Part 1.~~

~~M2. The Transmission Operators and Balancing Authorities shall have and provide upon request evidence that could include, but is not limited to, operator logs, voice recordings or transcripts of voice recordings, electronic communications or equivalent evidence that will be used to confirm that it utilized all resources, including firm load shedding, as directed by its Reliability Coordinator, to relieve an emergent condition. (Requirement 5 Part 2)~~

~~M3. The Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, voice recordings or transcripts of voice recordings, electronic communications, operator logs or equivalent evidence that will be used to determine if it coordinated with Transmission Operators, Balancing Authorities, and Generator Operators as needed to develop and implement action plans to mitigate potential or actual SOL, GPS, or DCS violations including the coordination of pending generation and transmission maintenance outages with Transmission Operators, Balancing Authorities and Generator Operators. (Requirement 6 Part 1)~~

~~M4. If a large Area Control Error has occurred, the Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, operator logs, voice recordings or transcripts of voice recordings, Hot Line recordings, electronic communications or equivalent evidence that will be used to determine if it identified sources of the Area Control Errors, and initiated corrective actions with the appropriate~~

~~Balancing Authority if the problem was within the Reliability Coordinator's Area (Requirement 8 Part 1)~~

- ~~M5.~~ If a Special Protection System is armed and that system could have had an inter-area impact, the Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, agreements with their Transmission Operators, procedural documents, operator logs, computer analysis, training modules, training records or equivalent evidence that will be used to confirm that it was aware of the impact of that Special Protection System on inter-area flows. (Requirement 9)
- ~~M6.~~ If there is an instance where there is a disagreement on a derived limit, the Transmission Operator, Balancing Authority, Generator Operator, Load-serving Entity, Purchasing-selling Entity and Transmission Service Provider involved in the disagreement shall have and provide upon request evidence that could include, but is not limited to, operator logs, voice recordings, electronic communications or equivalent evidence that will be used to determine if it operated to the most limiting parameter. (Part 2 of Requirement 10)
- ~~M7.~~ The Transmission Service Providers shall have and provide upon request evidence that could include, but is not limited to, procedural documents, operator logs, voice recordings or transcripts of voice recordings, electronic communications or equivalent evidence that will be used to confirm that it respected the SOLs or IROLs in accordance with filed tariffs and regional Total Transfer Calculation and Available Transfer Calculation processes. (Requirement 11 Part 2)
- ~~M4.~~ The Each Reliability Coordinator shall have and provide ~~upon request~~ evidence ~~that could~~which may include, but is not limited to, dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent evidencedocumentation, that will be used to ~~confirm~~determine that it ~~issued alerts when it foresaw a transmission problem (such as an SOL or IROL violation, loss of reactive reserves, etc.) within its Reliability Coordinator Area, to~~notified all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area ~~as specified in Requirement 12 Part 1.~~
- ~~M5.~~ The Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, operator logs, voice recordings or transcripts of voice recordings, electronic communications or equivalent evidence that will be used to confirm that upon receiving information such as an SOL or IROL violation, loss of reactive reserves, etc. it disseminated the information to its impacted Transmission Operators and Balancing Authorities as specified in Requirement 12 Part 2.
- ~~M1.~~ The~~when an anticipated or actual condition with Adverse~~ Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, operator logs, voice recordings or transcripts of voice recordings, electronic communications or equivalent evidence that will be used to confirm that it notified all impacted Transmission Operators, Balancing Authorities and Reliability Coordinators ~~when a transmission problem has~~Impacts within its Reliability Coordinator Area had been mitigated. (Requirement 12 Part ~~3~~R2)

C. Compliance

1. Compliance Monitoring Process

1.1. ~~Compliance~~ **Monitoring Responsibility** ~~Enforcement Authority~~

~~The Regional Entity is the Compliance Enforcement Authority except where the Reliability Coordinator works for the Regional Entity. Where the Reliability Coordinator works for the Regional Entity, the Regional Entity will establish an agreement with the ERO or another entity approved by the ERO and FERC (i.e. another Regional Entity), to be responsible for compliance enforcement.~~

~~Regional Reliability Organizations shall be responsible for compliance monitoring.~~

1.2. Compliance Monitoring and ~~Reset Time Frame~~ **Enforcement Processes:**

~~One~~ Compliance Audit

Self-Certification

Spot Checking

Compliance Violation Investigation

Self-Reporting

Complaint

1.3. Data Retention

~~The Reliability Coordinator shall keep data or more of the following methods will be used~~ evidence to assess ~~show~~ compliance:

~~— Self-certification (Conducted annually with submission according as identified below unless directed by its Compliance Enforcement Authority to schedule.)~~

~~— Spot Check Audits (Conducted anytime with up to 30 days notice given to prepare.)~~

~~— Periodic Audit (Conducted once every three years according to schedule.)~~

~~Triggered Investigations (Notification retain specific evidence for a longer period of time as part of an investigation must be made within 60 days of an event or complaint of noncompliance. The entity will have up to 30 days to prepare for the investigation. An entity may request an extension of the preparation period and the extension will be considered by the Compliance Monitor on a case-by-case basis.)~~

~~The Performance Reset Period shall be 12 months from the last finding of non-compliance.~~

~~5.1.~~ **Data Retention**

~~For Measures 1 and 9, each~~ Reliability Coordinator shall ~~have its current in-force documents as evidence.~~

- ~~For Measures 2–8~~retain its evidence for the most recent 90 days for voice recordings or 12 months for other documentation for Requirements R1 and R2 and Measures 12 through 13, theM1 and M2.

~~If a~~ Reliability Coordinator ~~shall keep 90 days of historical data (evidence).~~

~~For Measure 6, the Transmission Operator and Balancing Authority shall keep 90 days of historical data (evidence).~~

~~For Measure 10, the Transmission Operator, Balancing Authority, and Transmission Service Provider shall keep 90 days of historical data (evidence).~~

~~For Measure 11, the Transmission Service Provider shall keep 90 days of historical data (evidence).~~

~~If an entity is found non-compliant~~ the entity, it shall keep information related to the ~~noncompliance~~non-compliance until found compliant ~~or for two years plus the current year, whichever is longer.~~

- ~~Evidence used as part of a triggered investigation shall be retained by the entity being investigated for one year from the date that the investigation is closed, as determined by the Compliance Monitor,~~
- The Compliance ~~Monitor~~Enforcement Authority shall keep the last ~~periodic audit report~~records and all requested and submitted subsequent ~~compliance records~~audit records or for the time period specified above, whichever is longer.

1.4. Additional Compliance Information

None.

2. Violation Severity Levels:

Requirement~~R#~~	Lower ~~VSL~~	Moderate ~~VSL~~	High ~~VSL~~	Severe ~~VSL~~
~~R1~~	~~The Reliability Coordinator failed to monitor one (1) of the elements listed in IRO-005-1 R1.1 through R1.10.~~	~~The Reliability Coordinator failed to monitor two (2) of the elements listed in IRO-005-1 R1.1 through R1.10.~~	~~The Reliability Coordinator failed to monitor three (3) of the elements listed in IRO-005-1 R1.1 through R1.10.~~	~~The Reliability Coordinator failed to monitor more than three (3) of the elements listed in IRO-005-1 R1.1 through R1.10.~~
~~R1.1~~	~~The Reliability Coordinator failed to monitor the current status of Bulk Electric System elements (transmission or generation including critical auxiliaries such as Automatic Voltage Regulators and Special Protection Systems) and system loading.~~	~~N/A~~	~~N/A~~	~~N/A~~
~~R1.2~~	~~The Reliability Coordinator failed to monitor current pre-contingency element conditions (voltage, thermal, or stability), including any applicable mitigation plans to alleviate SOL or IROL violations, including the plan's viability and scope.~~	~~N/A~~	~~N/A~~	~~N/A~~

Requirement ~~R~~ #	Lower ~~VSL~~	Moderate ~~VSL~~	High ~~VSL~~	Severe ~~VSL~~
~~R1.3~~	The Reliability Coordinator failed to monitor current post-contingency element conditions (voltage, thermal, or stability), including any applicable mitigation plans to alleviate SOL or IROL violations, including the plan's viability and scope.	N/A	N/A	N/A
~~R1.4~~	The Reliability Coordinator failed to monitor system real and reactive reserves (actual versus required).	N/A	N/A	N/A
~~R1.5~~	The Reliability Coordinator failed to monitor capacity and energy adequacy conditions.	N/A	N/A	N/A
~~R1.6~~	The Reliability Coordinator failed to monitor current ACE for all its Balancing Authorities.	N/A	N/A	N/A
~~R1.7~~	The Reliability Coordinator failed to monitor current local or Transmission Loading Relief procedures in effect.	N/A	N/A	N/A
~~R1.8~~	The Reliability Coordinator failed to monitor planned generation dispatches.	N/A	N/A	N/A

Requirement ~~R~~ <u>R</u> #	Lower <u>VSL</u>	Moderate <u>VSL</u>	High <u>VSL</u>	Severe <u>VSL</u>
~~R1.9~~	~~The Reliability Coordinator failed to monitor planned transmission or generation outages.~~	~~N/A~~	~~N/A~~	~~N/A~~
~~R1.10~~	~~The Reliability Coordinator failed to monitor contingency events.~~	~~N/A~~	~~N/A~~	~~N/A~~
~~R2~~	~~N/A~~	~~The Reliability Coordinator failed to direct the Balancing Authorities in the Reliability Coordinator Area to arrange for assistance from neighboring Balancing Authorities.~~	~~The Reliability Coordinator failed to issue Energy Emergency Alerts as needed and at the request of its Balancing Authorities and Load-Serving Entities.~~	~~The Reliability Coordinator failed to monitor its Balancing Authorities' parameters to ensure that the required amount of operating reserves was provided and available as required to meet the Control Performance Standard and Disturbance Control Standard requirements.~~
~~R3~~	~~N/A~~	~~N/A~~	~~The Reliability Coordinator ensured its Transmission Operators and Balancing Authorities were aware of Geo-Magnetic Disturbance (GMD) forecast information, but failed to assist, when needed, in the development of any required response plans.~~	~~The Reliability Coordinator failed to ensure its Transmission Operators and Balancing Authorities were aware of Geo-Magnetic Disturbance (GMD) forecast information.~~
~~R4~~ <u>R1</u>	~~N/A~~ <u>The Reliability Coordinator who identified an anticipated or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area</u>	~~N/A~~ <u>The Reliability Coordinator who identified an anticipated or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area</u>	~~N/A~~ <u>The Reliability Coordinator who identified an anticipated or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area</u>	~~The Reliability Coordinator failed to disseminate information~~ <u>who identified an anticipated or actual condition with Adverse Reliability Impacts</u>

Requirement ~~R#~~	Lower <u>VSL</u>	Moderate <u>VSL</u>	High <u>VSL</u>	Severe <u>VSL</u>
	<u>failed to issue an alert to one, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.</u>	<u>failed to issue an alert to two, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.</u>	<u>failed to issue an alert to three, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.</u>	within its Reliability Coordinator Area, ~~when required~~: <u>failed to issue an alert to more than three impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.</u> <u>OR</u> <u>The Reliability Coordinator who identified an anticipated or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area (in cases where there are less than three impacted entities).</u>
~~R5~~	~~N/A~~	~~N/A~~	~~The Reliability Coordinator monitored system frequency and its Balancing Authorities' performance but failed to direct any necessary rebalancing to return to CPS and DCS compliance.~~	~~The Reliability Coordinator failed to monitor system frequency and its Balancing Authorities' performance and direct any necessary rebalancing to return to CPS and DCS compliance or the responsible entity failed to utilize all resources, including firm load shedding, as directed by its Reliability Coordinator to relieve the emergent condition.~~
~~R6~~	~~N/A~~	~~The Reliability Coordinator~~	~~The Reliability Coordinator~~	~~The Reliability Coordinator~~

Requirement <u>R#</u>	Lower <u>VSL</u>	Moderate <u>VSL</u>	High <u>VSL</u>	Severe <u>VSL</u>
		coordinated with Transmission Operators, Balancing Authorities, and Generator Operators, as needed, to develop action plans to mitigate potential or actual SOL, CPS, or DCS violations but failed to implement said plans, or the Reliability Coordinator coordinated pending generation and transmission maintenance outages with Transmission Operators, Balancing Authorities, and Generator Operators as needed in the real-time reliability analysis timeframe but failed to coordinate pending generation and transmission maintenance outages in the next-day reliability analysis timeframe.	failed to coordinate with Transmission Operators, Balancing Authorities, and Generator Operators as needed to develop and implement action plans to mitigate potential or actual SOL, CPS, or DCS violations, or the Reliability Coordinator failed to coordinate pending generation and transmission maintenance outages with Transmission Operators, Balancing Authorities, and Generator Operators as needed in both the real-time and next-day reliability analysis timeframes.	failed to coordinate with Transmission Operators, Balancing Authorities, and Generator Operators as needed to develop and implement action plans to mitigate potential or actual SOL, CPS, or DCS violations and the Reliability Coordinator failed to coordinate pending generation and transmission maintenance outages with Transmission Operators, Balancing Authorities, and Generator Operators as needed in both the real-time and next-day reliability analysis timeframes.
~~R7~~	~~N/A~~	~~N/A~~	~~N/A~~	The Reliability Coordinator failed to assist the Balancing Authorities in its Reliability Coordinator Area in arranging for assistance from neighboring Reliability Coordinator Areas or Balancing Authorities, when necessary.

Requirement ~~R#~~	Lower ~~VSL~~	Moderate ~~VSL~~	High ~~VSL~~	Severe ~~VSL~~
~~R8~~	N/A	The Reliability Coordinator identified sources of large Area Control Errors that were contributing to Frequency Error, Time Error, or Inadvertent Interchange and discussed corrective actions with the appropriate Balancing Authority but failed to direct the Balancing Authority to comply with CPS and DCS.	The Reliability Coordinator identified sources of large Area Control Errors that were contributing to Frequency Error, Time Error, or Inadvertent Interchange but failed to discuss corrective actions with the appropriate Balancing Authority.	The Reliability Coordinator failed to identify sources of large Area Control Errors that were contributing to Frequency Error, Time Error, or Inadvertent Interchange.
~~R9~~	N/A	N/A	N/A	The Reliability Coordinator failed to be aware of the impact on inter-area flows of an inter-Balancing Authority or inter-Transmission Operator, following the operation of a Special Protection System that is armed (e.g., could potentially affect transmission flows resulting in a SOL or IROL violation), or the Transmission Operator failed to immediately inform the Reliability Coordinator of the status of the Special Protection System including any degradation or potential failure to operate as expected.
~~R10~~	N/A	N/A	N/A	The responsible entity failed

Requirement ~~R#~~	Lower ~~VSL~~	Moderate ~~VSL~~	High ~~VSL~~	Severe ~~VSL~~
				to operate the Bulk Electric System to the most limiting parameter in instances where there was a difference in derived limits.
~~R11~~	~~N/A~~	~~N/A~~	~~N/A~~	The Transmission Service Provider failed to respect SOLs or IROLs in accordance with filed tariffs and regional Total Transfer Calculation and Available Transfer Calculation processes.
~~R12~~ <u>R2</u>	~~N/A~~ <u>The Reliability Coordinator failed to notify one, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.</u>	The Reliability Coordinator failed to notify <u>two, but not all</u> , impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.	~~N/A~~ <u>The Reliability Coordinator failed to notify three, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.</u>	The Reliability Coordinator ~~who foresaw a transmission problem (such as an SOL or IROL violation, loss of reactive reserves, etc.) within its Reliability Coordinator Area~~ failed to ~~issue an alert to all~~ <u>notify more than three</u> impacted Transmission Operators ~~and, Balancing Authorities in its Reliability Coordinator Area, or, when the receiving transmission problem had been mitigated.~~ <u>OR</u> <u>The Reliability Coordinator failed to disseminate this information to its</u> <u>notify more all</u> impacted Transmission

Requirement ~~R~~ <u>#</u>	Lower ~~VSL~~	Moderate ~~VSL~~	High ~~VSL~~	Severe ~~VSL~~
				Operators ~~and~~ ₁ Balancing Authorities ~~;~~ ₁ <u>when the transmission problem had been mitigated (in cases where there are less than three impacted entities).</u>

D. Regional Differences

None identified.

E. Associated Documents**Version History**

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
<u>1</u>	<u>August 28, 2006</u>	<u>Added three items that were inadvertently left out to “Applicability” section:</u> <u>4.5 Generator Operators.</u> <u>4.6 Load-Serving Entities.</u> <u>4.7 Purchasing-Selling Entities.</u>	<u>Errata</u>
<u>1</u>	<u>February 7, 2006</u>	<u>BOT Approval</u>	<u>Revised</u>
<u>1</u>	<u>April 4, 2007</u>	<u>Regulatory Approval — Effective Date</u>	<u>New</u>
<u>2</u>	<u>November 1, 2006</u>	<u>BOT Approval</u>	<u>Revised under Missing Measures & Compliance Elements Project</u>
<u>43a</u>	<u>October 17, 2008</u>	~~Retired R2, R3, R5; modified, R16, R17 and revised R9, R13 and, R14 ; retired R16 and R17~~ ~~Retired M2 and M3; modified M9 and M12; retired M13~~ ~~Made conforming changes to data retention~~ ~~Replaced Levels of Non-compliance~~ <u>eliminate redundancy or conflicts with the Feb 28, BOT approved Violation Severity Levels (VSLs)</u> ~~Retired VSLs associated with R2, R3, R5, R16 and R17;~~ ~~Modified VSLs associated with R9 and R13, and R14~~ <u>IRO standards IRO-009-1, and IRO-010-1</u>	~~Revised~~ <u>IROL Project – conforming changes and interpretation</u>

~~24~~	~~November 1, 2006~~ To be determined	~~Approved by the Board of Trustees~~ ~~Retired R1-R11; revised R12~~	~~Project 2006-06~~
~~2~~	~~January 1, 2007~~	~~Effective Date~~	
~~2a~~	~~November 5, 2009~~	~~Approved by the Board of Trustees~~	
~~3~~	~~October 17, 2008~~	~~Approved by the Board of Trustees~~	
~~3~~	~~March 23, 2011~~	~~Order issued by FERC approving IRO-005-3 (approval effective 5/23/11)~~	
~~3a~~	~~April 21, 2011~~	~~Added FERC approved Interpretation~~	

Appendix 1

Requirement Number and Text of Requirement

~~TOP-005-1 Requirement R3~~

~~Upon request, each Balancing Authority and Transmission Operator shall provide to other Balancing Authorities and Transmission Operators with immediate responsibility for operational reliability, the operating data that are necessary to allow these Balancing Authorities and Transmission Operators to perform operational reliability assessments and to coordinate reliable operations. Balancing Authorities and Transmission Operators shall provide the types of data as listed in Attachment 1 TOP-005-0 “Electric System Reliability Data,” unless otherwise agreed to by the Balancing Authorities and Transmission Operators with immediate responsibility for operational reliability.~~

~~The above referenced Attachment 1 — TOP-005-0 specifies the following data as item 2.6: New or degraded special protection systems. [Underline added for emphasis.]~~

~~IRO-005-1 Requirement R12¹~~

~~**R12.** Whenever a Special Protection System that may have an inter-Balancing Authority, or inter-Transmission Operator impact (e.g., could potentially affect transmission flows resulting in a SOL or IROL violation) is armed, the Reliability Coordinators shall be aware of the impact of the operation of that Special Protection System on inter-area flows. The Transmission Operator shall immediately inform the Reliability Coordinator of the status of the Special Protection System including any degradation or potential failure to operate as expected. [Underline added for emphasis.]~~

~~PRC-012-0 Requirements R1 and R1.3~~

~~**R1.** Each Regional Reliability Organization with a Transmission Owner, Generator Owner, or Distribution Providers that uses or is planning to use an SPS shall have a documented Regional Reliability Organization SPS review procedure to ensure that SPSs comply with Regional criteria and NERC Reliability Standards. The Regional SPS review procedure shall include:~~

~~**R1.3.** Requirements to demonstrate that the SPS shall be designed so that a single SPS component failure, when the SPS was intended to operate, does not prevent the interconnected transmission system from meeting the performance requirements defined in Reliability Standards TPL-001-0, TPL-002-0, and TPL-003-0.~~

Background Information for Interpretation

The TOP-005-1 standard focuses on two key obligations. The first key obligation (Requirement R1) is a “responsibility mandate.” Requirement R1 establishes who is responsible for the obligation to provide operating data “required” by a Reliability Coordinator within the framework of the Reliability Coordinator requirements defined in the IRO standards. The second key obligation (Requirement R3) is a “performance mandate.” Requirement R3 defines the obligation to provide data “requested” by other reliability entities that is needed “to perform

¹ ~~In the current version of the Standard (IRO-005-3a), this requirement is R9.~~

assessments and to coordinate operations.”

The Attachment to TOP-005-1 is provided as a guideline of what “can be shared.” The Attachment is not an obligation of “what must be shared.” Enforceable NERC Requirements must be explicitly contained within a given Standard’s approved requirements. In this case, the standard only requires data “upon request.” If a Reliability Coordinator or other reliability entity were to request data such as listed in the Attachment, then the entity being asked would be mandated by Requirements R1 and R3 to provide that data (including item 2.6, whether it is or is not in some undefined “degraded” state).

IRO-002-1 requires the Reliability Coordinator to have processes in place to support its reliability obligations (Requirement R2). Requirement R4 mandates that the Reliability Coordinator have communications processes in place to meet its reliability obligations, and Requirement R5 et al mandate the Reliability Coordinator to have the tools to carry out these reliability obligations.

IRO-003-2 (Requirements R1 and R2) requires the Reliability Coordinator to monitor the state of its system.

IRO-004-1 requires that the Reliability Coordinator carry out studies to identify Interconnection Reliability Operating Limits (Requirement R1) and to be aware of system conditions via monitoring tools and information exchange.

IRO-005-1 mandates that each Reliability Coordinator monitor predefined base conditions (Requirement R1), collect additional data when operating limits are or may be exceeded (Requirement R3), and identify actual or potential threats (Requirement R5). The basis for that request is left to each Reliability Coordinator. The Purpose statement of IRO-005-1 focuses on the Reliability Coordinator’s obligation to be aware of conditions that may have a “significant” impact upon its area and to communicate that information to others (Requirements R7 and R9). Please note: it is from this communication that Transmission Operators and Balancing Authorities would either obtain or would know to ask for SPS information from another Transmission Operator.

The IRO-005-1 (Requirement R12) standard implies that degraded is a condition that will result in a failure to operate as designed. If the loss of a communication channel will result in the failure of an SPS to operate as designed then the Transmission Operator would be mandated to report that information. On the other hand, if the loss of a communication channel will not result in the failure of the SPS to operate as designed, then such a condition can be, but is not mandated to be, reported.

Conclusion

The TOP-005-1 standard does not provide, nor does it require, a definition for the term “degraded.”

The IRO-005-1 (R12) standard implies that degraded is a condition that will result in a failure of an SPS to operate as designed. If the loss of a communication channel will result in the failure of an SPS to operate as designed, then the Transmission Operator would be mandated to report that information. On the other hand, if the loss of a communication channel will not result in the failure of the SPS to operate as designed, then such a condition can be, but is not mandated to be,

~~reported.~~

~~To request a formal definition of the term degraded, the Reliability Standards Development Procedure requires the submittal of a Standards Authorization Request.~~

Implementation Plan

IRO-005-4 – Reliability Coordination – Current Day Operations

Approvals Required

IRO-005-4 – Reliability Coordination – Current Day Operations

Prerequisite Approvals

None

Revisions to Glossary Terms

Adverse Reliability Impact - The impact of an event that results in ~~frequency-related Bulk Electric System~~ instability; ~~unplanned tripping of load or generation; or uncontrolled separation or cascading outages that affects a widespread area of the interconnection.~~

Applicable Entities

Reliability Coordinator

Conforming Changes to Other Standards

None

Effective Dates

IRO-005-4 shall become effective on the first day of the first calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees approval.

Retirements

IRO-005-3a should be retired at midnight of the day immediately prior to the Effective Date of IRO-005-4 in the particular jurisdiction in which the new standard is becoming effective.

Summary of Changes

The RC SDT proposes retiring other requirements and revising R15 into two separate requirements.

The following tables identify the sections of approved standards that shall be retired or revised when this standard is implemented.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-3a R1. and sub-requirements Each Reliability Coordinator shall monitor its Reliability Coordinator Area parameters, including but not limited to the following: <i>[Violation Risk Factor: High]</i>	Retire R1 and its sub-requirements – Monitoring capability can be objectively measured and is essential to real-time operations – however real-time monitoring is a supporting activity and is only one of several processes used to support operation within defined parameters. Monitoring capability should be assessed during certification and not as a requirement.
IRO-005-3a R2. Each Reliability Coordinator shall monitor its Balancing Authorities' parameters to ensure that the required amount of operating reserves is provided and available as required to meet the Control Performance Standard (CPS) and Disturbance Control Standard (DCS) requirements. If necessary, the Reliability Coordinator shall direct the Balancing Authorities in the Reliability Coordinator Area to arrange for assistance from neighboring Balancing Authorities. The Reliability Coordinator shall issue Energy Emergency Alerts as needed and at the request of its Balancing Authorities and Load-Serving Entities. <i>[Violation Risk Factor: High]</i>	None. The RCSDT proposes that this requirement be retired. The BA has its own requirements regarding compliance with CPS and DCS standards as well as requesting emergency assistance. We view these as vestiges of an earlier program that no longer apply given the current mandatory requirements with which the BA must comply. This requirement should be retired. The requirement is also redundant with existing EOP-002-2.
Notes: EOP-002-2 R1. Each Balancing Authority and Reliability Coordinator shall have the responsibility and clear decision-making authority to take whatever actions are needed to ensure the reliability of its respective area and shall exercise specific authority to alleviate capacity and energy	

Already Approved Standard	Proposed Replacement Requirement(s)
	emergencies. R2. Each Balancing Authority shall implement its capacity and energy emergency plan, when required and as appropriate, to reduce risks to the interconnected system. R3. A Balancing Authority that is experiencing an operating capacity or energy emergency shall communicate its current and future system conditions to its Reliability Coordinator and neighboring Balancing Authorities. R4. A Balancing Authority anticipating an operating capacity or energy emergency shall perform all actions necessary including bringing on all available generation, postponing equipment maintenance, scheduling interchange purchases in advance, and being prepared to reduce firm load. R5. A deficient Balancing Authority shall only use the assistance provided by the Interconnection's frequency bias for the time needed to implement corrective actions. The Balancing Authority shall not unilaterally adjust generation in an attempt to return Interconnection frequency to normal beyond that supplied through frequency bias action and Interchange Schedule changes. Such unilateral adjustment may overload transmission facilities. R6. If the Balancing Authority cannot comply with the Control Performance and Disturbance Control Standards, then it shall immediately implement remedies to do so. These remedies include, but are not limited to: R6.1. Loading all available generating capacity. R6.2. Deploying all available operating reserve. R6.3. Interrupting interruptible load and exports. R6.4. Requesting emergency assistance from other Balancing Authorities. R6.5. Declaring an Energy Emergency through its Reliability Coordinator; and R6.6. Reducing load, through procedures such as public appeals, voltage reductions, curtailing interruptible loads and firm loads. R7. Once the Balancing Authority has exhausted the steps listed in Requirement 6, or if these steps cannot be completed in sufficient time to resolve the emergency condition, the Balancing Authority shall: R7.1. Manually shed firm load without delay to return its ACE to zero; and R7.2. Request the Reliability Coordinator to declare an Energy Emergency Alert in accordance with Attachment 1-EOP-002-0 "Energy Emergency Alert Levels." R8. A Reliability Coordinator that has any Balancing Authority within its Reliability Coordinator area experiencing a potential or actual Energy Emergency shall initiate an Energy Emergency Alert as detailed in Attachment 1-EOP-002-0 "Energy Emergency Alert Levels." The Reliability

Already Approved Standard	Proposed Replacement Requirement(s)
Coordinator shall act to mitigate the emergency condition, including a request for emergency assistance if required. R9. When a Transmission Service Provider expects to elevate the transmission service priority of an Interchange Transaction from Priority 6 (Network Integration Transmission Service from Non-designated Resources) to Priority 7 (Network Integration Transmission Service from designated Network Resources) as permitted in its transmission tariff (See Attachment 1-IRO-006-0 “Transmission Loading Relief Procedure” for explanation of Transmission Service Priorities): R9.1. The deficient Load-Serving Entity shall request its Reliability Coordinator to initiate an Energy Emergency Alert in accordance with Attachment 1-EOP-002-0. R9.2. The Reliability Coordinator shall submit the report to NERC for posting on the NERC Website, noting the expected total MW that may have its transmission service priority changed. R9.3. The Reliability Coordinator shall use EEA 1 to forecast the change of the priority of transmission service of an Interchange Transaction on the system from Priority 6 to Priority 7. R9.4. The Reliability Coordinator shall use EEA 2 to announce the change of the priority of transmission service of an Interchange Transaction on the system from Priority 6 to Priority 7.	
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R3. Each Reliability Coordinator shall ensure its Transmission Operators and Balancing Authorities are aware of Geo-Magnetic Disturbance (GMD) forecast information and assist as needed in the development of any required response plans.	The RCSDT proposes retiring this requirement as it is addressed in R15 below. A GMD is one of the “expected or actual threats with Adverse Reliability Impacts”. IRO-005-4 (proposed) R2. Each Reliability Coordinator that identifies an expected or actual condition with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when the problem has been mitigated. <i>[Violation Risk Factor: Medium]</i> <i>[Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i>
IRO-005-3	

Already Approved Standard	Proposed Replacement Requirement(s)
R4. The Reliability Coordinator shall disseminate information within its Reliability Coordinator Area, as required.	None. The RCSDT recommends retiring this requirement.
Notes: The RCSDT proposes that this requirement is too vague and ambiguous to measure. We recommend retiring this requirement.	
IRO-005-3a R5. Each Reliability Coordinator shall monitor system frequency and its Balancing Authorities' performance and direct any necessary rebalancing to return to CPS and DCS compliance. The Transmission Operators and Balancing Authorities shall utilize all resources, including firm load shedding, as directed by its Reliability Coordinator to relieve the emergent condition.	None. The BA has its own requirements regarding compliance with CPS and DCS standards as well as requesting emergency assistance. RCSDT views these as vestiges of an earlier program that no longer apply given the current mandatory requirements with which the BA must comply. The second sentence is redundant with EOP-002, R4, R6, R7, and R9. This requirement should be retired. The RCSDT recommends retiring this requirement as it is redundant with: TOP-006-1 R7. Each Reliability Coordinator, Transmission Operator and Balancing Authority shall monitor system frequency. EOP-002-2 R4. A Balancing Authority anticipating an operating capacity or energy emergency shall perform all actions necessary including bringing on all available generation, postponing equipment maintenance, scheduling interchange purchases in advance, and being prepared to reduce firm load. R6. If the Balancing Authority cannot comply with the Control Performance and Disturbance Control Standards, then it shall immediately implement remedies to do so. These remedies include, but are not limited to: R6.1. Loading all available generating capacity. R6.2. Deploying all available operating reserve.

Already Approved Standard	Proposed Replacement Requirement(s)
	R6.3. Interrupting interruptible load and exports. R6.4. Requesting emergency assistance from other Balancing Authorities. R6.5. Declaring an Energy Emergency through its Reliability Coordinator; and R6.6. Reducing load, through procedures such as public appeals, voltage reductions, curtailing interruptible loads and firm loads. R7. Once the Balancing Authority has exhausted the steps listed in Requirement 6, or if these steps cannot be completed in sufficient time to resolve the emergency condition, the Balancing Authority shall: R7.1. Manually shed firm load without delay to return its ACE to zero; and R7.2. Request the Reliability Coordinator to declare an Energy Emergency Alert in accordance with Attachment 1-EOP-002-0 "Energy Emergency Alert Levels."
IRO-005-2 R6. The Reliability Coordinator shall coordinate with Transmission Operators, Balancing Authorities, and Generator Operators as needed to develop and implement action plans to mitigate potential or actual SOL, IROL, CPS or DCS violations. The Reliability Coordinator shall coordinate pending generation and transmission maintenance outages with Transmission Operators, Balancing Authorities, and Generator Operators as needed in both the real time and next-day reliability analysis timeframes.	None. The RCS DT proposes to retire this requirement from IRO-005. The RCS DT proposes retiring this requirement as it is redundant with TOP-003 and IRO-004 (all requirements) for next day requirements. The RC has the authority to coordinate pending outages in real-time through IRO-001-2, R1 (proposed). The issue of CPS and DCS is covered in EOP-002-2, R6, R7 and R8 (see above).

Already Approved Standard	Proposed Replacement Requirement(s)
Notes: TOP-003-0 R1. Generator Operators and Transmission Operators shall provide planned outage information. R1.1. Each Generator Operator shall provide outage information daily to its Transmission Operator for scheduled generator outages planned for the next day (any foreseen outage of a generator greater than 50 MW). The Transmission Operator shall establish the outage reporting requirements. R1.2. Each Transmission Operator shall provide outage information daily to its Reliability Coordinator, and to affected Balancing Authorities and Transmission Operators for scheduled generator and bulk transmission outages planned for the next day (any foreseen outage of a transmission line or transformer greater than 100 kV or generator greater than 50 MW) that may collectively cause or contribute to an SOL or IROL violation or a regional operating area limitation. The Reliability Coordinator shall establish the outage reporting requirements. R1.3. Such information shall be available by 1200 Central Standard Time for the Eastern Interconnection and 1200 Pacific Standard Time for the Western Interconnection. R2. Each Transmission Operator, Balancing Authority, and Generator Operator shall plan and coordinate scheduled outages of system voltage regulating equipment, such as automatic voltage regulators on generators, supplementary excitation control, synchronous condensers, shunt and series capacitors, reactors, etc., among affected Balancing Authorities and Transmission Operators as required. R3. Each Transmission Operator, Balancing Authority, and Generator Operator shall plan and coordinate scheduled outages of telemetering and control equipment and associated communication channels between the affected areas. R4. Each Reliability Coordinator shall resolve any scheduling of potential reliability conflicts. IRO-004-1 R1. Each Reliability Coordinator shall conduct next-day reliability analyses for its Reliability Coordinator Area to ensure that the Bulk Electric System can be operated reliably in anticipated normal and Contingency event conditions. The Reliability Coordinator shall conduct Contingency analysis studies to identify potential interface and other SOL and IROL violations, including overloaded transmission lines and transformers, voltage and stability limits, etc. R2. Each Reliability Coordinator shall pay particular attention to parallel flows to ensure one Reliability Coordinator Area does not place an unacceptable or undue Burden on an adjacent Reliability Coordinator Area. R3. Each Reliability Coordinator shall, in conjunction with its Transmission Operators and Balancing Authorities, develop action plans that may be required, including reconfiguration of the transmission system, re-dispatching of generation, reduction or curtailment of Interchange	

Already Approved Standard	Proposed Replacement Requirement(s)
Transactions, or reducing load to return transmission loading to within acceptable SOLs or IROLs. R4. Each Transmission Operator, Balancing Authority, Transmission Owner, Generator Owner, Generator Operator, and Load-Serving Entity in the Reliability Coordinator Area shall provide information required for system studies, such as critical facility status, Load, generation, operating reserve projections, and known Interchange Transactions. This information shall be available by 1200 Central Standard Time for the Eastern Interconnection and 1200 Pacific Standard Time for the Western Interconnection. R5. Each Reliability Coordinator shall share the results of its system studies, when conditions warrant or upon request, with other Reliability Coordinators and with Transmission Operators, Balancing Authorities, and Transmission Service Providers within its Reliability Coordinator Area. The Reliability Coordinator shall make study results available no later than 1500 Central Standard Time for the Eastern Interconnection and 1500 Pacific Standard Time for the Western Interconnection, unless circumstances warrant otherwise. R6. If the results of these studies indicate potential SOL or IROL violations, the Reliability Coordinator shall direct its Transmission Operators, Balancing Authorities and Transmission Service Providers to take any necessary action the Reliability Coordinator deems appropriate to address the potential SOL or IROL violation. R7. Each Transmission Operator, Balancing Authority, and Transmission Service Provider shall comply with the directives of its Reliability Coordinator based on the next day assessments in the same manner in which it would comply during real time operating events. IRO-001-2, R1 (proposed) R1. The Reliability Coordinator shall act or direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations and Same Day Operations]</i>	
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-3a R7. As necessary, the Reliability Coordinator shall assist the Balancing Authorities in its Reliability Coordinator Area in arranging for assistance from neighboring Reliability Coordinator Areas or Balancing Authorities. <i>[Violation Risk Factor: High]</i>	None. The RCSdT proposes to retire this requirement as it is redundant with: EOP-002-2 R7.2. Request the Reliability Coordinator to declare an Energy Emergency Alert in accordance with Attachment 1-EOP-002-0 “Energy Emergency Alert Levels.” R8. A Reliability Coordinator that has any Balancing Authority within its

Already Approved Standard	Proposed Replacement Requirement(s)
	Reliability Coordinator area experiencing a potential or actual Energy Emergency shall initiate an Energy Emergency Alert as detailed in Attachment 1-EOP-002-0 "Energy Emergency Alert Levels." The Reliability Coordinator shall act to mitigate the emergency condition, including a request for emergency assistance if required.
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-3a R8. The Reliability Coordinator shall identify sources of large Area Control Errors that may be contributing to Frequency Error, Time Error, or Inadvertent Interchange and shall discuss corrective actions with the appropriate Balancing Authority. The Reliability Coordinator shall direct its Balancing Authority to comply with CPS and DCS.	None. The RCS DT recommends retiring this requirement as it is redundant with: IRO-001-2 (proposed) R2. Each Reliability Coordinator shall take actions or direct actions (which could include issuing Reliability Directives) by Transmission Operators, Balancing Authorities, Generator Operators, and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i> TOP-006-1, R7 (existing) R7. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall monitor system frequency.
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-3a R9. Whenever a Special Protection System that may have an inter-Balancing Authority, or inter-Transmission Operator impact (e.g., could potentially affect transmission flows resulting in a SOL or IROL violation) is	None. The RCS DT recommends retiring this requirement as it is redundant with proposed IRO-010: IRO-010-1 R1. The Reliability Coordinator shall have a documented data

Already Approved Standard	Proposed Replacement Requirement(s)
armed, the Reliability Coordinators shall be aware of the impact of the operation of that Special Protection System on inter-area flows. The Transmission Operator shall immediately inform the Reliability Coordinator of the status of the Special Protection System including any degradation or potential failure to operate as expected.	specification for data and information to build and maintain models to support Real-Time monitoring, Operational Planning Analyses, and Real-time Assessments. The specification shall include the following: <i>(Violation Risk Factor: Low) (Time Horizon: Operations Planning)</i> R1.1. List of required data and information. R1.2. Mutually agreeable format. R1.3. Timeframe and periodicity for providing data and information (based on its hardware and software requirements, and the time needed to do its Operational Planning Analyses). R1.4. Process for data provision when automated Real-Time system operating data is unavailable. R2. The Reliability Coordinator shall distribute its data specification to entities that have Facilities monitored by the Reliability Coordinator and to entities that provide Facility status to the Reliability Coordinator. <i>(Violation Risk Factor: Low) (Time Horizon: Operations Planning)</i> R3. Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. The data and information is limited to data needed by the Reliability Coordinator to support Real-Time Monitoring, Operational Planning Analyses, and Real-Time Assessments. <i>(Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations)</i>
Notes: The RCSDT recommends retiring this requirement as it is redundant with proposed IRO-010, R1 and R3. Also, the scope of project	

Already Approved Standard	Proposed Replacement Requirement(s)
2007-3 includes enhancing the SPS provisions of TOP-005. IRO-003, R1 indicates the RC will monitor all items that will impact reliability, and SPSs are a part of that.	
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-3a R10. In instances where there is a difference in derived limits, the Reliability Coordinator and its Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities shall always operate the Bulk Electric System to the most limiting parameter.	None. The RCSDT recommends retiring the requirement as it is a facet of the SOL / IROL methodology required in FAC-010-1, FAC-011-1 and FAC-014-1.
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-3a R11. The Transmission Service Providers shall respect these SOLs or IROLs in accordance with filed tariffs and regional Total Transfer Calculation and Available Transfer Calculation processes.	None. The RC SDT proposes retiring this requirement. The concept of this requirement is more appropriately addressed in the proposed MOD standards under project 2006-7. As written, this requirement is not measureable and unenforceable as a TSP's tariff may supersede the requirement.
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-3a R12. Each Reliability Coordinator who foresees a transmission problem (such as an SOL or IROL violation, loss of reactive reserves, etc.) within its Reliability Coordinator Area shall issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area without delay. The receiving Reliability Coordinator shall disseminate this information to its	IRO-005-4 R1. When the results of an Operational Planning Analysis or Real-time Assessment indicate an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. <i>[Violation Risk Factor: High] [Time Horizon: Real-time]</i>

Already Approved Standard	Proposed Replacement Requirement(s)
impacted Transmission Operators and Balancing Authorities. The Reliability Coordinator shall notify all impacted Transmission Operators, Balancing Authorities, when the transmission problem has been mitigated.	<i>Operations, Same Day Operations and Operations Planning]</i> R2. The Each Reliability Coordinator that identifies an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when the problem has been mitigated. <i>[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i>

Implementation Plan Contents:
IRO-005-4 – Reliability Coordination – Current Day Operations

Approvals Required

IRO-005-4 – Reliability Coordination – Current Day Operations

Prerequisite Approvals

- ~~IRO-007-1~~
- ~~IRO-008-1~~
- ~~IRO-009-1~~
- ~~IRO-010-1~~

None

Revisions to Glossary Terms

Adverse Reliability Impact - The impact of an event that results in frequency-related Bulk Electric System instability; unplanned tripping of load or generation; or uncontrolled separation or cascading outages that affects a widespread area of the Interconnection.

Applicable Entities

Reliability Coordinator

Conforming Changes to Requirements in Already Approved Other Standards

~~Revision Summary~~

- ~~Many of the requirements in this standard will be retired under the IROL SDT work plan. The RCSDT proposes retiring other requirements and revising R15 into two separate requirements.~~

~~Revisions or Retirements to Already Approved Standards~~

~~The following tables identify the sections of approved standards that shall be retired or revised when this standard is implemented. If the drafting team is recommending the retirement or revision of a requirement, that text is blue.~~

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Functions that Must Comply with the Requirements in the Standards

None

Effective Dates

~~In those jurisdictions where regulatory approval is required, this standard~~ IRO-005-4 shall become effective on the first day of the first calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees approval.

Retirements

IRO-005-3a should be retired at midnight of the day immediately prior to the Effective Date of IRO-005-4 in the particular jurisdiction in which the new standard is becoming effective.

Summary of Changes

The RC SDT proposes retiring other requirements and revising R15 into two separate requirements.

The following tables identify the sections of approved standards that shall be retired or revised when this standard is implemented.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-3a R1. and sub-requirements Each Reliability Coordinator shall monitor its Reliability Coordinator Area parameters, including but not limited to the following: <i>[Violation Risk Factor: High]</i>	Retire R1 and its sub-requirements – Monitoring capability can be objectively measured and is essential to real-time operations – however real-time monitoring is a supporting activity and is only one of several processes used to support operation within defined parameters. Monitoring capability should be assessed during certification and not as a requirement.
IRO-005-3a R2. Each Reliability Coordinator shall monitor its Balancing Authorities' parameters to ensure that the required amount of operating reserves is provided and available as required to meet the Control Performance Standard (CPS) and Disturbance Control Standard (DCS) requirements. If necessary, the Reliability Coordinator shall direct the Balancing Authorities in the Reliability Coordinator Area to arrange for assistance from neighboring Balancing Authorities. The Reliability Coordinator shall issue Energy Emergency Alerts as needed and at the request of its Balancing Authorities and Load-Serving Entities. <i>[Violation Risk Factor: High]</i>	None. The RCSDT proposes that this requirement be retired. The BA has its own requirements regarding compliance with CPS and DCS standards as well as requesting emergency assistance. We view these as vestiges of an earlier program that no longer apply given the current mandatory requirements with which the BA must comply. This requirement should be retired. The requirement is also redundant with existing EOP-002-2.
Notes: EOP-002-2 R1. Each Balancing Authority and Reliability Coordinator shall have the responsibility and clear decision-making authority to take whatever actions are needed to ensure the reliability of its respective area and shall exercise specific authority to alleviate capacity and energy	

Already Approved Standard	Proposed Replacement Requirement(s)
	emergencies. R2. Each Balancing Authority shall implement its capacity and energy emergency plan, when required and as appropriate, to reduce risks to the interconnected system. R3. A Balancing Authority that is experiencing an operating capacity or energy emergency shall communicate its current and future system conditions to its Reliability Coordinator and neighboring Balancing Authorities. R4. A Balancing Authority anticipating an operating capacity or energy emergency shall perform all actions necessary including bringing on all available generation, postponing equipment maintenance, scheduling interchange purchases in advance, and being prepared to reduce firm load. R5. A deficient Balancing Authority shall only use the assistance provided by the Interconnection’s frequency bias for the time needed to implement corrective actions. The Balancing Authority shall not unilaterally adjust generation in an attempt to return Interconnection frequency to normal beyond that supplied through frequency bias action and Interchange Schedule changes. Such unilateral adjustment may overload transmission facilities. R6. If the Balancing Authority cannot comply with the Control Performance and Disturbance Control Standards, then it shall immediately implement remedies to do so. These remedies include, but are not limited to: R6.1. Loading all available generating capacity. R6.2. Deploying all available operating reserve. R6.3. Interrupting interruptible load and exports. R6.4. Requesting emergency assistance from other Balancing Authorities. R6.5. Declaring an Energy Emergency through its Reliability Coordinator; and R6.6. Reducing load, through procedures such as public appeals, voltage reductions, curtailing interruptible loads and firm loads. R7. Once the Balancing Authority has exhausted the steps listed in Requirement 6, or if these steps cannot be completed in sufficient time to resolve the emergency condition, the Balancing Authority shall: R7.1. Manually shed firm load without delay to return its ACE to zero; and R7.2. Request the Reliability Coordinator to declare an Energy Emergency Alert in accordance with Attachment 1-EOP-002-0 “Energy Emergency Alert Levels.” R8. A Reliability Coordinator that has any Balancing Authority within its Reliability Coordinator area experiencing a potential or actual Energy Emergency shall initiate an Energy Emergency Alert as detailed in Attachment 1-EOP-002-0 “Energy Emergency Alert Levels.” The Reliability

Already Approved Standard	Proposed Replacement Requirement(s)
Coordinator shall act to mitigate the emergency condition, including a request for emergency assistance if required. R9. When a Transmission Service Provider expects to elevate the transmission service priority of an Interchange Transaction from Priority 6 (Network Integration Transmission Service from Non-designated Resources) to Priority 7 (Network Integration Transmission Service from designated Network Resources) as permitted in its transmission tariff (See Attachment 1-IRO-006-0 “Transmission Loading Relief Procedure” for explanation of Transmission Service Priorities): R9.1. The deficient Load-Serving Entity shall request its Reliability Coordinator to initiate an Energy Emergency Alert in accordance with Attachment 1-EOP-002-0. R9.2. The Reliability Coordinator shall submit the report to NERC for posting on the NERC Website, noting the expected total MW that may have its transmission service priority changed. R9.3. The Reliability Coordinator shall use EEA 1 to forecast the change of the priority of transmission service of an Interchange Transaction on the system from Priority 6 to Priority 7. R9.4. The Reliability Coordinator shall use EEA 2 to announce the change of the priority of transmission service of an Interchange Transaction on the system from Priority 6 to Priority 7.	
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-2 R3. Each Reliability Coordinator shall ensure its Transmission Operators and Balancing Authorities are aware of Geo-Magnetic Disturbance (GMD) forecast information and assist as needed in the development of any required response plans.	The RCSDT proposes retiring this requirement as it is addressed in R15 below. A GMD is one of the “expected or actual threats with Adverse Reliability Impacts”. IRO-005-4 (proposed) R2. Each Reliability Coordinator that identifies an expected or actual condition with Adverse Reliability Impacts, within its Reliability Coordinator Area shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when the problem has been mitigated. <i>[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i>
IRO-005-3	

Already Approved Standard	Proposed Replacement Requirement(s)
R4. The Reliability Coordinator shall disseminate information within its Reliability Coordinator Area, as required.	None. The RCSDT recommends retiring this requirement.
Notes: The RCSDT proposes that this requirement is too vague and ambiguous to measure. We recommend retiring this requirement.	
IRO-005-3a R5. Each Reliability Coordinator shall monitor system frequency and its Balancing Authorities' performance and direct any necessary rebalancing to return to CPS and DCS compliance. The Transmission Operators and Balancing Authorities shall utilize all resources, including firm load shedding, as directed by its Reliability Coordinator to relieve the emergent condition.	None. The BA has its own requirements regarding compliance with CPS and DCS standards as well as requesting emergency assistance. RCSDT views these as vestiges of an earlier program that no longer apply given the current mandatory requirements with which the BA must comply. The second sentence is redundant with EOP-002, R4, R6, R7, and R9. This requirement should be retired. The RCSDT recommends retiring this requirement as it is redundant with: TOP-006-1 R7. Each Reliability Coordinator, Transmission Operator and Balancing Authority shall monitor system frequency. EOP-002-2 R4. A Balancing Authority anticipating an operating capacity or energy emergency shall perform all actions necessary including bringing on all available generation, postponing equipment maintenance, scheduling interchange purchases in advance, and being prepared to reduce firm load. R6. If the Balancing Authority cannot comply with the Control Performance and Disturbance Control Standards, then it shall immediately implement remedies to do so. These remedies include, but are not limited to: R6.1. Loading all available generating capacity. R6.2. Deploying all available operating reserve.

Already Approved Standard	Proposed Replacement Requirement(s)
	R6.3. Interrupting interruptible load and exports. R6.4. Requesting emergency assistance from other Balancing Authorities. R6.5. Declaring an Energy Emergency through its Reliability Coordinator; and R6.6. Reducing load, through procedures such as public appeals, voltage reductions, curtailing interruptible loads and firm loads. R7. Once the Balancing Authority has exhausted the steps listed in Requirement 6, or if these steps cannot be completed in sufficient time to resolve the emergency condition, the Balancing Authority shall: R7.1. Manually shed firm load without delay to return its ACE to zero; and R7.2. Request the Reliability Coordinator to declare an Energy Emergency Alert in accordance with Attachment 1-EOP-002-0 “Energy Emergency Alert Levels.”
IRO-005-2 R6. The Reliability Coordinator shall coordinate with Transmission Operators, Balancing Authorities, and Generator Operators as needed to develop and implement action plans to mitigate potential or actual SOL, IROL, CPS or DCS violations. The Reliability Coordinator shall coordinate pending generation and transmission maintenance outages with Transmission Operators, Balancing Authorities, and Generator Operators as needed in both the real time and next-day reliability analysis timeframes.	None. The RCS DT proposes to retire this requirement from IRO-005. The RCS DT proposes retiring this requirement as it is redundant with TOP-003 and IRO-004 (all requirements) for next day requirements. The RC has the authority to coordinate pending outages in real-time through IRO-001-2, R1 (proposed). The issue of CPS and DCS is covered in EOP-002-2, R6, R7 and R8 (see above).

Already Approved Standard	Proposed Replacement Requirement(s)
Notes: TOP-003-0 R1. Generator Operators and Transmission Operators shall provide planned outage information. R1.1. Each Generator Operator shall provide outage information daily to its Transmission Operator for scheduled generator outages planned for the next day (any foreseen outage of a generator greater than 50 MW). The Transmission Operator shall establish the outage reporting requirements. R1.2. Each Transmission Operator shall provide outage information daily to its Reliability Coordinator, and to affected Balancing Authorities and Transmission Operators for scheduled generator and bulk transmission outages planned for the next day (any foreseen outage of a transmission line or transformer greater than 100 kV or generator greater than 50 MW) that may collectively cause or contribute to an SOL or IROL violation or a regional operating area limitation. The Reliability Coordinator shall establish the outage reporting requirements. R1.3. Such information shall be available by 1200 Central Standard Time for the Eastern Interconnection and 1200 Pacific Standard Time for the Western Interconnection. R2. Each Transmission Operator, Balancing Authority, and Generator Operator shall plan and coordinate scheduled outages of system voltage regulating equipment, such as automatic voltage regulators on generators, supplementary excitation control, synchronous condensers, shunt and series capacitors, reactors, etc., among affected Balancing Authorities and Transmission Operators as required. R3. Each Transmission Operator, Balancing Authority, and Generator Operator shall plan and coordinate scheduled outages of telemetering and control equipment and associated communication channels between the affected areas. R4. Each Reliability Coordinator shall resolve any scheduling of potential reliability conflicts. IRO-004-1 R1. Each Reliability Coordinator shall conduct next-day reliability analyses for its Reliability Coordinator Area to ensure that the Bulk Electric System can be operated reliably in anticipated normal and Contingency event conditions. The Reliability Coordinator shall conduct Contingency analysis studies to identify potential interface and other SOL and IROL violations, including overloaded transmission lines and transformers, voltage and stability limits, etc. R2. Each Reliability Coordinator shall pay particular attention to parallel flows to ensure one Reliability Coordinator Area does not place an unacceptable or undue Burden on an adjacent Reliability Coordinator Area. R3. Each Reliability Coordinator shall, in conjunction with its Transmission Operators and Balancing Authorities, develop action plans that may be required, including reconfiguration of the transmission system, re-dispatching of generation, reduction or curtailment of Interchange	

Already Approved Standard	Proposed Replacement Requirement(s)
Transactions, or reducing load to return transmission loading to within acceptable SOLs or IROLs. R4. Each Transmission Operator, Balancing Authority, Transmission Owner, Generator Owner, Generator Operator, and Load-Serving Entity in the Reliability Coordinator Area shall provide information required for system studies, such as critical facility status, Load, generation, operating reserve projections, and known Interchange Transactions. This information shall be available by 1200 Central Standard Time for the Eastern Interconnection and 1200 Pacific Standard Time for the Western Interconnection. R5. Each Reliability Coordinator shall share the results of its system studies, when conditions warrant or upon request, with other Reliability Coordinators and with Transmission Operators, Balancing Authorities, and Transmission Service Providers within its Reliability Coordinator Area. The Reliability Coordinator shall make study results available no later than 1500 Central Standard Time for the Eastern Interconnection and 1500 Pacific Standard Time for the Western Interconnection, unless circumstances warrant otherwise. R6. If the results of these studies indicate potential SOL or IROL violations, the Reliability Coordinator shall direct its Transmission Operators, Balancing Authorities and Transmission Service Providers to take any necessary action the Reliability Coordinator deems appropriate to address the potential SOL or IROL violation. R7. Each Transmission Operator, Balancing Authority, and Transmission Service Provider shall comply with the directives of its Reliability Coordinator based on the next day assessments in the same manner in which it would comply during real time operating events. IRO-001-2, R1 (proposed) R1. The Reliability Coordinator shall act or direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations and Same Day Operations]</i>	Transactions, or reducing load to return transmission loading to within acceptable SOLs or IROLs. R4. Each Transmission Operator, Balancing Authority, Transmission Owner, Generator Owner, Generator Operator, and Load-Serving Entity in the Reliability Coordinator Area shall provide information required for system studies, such as critical facility status, Load, generation, operating reserve projections, and known Interchange Transactions. This information shall be available by 1200 Central Standard Time for the Eastern Interconnection and 1200 Pacific Standard Time for the Western Interconnection. R5. Each Reliability Coordinator shall share the results of its system studies, when conditions warrant or upon request, with other Reliability Coordinators and with Transmission Operators, Balancing Authorities, and Transmission Service Providers within its Reliability Coordinator Area. The Reliability Coordinator shall make study results available no later than 1500 Central Standard Time for the Eastern Interconnection and 1500 Pacific Standard Time for the Western Interconnection, unless circumstances warrant otherwise. R6. If the results of these studies indicate potential SOL or IROL violations, the Reliability Coordinator shall direct its Transmission Operators, Balancing Authorities and Transmission Service Providers to take any necessary action the Reliability Coordinator deems appropriate to address the potential SOL or IROL violation. R7. Each Transmission Operator, Balancing Authority, and Transmission Service Provider shall comply with the directives of its Reliability Coordinator based on the next day assessments in the same manner in which it would comply during real time operating events. IRO-001-2, R1 (proposed) R1. The Reliability Coordinator shall act or direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area to prevent or mitigate the magnitude or duration of events that result in Adverse Reliability Impacts. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations and Same Day Operations]</i>
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-3a R7. As necessary, the Reliability Coordinator shall assist the Balancing Authorities in its Reliability Coordinator Area in arranging for assistance from neighboring Reliability Coordinator Areas or Balancing Authorities. <i>[Violation Risk Factor: High]</i>	None. The RCSDT proposes to retire this requirement as it is redundant with: EOP-002-2 R7.2. Request the Reliability Coordinator to declare an Energy Emergency Alert in accordance with Attachment 1-EOP-002-0 “Energy Emergency Alert Levels.” R8. A Reliability Coordinator that has any Balancing Authority

Already Approved Standard	Proposed Replacement Requirement(s)
	within its Reliability Coordinator area experiencing a potential or actual Energy Emergency shall initiate an Energy Emergency Alert as detailed in Attachment 1-EOP-002-0 "Energy Emergency Alert Levels." The Reliability Coordinator shall act to mitigate the emergency condition, including a request for emergency assistance if required.
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-3a R8. The Reliability Coordinator shall identify sources of large Area Control Errors that may be contributing to Frequency Error, Time Error, or Inadvertent Interchange and shall discuss corrective actions with the appropriate Balancing Authority. The Reliability Coordinator shall direct its Balancing Authority to comply with CPS and DCS.	None. The RCSdT recommends retiring this requirement as it is redundant with: IRO-001-2 (proposed) R2. Each Reliability Coordinator shall take actions or direct actions (which could include issuing Reliability Directives) by Transmission Operators, Balancing Authorities, Generator Operators, and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i> TOP-006-1, R7 (existing) R7. Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall monitor system frequency.
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-3a R9. Whenever a Special Protection System that may have an inter-Balancing Authority, or inter-Transmission Operator impact (e.g., could potentially affect transmission flows resulting in a	None. The RCSdT recommends retiring this requirement as it is redundant with proposed IRO-010: IRO-010-1

Already Approved Standard	Proposed Replacement Requirement(s)
SOL or IROL violation) is armed, the Reliability Coordinators shall be aware of the impact of the operation of that Special Protection System on inter-area flows. The Transmission Operator shall immediately inform the Reliability Coordinator of the status of the Special Protection System including any degradation or potential failure to operate as expected.	R1. The Reliability Coordinator shall have a documented data specification for data and information to build and maintain models to support Real-Time monitoring, Operational Planning Analyses, and Real-time Assessments. The specification shall include the following: (<i>Violation Risk Factor: Low</i>) (<i>Time Horizon: Operations Planning</i>) R1.1. List of required data and information. R1.2. Mutually agreeable format. R1.3. Timeframe and periodicity for providing data and information (based on its hardware and software requirements, and the time needed to do its Operational Planning Analyses). R1.4. Process for data provision when automated Real-Time system operating data is unavailable. R2. The Reliability Coordinator shall distribute its data specification to entities that have Facilities monitored by the Reliability Coordinator and to entities that provide Facility status to the Reliability Coordinator. (<i>Violation Risk Factor: Low</i>) (<i>Time Horizon: Operations Planning</i>) R3. Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. The data and information is limited to data needed by the Reliability Coordinator to support Real-Time Monitoring, Operational Planning Analyses, and Real-Time Assessments. (<i>Violation Risk Factor: Medium</i>) (<i>Time Horizon: Operations Planning; Same-day Operations; Real-</i>

Already Approved Standard	Proposed Replacement Requirement(s)
	time Operations)
Notes: The RCS DT recommends retiring this requirement as it is redundant with proposed IRO-010, R1 and R3. Also, the scope of project 2007-3 includes enhancing the SPS provisions of TOP-005. IRO-003, R1 indicates the RC will monitor all items that will impact reliability, and SPSs are a part of that.	
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-3a R10. In instances where there is a difference in derived limits, the Reliability Coordinator and its Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities shall always operate the Bulk Electric System to the most limiting parameter.	None. The RCS DT recommends retiring the requirement as it is a facet of the SOL / IROL methodology required in FAC-010-1, FAC-011-1 and FAC-014-1.
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-3a R11. The Transmission Service Providers shall respect these SOLs or IROLs in accordance with filed tariffs and regional Total Transfer Calculation and Available Transfer Calculation processes.	None. The RC SDT proposes retiring this requirement. The concept of this requirement is more appropriately addressed in the proposed MOD standards under project 2006-7. As written, this requirement is not measureable and unenforceable as a TSP's tariff may supersede the requirement.
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-005-3a R12. Each Reliability Coordinator who foresees a transmission problem (such as an SOL or IROL violation, loss of reactive reserves, etc.) within its Reliability Coordinator Area shall issue an alert to all impacted Transmission Operators and	IRO-005-4 R1. When the results of an Operational Planning Analysis or Real-time Assessment indicate an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area, each Reliability Coordinator

Already Approved Standard	Proposed Replacement Requirement(s)
Balancing Authorities in its Reliability Coordinator Area without delay. The receiving Reliability Coordinator shall disseminate this information to its impacted Transmission Operators and Balancing Authorities. The Reliability Coordinator shall notify all impacted Transmission Operators, Balancing Authorities, when the transmission problem has been mitigated.	shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i> R2. The Each Reliability Coordinator that identifies an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when the problem has been mitigated. <i>[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i>

VRFs and VSLs for IRO-005-4 - Reliability Coordination — Current Day Operations

R#	VRF	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	High	The Reliability Coordinator who identified an anticipated or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to one, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.	The Reliability Coordinator who identified an anticipated or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to two, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.	The Reliability Coordinator who identified an anticipated or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to three, but not all, impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area.	The Reliability Coordinator who identified an anticipated or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to more than three impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. OR The Reliability Coordinator who identified an anticipated or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area failed to issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area (in cases where there are less than three impacted entities).
R2	Medium	The Reliability Coordinator failed to notify one, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.	The Reliability Coordinator failed to notify two, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.	The Reliability Coordinator failed to notify three, but not all, impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated.	The Reliability Coordinator failed to notify more than three impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated. OR The Reliability Coordinator failed

VRFs and VSLs for IRO-005-4 - Reliability Coordination — Current Day Operations					
R#	VRF	Lower VSL	Moderate VSL	High VSL	Severe VSL
					to notify more all impacted Transmission Operators, Balancing Authorities, when the transmission problem had been mitigated (in cases where there are less than three impacted entities).

Project 2006-06 Reliability Coordination

Associated with IRO-014-2 – Coordination Among Reliability Coordinators

Revised Definition for Approval:

Clean Proposed Definition:

Adverse Reliability Impact: The impact of an event that results in Bulk Electric System instability or Cascading.

Redline to Previously Approved Definition:

Adverse Reliability Impact: The impact of an event that results in Bulk Electric System ~~frequency related~~ instability; ~~unplanned tripping of load or generation; or uncontrolled separation or cascading~~ Cascading outages that affects a widespread area of the ~~Interconnection~~.

The defined term is used in two of the three standards posted for recirculation ballot:

- In IRO-005, the defined term is used in Requirement R1 and R2
- In IRO-014, the defined term is used in Requirement R1, R5, R6, R7 and R8

(The term is also used in IRO-001, Requirement R2 - and the revisions in IRO-001-3 standard will be posted for another comment period.)

The history of the refinement of the definition is confusing because so many of the requirements in the set of standards were shifted from one standard to another – and as you'll see, the team was not consistent in posting the definition with a single standard.

The first proposal for a revision to the definition was included in the first posting of the [implementation plan for IRO-001-2](#) - but was not prominently placed in the Definitions section of the standard. This is the original proposal:

Adverse Reliability Impact – The impact of an event that results in frequency-related instability; ~~unplanned tripping of load or generation;~~ or uncontrolled separation or cascading outages that affects a widespread area of the Interconnection.

Commenters not only made suggestions for additional revisions to the definition, they also pointed out that the definition should be included not only in the implementation plan, but also at the front of the standard.

For the [second posting of IRO-014](#) the following definition was included:

Adverse Reliability Impact – The impact of an event that results in Bulk Electric System ~~frequency-related~~ instability; ~~unplanned tripping of load or generation;~~ or uncontrolled separation or cascading outages ~~that affects a widespread area of the Interconnection.~~

For the third posting of the standard, the only change to the above definition was to capitalize the word, “Cascading” and remove the word, ‘outages.’ This is the version posted with [Draft 3 of IRO-001-2](#) – showing changes to the approved definition:

Adverse Reliability Impact – The impact of an event that results in Bulk Electric System ~~frequency-related~~ instability; ~~unplanned tripping of load or generation;~~ or uncontrolled separation or ~~C~~cascading. ~~outages that affects a widespread area of the Interconnection.~~

The version posted for recirculation ballot is unchanged from the version that was last posted for comment/ballot.

The team subdivided its edits to IRO-001-2 – the first phase includes only the removal of a single requirement as a conforming change associated with the approval of IRO-014. The more extensive changes are moving forward as IRO-001-3 and will be posted for another comment period. Because the revised definition of Adverse Reliability Impact is used in both IRO-005 and IRO-014, it was necessary to move it forward for approval with the approval of these standards. So – once again the definition was moved from IRO-001 to IRO-014. Note that there were no comments that promoted the team to revise the definition following the initial ballot and comment period. Because the definition was last included in IRO-001-2, not in IRO-014-2, when we made a redline comparison of the proposed IRO-014 to the last posted version of IRO-014, the definition appears as though it is totally ‘new’ – but it is unchanged. When we have the webinar, I'll see if we can reinforce this.

Standard Development Roadmap

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed:

1. Draft SAR Version 1 posted January 15, 2007
2. Draft SAR Version 1 Comment Period ended February 14, 2007
3. Draft SAR Version 2 and comment responses on SAR version 1 posted March 19, 2007
4. Draft Version 2 SAR comment period ended April 17, 2007
5. SAR version 2 and comment responses for SAR version 2 accepted by SC and SDT appointed in June 2007.
6. First posting of revised standards on August 5, 2008 with comment period closed on September 16, 2008.
7. Draft Version 2 of standards and response to comments September 16, 2008–May 26, 2009.
8. Second posting of revised standards on July 10, 2009 with comment period closed on August 9, 2009.
9. RC SDT coordinated with OPCP SDT and RTO SDT on definitions relating to directives and three part communication and Draft Version 3 of standards and response to comments August 9–November 20, 2009.
10. Third posting of revised standards on January 4, 2010 with comment period closed on February 18, 2010.
11. The fourth draft of the standards was posted for a comment period with an Initial Ballot that ended on March 7, 2011.

Proposed Action Plan and Description of Current Draft:

The SDT began working on revisions to the standards in August 2007. The current posting is for the recirculation ballot. The initial ballot was conducted as a single vote for a set of standards and their associated implementation plans and definitions. Following the initial ballot the Standards Committee authorized the team to separate the standards and post the standards that have achieved consensus for individual recirculation ballots. This is the fifth posting of this standard.

Future Development Plan:

Anticipated Actions	Anticipated Date
1. Standards posted for recirculation ballots.	July 2011
2. Standards sent to BOT for approval.	August 2011
3. Standards filed with regulatory authorities.	September 2011

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

The RC SDT proposes the following modified definition:

Adverse Reliability Impact: The impact of an event that results in Bulk Electric System instability or Cascading.

A. Introduction

1. **Title:** **Coordination Among Reliability Coordinators**
2. **Number:** IRO-014-2
3. **Purpose:** To ensure that each Reliability Coordinator's operations are coordinated such that they will not have an Adverse Reliability Impact on other Reliability Coordinator Areas and to preserve the reliability benefits of interconnected operations.
4. **Applicability:**
 - 4.1. Reliability Coordinator
5. **Effective Date:** In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter that is 12 months after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter that is 12 months after Board of Trustees approval.

B. Requirements

- R1.** Each Reliability Coordinator shall have Operating Procedures, Operating Processes, or Operating Plans for activities that require notification, exchange of information or coordination of actions that may impact other Reliability Coordinator Areas to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following: *[Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning]*
 - 1.1. Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators.
 - 1.2. Energy and capacity shortages.
 - 1.3. Planned or unplanned outage information.
 - 1.4. Control of voltage, including the coordination of reactive resources.
 - 1.5. Coordination of information exchange to support reliability assessments.
 - 1.6. Authority to act to prevent and mitigate system conditions which could cause Adverse Reliability Impacts to other Reliability Coordinator Areas.
 - 1.7. Weekly conference calls
- R2.** Each Reliability Coordinator shall maintain its Operating Procedures, Operating Processes, or Operating Plans identified in Requirement R1 as follows: *[Violation Risk Factor: Lower] [Time Horizon: Same Day Operations and Operations Planning]*
 - 2.1. Review and update annually with no more that 15 months between reviews.
 - 2.2. Obtain written agreement from all of the Reliability Coordinators required to take the indicated action(s) for each update.

- 2.3.** Distribute to all Reliability Coordinators that are required to take the indicated action(s) within 30 days of an update.
- R3.** Each Reliability Coordinator shall make notifications and exchange reliability-related information with other Reliability Coordinators in accordance with the Operating Procedures, Operating Processes, or Operating Plans identified in Requirement R1. *[Violation Risk Factor: Medium][Time Horizon: Real-time Operations and Operations Planning]*
- R4.** Each Reliability Coordinator shall participate in agreed upon conference calls, at least weekly (per Requirement 1, Part 1.7) with other Reliability Coordinators within the same Interconnection. *[Violation Risk Factor: Lower][Time Horizon: Real-time Operations]*
- R5.** Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify all other Reliability Coordinators. *[Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*
- R6.** During each instance where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact each impacted Reliability Coordinator shall operate as though the problem exists. *[Violation Risk Factor: High][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*
- R7.** During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, the Reliability Coordinator that identified the Adverse Reliability Impact shall develop an action plan to resolve the Adverse Reliability Impact. *[Violation Risk Factor: High][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*
- R8.** During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, each Reliability Coordinator shall implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact unless such actions would violate safety, equipment, regulatory or statutory requirements. *[Violation Risk Factor: High][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*

C. Measures

- M1.** Each Reliability Coordinator shall have available the latest approved documented version of its Operating Procedures, Processes, and Operating Plans that require notifications, information exchange or the coordination of actions among impacted Reliability Coordinators for conditions or activities that impact other Reliability Coordinator Areas. This documentation shall include dated, current in force documentation with the specified elements. (R1)
- M2.** Each Reliability Coordinator shall have dated evidence that the Operating Procedures, Processes, and Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were:
- 2.1** Reviewed and updated annually with no more than 15 months between reviews.

- 2.2 Agreed to, in writing, by all the Reliability Coordinators required to take the indicated action(s).
- 2.3 Distributed within 30 days of an update to all Reliability Coordinators that are required to take the indicated action(s).

This evidence may include, but is not limited to dated documentation with confirmation of receipt, dated notice of acceptance or agreement to take specified actions, or dated electronic communications with confirmation of receipt and acceptance or agreement to take specified actions. (R2)

- M3.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent dated documentation, that will be used to determine that it made notifications and exchanged reliability-related information with impacted Reliability Coordinators in accordance with the Operating Procedures, Processes, or Plans identified in Requirement R1. (R3)
- M4.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent dated documentation, that will be used to determine that it participated in agreed upon (at least weekly) conference calls with other Reliability Coordinators within the same Interconnection. (R4)
- M5.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent dated documentation, that will be used to determine that it, upon identification of an Adverse Reliability Impact, notified other Reliability Coordinators. (R5)
- M6.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it operated under the assumption that the Adverse Reliability Impact existed during each instance where Reliability Coordinators disagreed on the existence of an Adverse Reliability Impact. (R6)
- M7.** Each Reliability Coordinator that identified an Adverse Reliability Impact shall have evidence and provide evidence that it developed an action plan during those instances where Reliability Coordinators disagreed on the existence of an Adverse Reliability Impact. This evidence may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent dated documentation. (R7)
- M8.** Each impacted Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent dated documentation, that will be used to determine that it implemented the action plan developed by the Reliability Coordinator who has the identified the Adverse Reliability Impact when a Reliability Coordinator has identified an Adverse Reliability Impact and the impacted Reliability

Coordinators disagree on an action unless such actions would have violated safety, equipment, or regulatory or statutory requirements. (R8)

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

The Regional Entity is the Compliance Enforcement Authority except where the Reliability Coordinator works for the Regional Entity. Where the Reliability Coordinator works for the Regional Entity, the Regional Entity will establish an agreement with the ERO or another entity approved by the ERO and FERC (i.e. another Regional Entity), to be responsible for compliance enforcement.

1.2. Compliance Monitoring Period and Reset Time Frame

Not Applicable

1.3. Compliance Monitoring and Enforcement Processes:

Compliance Audit

Self-Certification

Spot Checking

Compliance Violation Investigation

Self-Reporting

Complaint

1.4. Data Retention

The Reliability Coordinator shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- o Each Reliability Coordinator shall retain its current, in force document and any documents in force since the last compliance audit for Requirements R1, R2, and Measures M1, M2.
- o Each Reliability Coordinator shall retain its most recent 12 months of evidence for Requirement R3, R4, R5 and Measure M3, M4, M5.
- o Each Reliability Coordinator shall retain 3 calendar years plus current calendar year of evidence for Requirements R6 through R8 and Measures M6 through M8.
- o If a Reliability Coordinator is found non-compliant, it shall keep information related to the non-compliance until found compliant, or for the time period specified above, whichever is longer.
- o The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

2. Violation Severity Levels

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	The Reliability Coordinator has Operating Procedures, Operating Processes, or Operating Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address one of the topical areas identified in Parts 1.1 through 1.7.	The Reliability Coordinator has Operating Procedures, Operating Processes, or Operating Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address two of the topical areas identified in Parts 1.1 through 1.7.	The Reliability Coordinator has Operating Procedures, Operating Processes, or Operating Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address three of the topical areas identified in Parts 1.1 through 1.7.	The Reliability Coordinator failed to have Operating Procedures, Operating Processes, or Operating Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability to address three or more of the topical areas identified in Parts 1.1 through 1.7.
R2	N/A	The Reliability Coordinator Operating Procedures, Operating Processes, or Operating Plans identified in R1 but failed to distribute these to all Reliability Coordinators that are required to take action.	The Reliability Coordinator has Operating Procedures, Operating Processes, or Operating Plans identified in R1 but failed to obtain agreement from all Reliability Coordinators that are required to take action. OR Failed to review and update the Operating Procedures, Operating Processes, and Operating Plans identified in R1 annually.	The Reliability Coordinator has Operating Procedures, Operating Processes, or Operating Plans identified in R1 but failed to review and update annually and obtain written agreement from all Reliability Coordinators that are required to take action and failed to distribute these to all Reliability Coordinators that are required to take action.
R3	N/A	N/A	The Reliability Coordinator failed to make notifications OR exchange reliability-related information with impacted Reliability Coordinators.	The Reliability Coordinator failed to make notifications AND exchange reliability-related information with impacted Reliability Coordinators.

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R4	N/A	N/A	N/A	The Reliability Coordinator failed to participate in an agreed upon (at least weekly) conference call with impacted Reliability Coordinators within the same Interconnection.
R5	N/A	The Reliability Coordinator failed to notify one, but not all, of the impacted Reliability Coordinators upon identification of an Adverse Reliability Impact.	N/A	The Reliability Coordinator failed to notify more than one impacted Reliability Coordinators upon identification of an Adverse Reliability Impact. OR The Reliability Coordinator failed to notify the impacted Reliability Coordinator (when there is only one impacted Reliability Coordinator) upon identification of an Adverse Reliability Impact.
R6	N/A	N/A	N/A	The Reliability Coordinator failed to operate under the assumption that the Adverse Reliability Impact existed during an instance where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact.
R7	N/A	N/A	N/A	The Reliability Coordinator that identified the Adverse Reliability Impact failed to develop an action plan to resolve the Adverse Reliability Impact during an instance where Reliability Coordinators disagreed on the existence of an Adverse Reliability

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
				Impact.
R8	N/A	N/A	N/A	The Reliability Coordinator failed to implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact during an instance where Reliability Coordinators disagreed on the existence of an Adverse Reliability Impact.

E. Regional Differences

None identified.

F. Associated Documents**Version History**

Version	Date	Action	Change Tracking
1	August 10, 2005	1. Changed incorrect use of certain hyphens (-) to “en dash (–).” 2. Hyphenated “30-day” when used as adjective. 3. Changed standard header to be consistent with standard “Title.” 4. Initial capped heading “Definitions of Terms Used in Standard.” 5. Added “periods” to items where appropriate. 6. Changed “Timeframe” to “Time Frame” in item D, 1.2. 7. Lower cased all words that are not “defined” terms — drafting team, self-certification. 8. Changed apostrophes to “smart” symbols. 9. Added comma in all word strings “Procedures, Processes, or Plans,” etc. 10. Added hyphens to “Reliability Coordinator-to-Reliability Coordinator” where used as adjective. 11. Removed comma in item 2.1.2. 12. Removed extra spaces between words where appropriate.	January 20, 2006
1	February 7, 2006	Approved by BOT	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New
2	TBD	Revised per Project 2006-6; Revised existing requirements for clarity, retired R3 and R4 and incorporated requirements from IRO-015-1 and IRO-016-1 into this standard.	Revised

Standard Development Roadmap

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

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1. Draft SAR Version 1 posted January 15, 2007
2. Draft SAR Version 1 Comment Period ended February 14, 2007
3. Draft SAR Version 2 and comment responses on SAR version 1 posted March 19, 2007
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Proposed Action Plan and Description of Current Draft:

The SDT began working on revisions to the standards in August 2007. The current posting is for the recirculation ballot. The initial ballot was conducted as a single vote for a set of standards and their associated implementation plans and definitions. Following the initial ballot the Standards Committee authorized the team to separate the standards and post the standards that have achieved consensus for individual recirculation ballots. This is the fifth posting of this standard.

Future Development Plan:

Anticipated Actions	Anticipated Date
1. Standards posted for recirculation ballots.	July 2011
2. Standards sent to BOT for approval.	August 2011
3. Standards filed with regulatory authorities.	September 2011

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

~~None~~ The RC SDT proposes the following modified definition:

Adverse Reliability Impact: The impact of an event that results in Bulk Electric System instability or Cascading.

A. Introduction

1. **Title:** Coordination Among Reliability Coordinators
2. **Number:** IRO-014-2
3. **Purpose:** To ensure that each Reliability Coordinator's operations are coordinated such that they will not have an Adverse Reliability Impact on other Reliability Coordinator Areas and to preserve the reliability benefits of interconnected operations.
4. **Applicability:**
 - 4.1. Reliability Coordinators.
5. **Effective Date:** In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter that is 12 months after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter that is 12 months after Board of Trustees approval.

B. Requirements

- R1. Each Reliability Coordinator shall have Operating Procedures, Operating Processes, or Operating Plans for activities that require notification, exchange of information or coordination of actions that may impact other Reliability Coordinator Areas to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following: *[Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning]*
 - 1.1. Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators.
 - 1.2. Energy and capacity shortages.
 - 1.3. Planned or unplanned outage information.
 - 1.4. Control of voltage, including the coordination of reactive resources.
 - 1.5. Coordination of information exchange to support reliability assessments.
 - 1.6. Authority to act to prevent and mitigate system conditions which could cause Adverse Reliability Impacts to other Reliability Coordinator Areas.
 - 1.7. Weekly conference calls
- R2. Each Reliability Coordinator shall maintain its Operating Procedures, Operating Processes, or Operating Plans identified in Requirement R1 as follows: *[Violation Risk Factor: Lower] [Time Horizon: Same Day Operations and Operations Planning]*
 - 2.1. Review and update annually with no more that 15 months between reviews.
 - 2.2. Obtain written agreement from all of the Reliability Coordinators required to take the indicated action(s) for each update.

- 2.3.** Distribute to all Reliability Coordinators that are required to take the indicated action(s) within 30 days of an update.
- R3.** Each Reliability Coordinator shall make notifications and exchange reliability-related information with other Reliability Coordinators in accordance with the Operating Procedures, Operating Processes, or Operating Plans identified in Requirement R1. *[Violation Risk Factor: Medium][Time Horizon: Real-time Operations and Operations Planning]*
- R4.** Each Reliability Coordinator shall participate in agreed upon conference calls, at least weekly (per Requirement 1, Part 1.7) with other Reliability Coordinators within the same Interconnection. *[Violation Risk Factor: Lower][Time Horizon: Real-time Operations]*
- R5.** Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify all other Reliability Coordinators. *[Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*
- R6.** During each instance where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact each impacted Reliability Coordinator shall operate as though the problem exists. *[Violation Risk Factor: High][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*
- R7.** During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, the Reliability Coordinator that identified the Adverse Reliability Impact shall develop an action plan to resolve the Adverse Reliability Impact. *[Violation Risk Factor: High][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*
- R8.** ~~When a Reliability Coordinator has identified an Adverse Reliability Impact and the other~~ During those instances where Reliability Coordinators disagree on ~~an action plan~~ the existence of an Adverse Reliability Impact, each Reliability Coordinator shall implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact unless such actions would violate safety, equipment, regulatory or statutory requirements. *[Violation Risk Factor: High][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*

C. Measures

- M1.** Each Reliability Coordinator shall have available the latest approved documented version of its Operating Procedures, Processes, and Operating Plans that require notifications, information exchange or the coordination of actions among impacted Reliability Coordinators for conditions or activities that impact other Reliability Coordinator Areas. This documentation shall include dated, current in force documentation with the specified elements. (R1)
- M2.** Each Reliability Coordinator shall have dated evidence that the Operating Procedures, Processes, and Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were:
- 2.1** Reviewed and updated annually with no more than 15 months between reviews.

- 2.2 Agreed to, in writing, by all the Reliability Coordinators required to take the indicated action(s).
- 2.3 Distributed within 30 days of an update to all Reliability Coordinators that are required to take the indicated action(s).

This evidence may include, but is not limited to dated documentation with confirmation of receipt, dated notice of acceptance or agreement to take specified actions, or dated electronic communications with confirmation of receipt and acceptance or agreement to take specified actions. (R2)

- M3.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent dated documentation, that will be used to determine that it made notifications and exchanged reliability-related information with impacted Reliability Coordinators in accordance with the Operating Procedures, Processes, or Plans identified in Requirement R1. (R3)
- M4.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent dated documentation, that will be used to determine that it participated in agreed upon (at least weekly) conference calls with other Reliability Coordinators within the same Interconnection. (R4)
- M5.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent dated documentation, that will be used to determine that it, upon identification of an Adverse Reliability Impact, notified ~~impacted~~other Reliability Coordinators. (R5)
- M6.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it operated under the assumption that the Adverse Reliability Impact existed during each instance where Reliability Coordinators disagreed on the existence of an Adverse Reliability Impact. (R6)
- M7.** Each Reliability Coordinator that identified an Adverse Reliability Impact shall have evidence and provide evidence that it developed an action plan during those instances where Reliability Coordinators disagreed on the existence of an Adverse Reliability Impact. This evidence may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent dated documentation. (R7)
- M8.** Each impacted Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent dated documentation, that will be used to determine that it implemented the action plan developed by the Reliability Coordinator who has the identified the Adverse Reliability Impact when a Reliability Coordinator has identified an Adverse Reliability Impact and the impacted Reliability

Coordinators disagree on an action unless such actions would have violated safety, equipment, or regulatory or statutory requirements. (R8)

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

~~Regional Entity~~ The Regional Entity is the Compliance Enforcement Authority except where the Reliability Coordinator works for the Regional Entity. Where the Reliability Coordinator works for the Regional Entity, the Regional Entity will establish an agreement with the ERO or another entity approved by the ERO and FERC (i.e. another Regional Entity), to be responsible for compliance enforcement.

1.2. Compliance Monitoring Period and Reset Time Frame

Not Applicable

1.3. Compliance Monitoring and Enforcement Processes:

Compliance Audits~~s~~

Self-Certifications~~s~~

Spot Checking

Compliance Violation Investigations~~s~~

Self-Reporting

Complaints~~s~~

1.4. Data Retention

The Reliability Coordinator shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- o Each Reliability Coordinator shall retain its current, in force document and any documents in force since the last compliance audit for Requirements R1, R2, and Measures M1, M2.
- o Each Reliability Coordinator shall retain its most recent 12 months of evidence for Requirement R3, R4, R5 and Measure M3, M4, M5.
- o Each Reliability Coordinator shall retain 3 calendar years plus current calendar year of evidence for Requirements R6 through R8 and Measures M6 through M8.
- o If a Reliability Coordinator is found non-compliant, it shall keep information related to the non-compliance until found compliant, or for the time period specified above, whichever is longer.
- o The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

2. Violation Severity Levels

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	The Reliability Coordinator has Operating Procedures, Operating Processes, or Operating Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address one of the topical areas identified in Parts 1.1 through 1.7.	The Reliability Coordinator has Operating Procedures, Operating Processes, or Operating Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address two of the topical areas identified in Parts 1.1 through 1.7.	The Reliability Coordinator has Operating Procedures, Operating Processes, or Operating Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address three of the topical areas identified in Parts 1.1 through 1.7.	The Reliability Coordinator failed to have Operating Procedures, Operating Processes, or Operating Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability to address three or more of the topical areas identified in Parts 1.1 through 1.7.
R2	N/A	The Reliability Coordinator Operating Procedures, Operating Processes, or Operating Plans identified in R1 but failed to distribute these to all Reliability Coordinators that are required to take action.	The Reliability Coordinator has Operating Procedures, Operating Processes, or Operating Plans identified in R1 but failed to obtain agreement from all Reliability Coordinators that are required to take action. OR Failed to review and update the Operating Procedures, Operating Processes, and Operating Plans identified in R1 annually.	The Reliability Coordinator has Operating Procedures, Operating Processes, or Operating Plans identified in R1 but failed to review and update annually and obtain written agreement from all Reliability Coordinators that are required to take action and failed to distribute these to all Reliability Coordinators that are required to take action.
R3	N/A	N/A	The Reliability Coordinator failed to make notifications OR exchange reliability-related information with impacted Reliability Coordinators.	The Reliability Coordinator failed to make notifications AND exchange reliability-related information with impacted Reliability Coordinators.

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R4	N/A	N/A	N/A	The Reliability Coordinator failed to participate in an agreed upon (at least weekly) conference call with impacted Reliability Coordinators within the same Interconnection.
R5	N/A	The Reliability Coordinator failed to notify one, but not all, of the impacted Reliability Coordinators upon identification of an Adverse Reliability Impact.	N/A	The Reliability Coordinator failed to notify more than one impacted Reliability Coordinators upon identification of an Adverse Reliability Impact. OR The Reliability Coordinator failed to notify the impacted Reliability Coordinator (when there is only one impacted Reliability Coordinator) upon identification of an Adverse Reliability Impact.
R6	N/A	N/A	N/A	The Reliability Coordinator failed to operate under the assumption that the Adverse Reliability Impact existed during an instance where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact.
R7	N/A	N/A	N/A	The Reliability Coordinator that identified the Adverse Reliability Impact failed to develop an action plan to resolve the Adverse Reliability Impact during an instance where Reliability Coordinators disagreed on the existence of an Adverse Reliability

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
				Impact.
R8	N/A	N/A	N/A	The Reliability Coordinator failed to implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact ~~when a Reliability Coordinator has identified an Adverse Reliability Impact and the impacted~~ <u>during an instance where Reliability Coordinators disagreed on ~~an action plan~~ the existence of an Adverse Reliability Impact.</u>

E. Regional Differences

None identified.

F. Associated Documents**Version History**

Version	Date	Action	Change Tracking
1	August 10, 2005	1. Changed incorrect use of certain hyphens (-) to “en dash (–).” 2. Hyphenated “30-day” when used as adjective. 3. Changed standard header to be consistent with standard “Title.” 4. Initial capped heading “Definitions of Terms Used in Standard.” 5. Added “periods” to items where appropriate. 6. Changed “Timeframe” to “Time Frame” in item D, 1.2. 7. Lower cased all words that are not “defined” terms — drafting team, self-certification. 8. Changed apostrophes to “smart” symbols. 9. Added comma in all word strings “Procedures, Processes, or Plans,” etc. 10. Added hyphens to “Reliability Coordinator-to-Reliability Coordinator” where used as adjective. 11. Removed comma in item 2.1.2. 12. Removed extra spaces between words where appropriate.	January 20, 2006
1	February 7, 2006	Approved by BOT	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New
2	TBD	Revised per ~~SAR for~~ Project 2006-6, ~~RC SDF~~ ; <u>Revised existing requirements for clarity, retired R3 and R4 and incorporated requirements from IRO-015-1 and IRO-016-1 into this standard.</u>	Revised

Standard Development Roadmap

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1. Draft SAR Version 1 posted January 15, 2007
2. Draft SAR Version 1 Comment Period ended February 14, 2007
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Future Development Plan:

Anticipated Actions	Anticipated Date
1. Standards posted for recirculation ballots.	July 2011
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The RC SDT proposes the following modified definition:

Adverse Reliability Impact: The impact of an event that results in Bulk Electric System instability or Cascading.

A. Introduction

1. **Title:** ~~Procedures, Processes, or Plans to Support~~ **Coordination Between Among Reliability Coordinators**
2. **Number:** IRO-014-~~12~~
3. **Purpose:** To ensure that each Reliability Coordinator's operations are coordinated such that they will not have an Adverse Reliability Impact on other Reliability Coordinator Areas and to preserve the reliability benefits of interconnected operations.
4. **Applicability:**
 - 4.1. Reliability Coordinator
- ~~5. **Effective Date:** November 1, 2006~~
5. **Effective Date:** In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter that is 12 months after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter that is 12 months after Board of Trustees approval.

B. Requirements

- ~~R1.~~ The Each Reliability Coordinator shall have Operating Procedures, Operating Processes, or Operating Plans ~~in place~~ for activities that require notification, exchange of information or coordination of actions ~~with one or more that may impact~~ other Reliability ~~Coordinators~~ Coordinator Areas to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall ~~address Scenarios that affect other Reliability Coordinator Areas as well as those developed in coordination with other Reliability Coordinators.~~
- ~~R2.~~ R1. ~~These Operating Procedures, Processes, or Plans shall~~ collectively address, ~~as a minimum,~~ the following: [Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning]
- ~~2.1.1.1.~~ 2.1.1.1. Communications and notifications, including the mutually agreed to conditions¹ under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators.
- ~~2.2.1.2.~~ 2.2.1.2. Energy and capacity shortages.
- ~~2.3.1.3.~~ 2.3.1.3. Planned or unplanned outage information.

¹ ~~Examples of conditions when one Reliability Coordinator may need to notify another Reliability Coordinator may include (but aren't limited to) sabotage events, Interconnection Reliability Operating Limit violations, voltage reductions, insufficient resources, arming of special protection systems, etc.~~

~~2.4.1.4. Voltage control~~Control of voltage, including the coordination of reactive resources ~~for voltage control.~~

~~2.5.1.5.~~ Coordination of information exchange to support reliability assessments.

~~2.6.1.6.~~ Authority to act to prevent and mitigate ~~instances of causingsystem conditions which could cause~~ Adverse Reliability Impacts to other Reliability Coordinator Areas.

1.7. Weekly conference calls

R2. Each Reliability ~~Coordinator's~~Coordinator shall maintain its Operating ~~Procedure, Process~~Procedures, Operating Processes, or PlanOperating Plans identified in Requirement R1 as follows: [Violation Risk Factor: Lower] [Time Horizon: Same Day Operations and Operations Planning]

2.1. Review and update annually with no more that requires15 months between reviews.

2.2. Obtain written agreement from all of the Reliability Coordinators required to take the indicated action(s) for each update.

2.3. Distribute to all Reliability Coordinators that are required to take the indicated action(s) within 30 days of an update.

R3. Each Reliability Coordinator shall make notifications and exchange reliability-related information with other Reliability Coordinators in accordance with the Operating Procedures, Operating Processes, or Operating Plans identified in Requirement R1. [Violation Risk Factor: Medium][Time Horizon: Real-time Operations and Operations Planning]

R4. Each Reliability Coordinator shall participate in agreed upon conference calls, at least weekly (per Requirement 1, Part 1.7) with other Reliability Coordinators within the same Interconnection. [Violation Risk Factor: Lower][Time Horizon: Real-time Operations]

R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify all other Reliability Coordinators. [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

R6. During each instance where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact each impacted Reliability Coordinator shall operate as though the problem exists. [Violation Risk Factor: High] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

R7. During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, the Reliability Coordinator that identified the Adverse Reliability Impact shall develop an action plan to resolve the Adverse Reliability Impact. [Violation Risk Factor: High][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

R8. During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, each Reliability Coordinator shall implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability

Impact unless such actions would violate safety, equipment, regulatory or statutory requirements. [Violation Risk Factor: High][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]

C. Measures

M1. Each Reliability Coordinator shall have available the latest approved documented version of its Operating Procedures, Processes, and Operating Plans that require notifications, information exchange or the coordination of actions among impacted Reliability Coordinators for conditions or activities that impact other Reliability Coordinator Areas. This documentation shall include dated, current in force documentation with the specified elements. (R1)

~~M1.~~**M2.** Each Reliability Coordinator shall have dated evidence that the Operating Procedures, Processes, and Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) shall be:

2.1 Reviewed and updated annually with no more than 15 months between reviews.

~~1.12.2~~ Agreed to, in writing, by all the Reliability Coordinators required to take the indicated action(s).

~~1.22.3~~ Distributed within 30 days of an update to all Reliability Coordinators that are required to take the indicated action(s).

~~R3.~~ A Reliability Coordinator's Operating Procedures, Processes, or Plans developed to support a Reliability Coordinator to Reliability Coordinator Operating Procedure, Process, or Plan shall include:

~~3.1.~~ A reference to the associated Reliability Coordinator to Reliability Coordinator Operating Procedure, Process, or Plan.

~~3.2.~~ The agreed-upon actions from the associated Reliability Coordinator to Reliability Coordinator Operating Procedure, Process, or Plan.

~~R4.~~ Each of the Operating Procedures, Processes, and Plans addressed in Reliability Standard IRO-014 Requirement 1 and Requirement 3 shall:

~~4.1.~~ Include version control number or date.

~~4.2.~~ Include a distribution list.

~~4.3.~~ Be reviewed, at least once every three years, and updated if needed.

C. Measures

~~M2.~~ The Reliability Coordinator's System Operators shall have available for Real-time use, the latest approved version of Operating Procedures, Processes, or Plans that require notifications, information exchange or the coordination of actions between Reliability Coordinators.

~~2.1~~ These Operating Procedures, Processes, or Plans shall address:

- ~~2.1.1 — Communications and notifications, including the conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators.~~
- ~~M1.1.2 — Energy and capacity shortages.~~
- ~~M1.1.3 — Planned or unplanned outage information.~~
- ~~M1.1.4 — Voltage control, including the coordination of reactive resources for voltage control.~~
- ~~M1.1.5 — Coordination of information exchange to support reliability assessments.~~
- ~~M1.1.6 — Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas.~~
- ~~M3. — The Reliability Coordinator shall have evidence that these Operating Procedures, Processes, or Plans were:~~
 - ~~3.1 — Agreed to by all the Reliability Coordinators required to take the indicated action(s).~~
 - ~~3.2 — Distributed to all Reliability Coordinators that are required to take the indicated action(s).~~
- ~~M4. — The Reliability Coordinator's Operating Procedures, Processes, or Plans developed (for its System Operators' internal use) to support a Reliability Coordinator to Reliability Coordinator Operating Procedure, Process, or Plan received from another Reliability Coordinator shall:~~
 - ~~4.1 — Be available to the Reliability Coordinator's System Operators for Real-time use;~~
 - ~~4.2 — Include a reference to the associated source document, and~~
 - ~~4.3 — Support the agreed-upon actions from the source document.~~
- ~~M5. — The Reliability Coordinator's Operating Procedures, Processes, or Plans that addresses Reliability Coordinator to Reliability Coordinator coordination shall each include a version control number or date and a distribution list. The Reliability Coordinator shall have evidence that these Operating Procedures, Processes, or Plans were reviewed within the last three years.~~

This evidence may include, but is not limited to dated documentation with confirmation of receipt, dated notice of acceptance or agreement to take specified actions, or dated electronic communications with confirmation of receipt and acceptance or agreement to take specified actions. (R2)
- M3. Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent dated documentation, that will be used to determine that it made notifications and exchanged reliability-related information with

impacted Reliability Coordinators in accordance with the Operating Procedures, Processes, or Plans identified in Requirement R1. (R3)

M4. Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent dated documentation, that will be used to determine that it participated in agreed upon (at least weekly) conference calls with other Reliability Coordinators within the same Interconnection. (R4)

M5. Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent dated documentation, that will be used to determine that it, upon identification of an Adverse Reliability Impact, notified other Reliability Coordinators. (R5)

M6. Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it operated under the assumption that the Adverse Reliability Impact existed during each instance where Reliability Coordinators disagreed on the existence of an Adverse Reliability Impact. (R6)

M7. Each Reliability Coordinator that identified an Adverse Reliability Impact shall have evidence and provide evidence that it developed an action plan during those instances where Reliability Coordinators disagreed on the existence of an Adverse Reliability Impact. This evidence may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent dated documentation. (R7)

M8. Each impacted Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent dated documentation, that will be used to determine that it implemented the action plan developed by the Reliability Coordinator who has the identified the Adverse Reliability Impact when a Reliability Coordinator has identified an Adverse Reliability Impact and the impacted Reliability Coordinators disagree on an action unless such actions would have violated safety, equipment, or regulatory or statutory requirements. (R8)

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance ~~Monitoring Responsibility~~ Enforcement Authority

~~Regional Reliability Organization~~

The Regional Entity is the Compliance Enforcement Authority except where the Reliability Coordinator works for the Regional Entity. Where the Reliability Coordinator works for the Regional Entity, the Regional Entity will establish an agreement with the ERO or another entity approved by the ERO and FERC (i.e. another Regional Entity), to be responsible for compliance enforcement.

1.2. Compliance Monitoring Period and Reset Time Frame

~~The Performance Reset Period shall be one calendar year.~~

Not Applicable

1.3. Compliance Monitoring and Enforcement Processes:

Compliance Audit

Self-Certification

Spot Checking

Compliance Violation Investigation

Self-Reporting

Complaint

1.3.1.4. Data Retention

The Reliability Coordinator shall keep ~~documentation for the prior calendar year and the current calendar year. The Compliance Monitor shall keep data or evidence to show~~ compliance data for a minimum of three years or until the Reliability Coordinator has achieved full compliance, whichever is longer.

1.4. Additional Compliance Information

~~The Reliability Coordinator shall demonstrate compliance through self-certification submitted to as identified below unless directed by its Compliance Monitor annually. The Compliance Monitor shall also use a scheduled on-site review at least once every three years and investigations upon complaint. The Compliance Monitor shall conduct an Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation upon a complaint within 30 days of the alleged infraction's discovery date. The Compliance Monitor shall complete the investigation within 45 days after the start of the investigation. As part of an audit or investigation, the Compliance Monitor shall interview other Reliability Coordinators to identify Operating Procedures, Processes or Plans that were distributed to the Reliability Coordinator being audited to verify that these documents are available for Real-time use by the receiving Reliability Coordinator's System Operators.;~~

~~o TheEach Reliability Coordinator shall have the followingretain its current, in force document and any documents available for inspection during an on-sitein force since the last compliance audit or within five business daysfor Requirements R1, R2, and Measures M1, M2.~~

~~o Each Reliability Coordinator shall retain its most recent 12 months of a request as partevidence for Requirement R3, R4, R5 and Measure M3, M4, M5.~~

~~o Each Reliability Coordinator shall retain 3 calendar years plus current calendar year of an investigation upon a complaint:evidence for Requirements R6 through R8 and Measures M6 through M8.~~

~~1.4.1 The latest version of its Operating Procedures, Processes, or Plans that require notification, exchange of If a Reliability Coordinator is found non-compliant,~~

~~it shall keep information, or coordination of actions with one or more other Reliability Coordinators to support Interconnection reliability.~~

~~1.4.2—Evidence of distribution of Operating Procedures, Processes, or Plans.~~

~~1.—Levels of Non-Compliance~~

~~1.1. Level 1:—There shall be a level one non-compliance if either of the following conditions is present:~~

~~1.1.1—The latest versions of Operating Procedures, Processes, or Plans (identified through self-certification) that require notification, exchange of information, or coordination of actions with one or more other Reliability Coordinators to support Interconnection reliability do not include a version control number or date, and a distribution list.~~

~~1.1.2—The latest versions of Reliability Coordinator internal documents developed to support action(s) required as a result of other Reliability Coordinators do not include both a reference to the source Operating Procedure, Process, or Plan and the agreed-upon actions from the source Operating Procedure, Process, or Plan.~~

~~1.2. Level 2:—There shall be a level two related to the non-compliance if any of the following conditions is present:~~

~~1.2.1—Documents required by this standard were not distributed to all entities on the distribution list.~~

- ~~o Documents required by this standard were not available until found compliant, or for System Operators' Real-time use period specified above, whichever is longer.~~

~~1.2.2—Documents required by this standard do not address all required topics.~~

~~1.3. Level 3:—Documents required by this standard do not address any of the six required topics in Reliability Standard IRO-014 R1.~~

~~1.4. Level 4:—Not Applicable.~~

- ~~o The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.~~

2. Violation Severity Levels

<u>R#</u>	<u>Lower VSL</u>	<u>Moderate VSL</u>	<u>High VSL</u>	<u>Severe VSL</u>
<u>R1</u>	<u>The Reliability Coordinator has Operating Procedures, Operating Processes, or Operating Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address one of the topical areas identified in Parts 1.1 through 1.7.</u>	<u>The Reliability Coordinator has Operating Procedures, Operating Processes, or Operating Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address two of the topical areas identified in Parts 1.1 through 1.7.</u>	<u>The Reliability Coordinator has Operating Procedures, Operating Processes, or Operating Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address three of the topical areas identified in Parts 1.1 through 1.7.</u>	<u>The Reliability Coordinator failed to have Operating Procedures, Operating Processes, or Operating Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability to address three or more of the topical areas identified in Parts 1.1 through 1.7.</u>
<u>R2</u>	<u>N/A</u>	<u>The Reliability Coordinator Operating Procedures, Operating Processes, or Operating Plans identified in R1 but failed to distribute these to all Reliability Coordinators that are required to take action.</u>	<u>The Reliability Coordinator has Operating Procedures, Operating Processes, or Operating Plans identified in R1 but failed to obtain agreement from all Reliability Coordinators that are required to take action.</u> <u>OR</u> <u>Failed to review and update the Operating Procedures, Operating Processes, and Operating Plans identified in R1 annually.</u>	<u>The Reliability Coordinator has Operating Procedures, Operating Processes, or Operating Plans identified in R1 but failed to review and update annually and obtain written agreement from all Reliability Coordinators that are required to take action and failed to distribute these to all Reliability Coordinators that are required to take action.</u>
<u>R3</u>	<u>N/A</u>	<u>N/A</u>	<u>The Reliability Coordinator failed to make notifications OR exchange reliability-related information with impacted Reliability Coordinators.</u>	<u>The Reliability Coordinator failed to make notifications AND exchange reliability-related information with impacted Reliability Coordinators.</u>

<u>R#</u>	<u>Lower VSL</u>	<u>Moderate VSL</u>	<u>High VSL</u>	<u>Severe VSL</u>
<u>R4</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>The Reliability Coordinator failed to participate in an agreed upon (at least weekly) conference call with impacted Reliability Coordinators within the same Interconnection.</u>
<u>R5</u>	<u>N/A</u>	<u>The Reliability Coordinator failed to notify one, but not all, of the impacted Reliability Coordinators upon identification of an Adverse Reliability Impact.</u>	<u>N/A</u>	<u>The Reliability Coordinator failed to notify more than one impacted Reliability Coordinators upon identification of an Adverse Reliability Impact.</u> <u>OR</u> <u>The Reliability Coordinator failed to notify the impacted Reliability Coordinator (when there is only one impacted Reliability Coordinator) upon identification of an Adverse Reliability Impact.</u>
<u>R6</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>The Reliability Coordinator failed to operate under the assumption that the Adverse Reliability Impact existed during an instance where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact.</u>
<u>R7</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>The Reliability Coordinator that identified the Adverse Reliability Impact failed to develop an action plan to resolve the Adverse Reliability Impact during an instance where Reliability Coordinators disagreed on the existence of an Adverse Reliability</u>

<u>R#</u>	<u>Lower VSL</u>	<u>Moderate VSL</u>	<u>High VSL</u>	<u>Severe VSL</u>
				<u>Impact.</u>
<u>R8</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>The Reliability Coordinator failed to implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact during an instance where Reliability Coordinators disagreed on the existence of an Adverse Reliability Impact.</u>

E. Regional Differences

None ~~Identified~~identified.

F. Associated Documents

Version History

Version	Date	Action	Change Tracking
~~Version 1~~	~~08/August 10/05,~~ <u>2005</u>	1. Changed incorrect use of certain hyphens (-) to “en dash (–).” 2. Hyphenated “30-day” when used as adjective. 3. Changed standard header to be consistent with standard “Title.” 4. Initial capped heading “Definitions of Terms Used in Standard.” 5. Added “periods” to items where appropriate. 6. Changed “Timeframe” to “Time Frame” in item D, 1.2. 7. Lower cased all words that are not “defined” terms — drafting team, self-certification. 8. Changed apostrophes to “smart” symbols. 9. Added comma in all word strings “Procedures, Processes, or Plans,” etc. 10. Added hyphens to “Reliability Coordinator-to-Reliability Coordinator” where used as adjective. 11. Removed comma in item 2.1.2. 12. Removed extra spaces between words where appropriate.	~~01/January 20/06,~~ <u>2006</u>
<u>1</u>	<u>February 7, 2006</u>	<u>Approved by BOT</u>	<u>Revised</u>
<u>1</u>	<u>April 4, 2007</u>	<u>Regulatory Approval — Effective Date</u>	<u>New</u>
<u>2</u>	<u>TBD</u>	<u>Revised per Project 2006-6; Revised existing requirements for clarity, retired R3 and R4 and incorporated requirements from IRO-015-1 and IRO-016-1 into this standard.</u>	<u>Revised</u>

Implementation Plan

IRO-014-2 – Coordination Among Reliability Coordinators

Approvals Required

IRO-014-2 – Coordination Among Reliability Coordinators

Prerequisite Approvals

None

Revisions to Glossary Terms

Adverse Reliability Impact - The impact of an event that results in ~~frequency-related Bulk Electric System instability; unplanned tripping of load or generation; or uncontrolled separation or cascading outages that affects a widespread area of the interconnection.~~

Applicable Entities

Reliability Coordinator

Conforming Changes to Other Standards

Modify IRO-001.1 to eliminate R7, as discussed below.

Effective Dates

In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter that is 12 months after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter that is 12 months after Board of Trustees approval.

Retirements

IRO-014-1, IRO-015-1 and IRO-016-1 should be retired at midnight of the day immediately prior to the Effective Date of IRO-014-2 in the particular jurisdiction in which the new standard is becoming effective.

Summary of Changes

The Reliability Coordination Standard Drafting Team (RC SDT) revised the standard and proposes retiring two requirements (R3 and R4). New requirements were brought into this standard from IRO-015-1 (R1-R2) and IRO-016-1 (R1 and its sub requirements). Changes were made to eliminate redundancies between standards (existing and proposed), eliminate administrative items, and align with NERC's Rules of Procedure and to address issues in FERC Order 693.

The following tables identify the sections of approved standards that shall be retired or revised when this standard is implemented.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1.1 R7. The Reliability Coordinator shall have clear, comprehensive coordination agreements with adjacent Reliability Coordinators to ensure that System Operating Limit or Interconnection Reliability Operating Limit violation mitigation requiring actions in adjacent Reliability Coordinator Areas are coordinated.	IRO-014-2 R1. Each Reliability Coordinator shall have Operating Procedures, Operating Processes, or Operating Plans for activities that require notification, exchange of information or coordination of actions that may impact other Reliability Coordinator Areas to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following: <i>[Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning]</i> 1.1. Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators. 1.2. Energy and capacity shortages. 1.3. Planned or unplanned outage information.

Already Approved Standard	Proposed Replacement Requirement(s)
	1.4. Control of voltage, including the coordination of reactive resources. 1.5. Coordination of information exchange to support reliability assessments. 1.6. Authority to act to prevent and mitigate system conditions which could ~~instances of causing~~ Adverse Reliability Impacts to other Reliability Coordinator Areas. 1.7. Weekly conference calls
Notes: The RC SDT proposes retiring IRO-001.1 R7, as it is redundant with IRO-014, R1.	
IRO-014-1 R1. The Reliability Coordinator shall have Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with one or more other Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall address Scenarios that affect other Reliability Coordinator Areas as well as those developed in coordination with other Reliability Coordinators. <i>[Violation Risk Factor: Medium]</i> R1.1 These Operating Procedures, Processes, or Plans shall collectively address, as a minimum, the following: <i>[Violation Risk Factor: Lower]</i> R1.1.1 Communications and notifications, including the conditions¹ under which one Reliability Coordinator notifies	IRO-014-2 R1. Each Reliability Coordinator shall have Operating Procedures, Operating Processes, or Operating Plans for activities that require notification, exchange of information or coordination of actions that may impact other Reliability Coordinator Areas to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following: <i>[Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning]</i> 1.1 Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the

¹ Examples of conditions when one Reliability Coordinator may need to notify another Reliability Coordinator may include (but aren't limited to) sabotage events, Interconnection Reliability Operating Limit violations, voltage reductions, insufficient resources, arming of special protection systems, etc.

Already Approved Standard	Proposed Replacement Requirement(s)
other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators. [Violation Risk Factor: Medium] R1.1.2 Energy and capacity shortages. [Violation Risk Factor: Medium] R1.1.3 Planned or unplanned outage information. [Violation Risk Factor: Medium] R1.1.4 Voltage control, including the coordination of reactive resources for voltage control. [Violation Risk Factor: Medium] R1.1.5 Coordination of information exchange to support reliability assessments. [Violation Risk Factor: Lower] R1.1.6 Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas. [Violation Risk Factor: Lower]	process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators. 1.2 Energy and capacity shortages. 1.3 Planned or unplanned outage information. 1.4 Control of voltage, including the coordination of reactive resources. 1.5 Coordination of information exchange to support reliability assessments. 1.6 Authority to act to prevent and mitigate system conditions which could cause Adverse Reliability Impacts to other Reliability Coordinator Areas. 1.7 Weekly conference calls Authority to act to prevent and mitigate system conditions which could ~~instances of causing~~ Adverse Reliability Impacts to other Reliability Coordinator Areas.
Notes: Revise R1 as shown and delete the footnote.	
IRO-014-1 R2. Each Reliability Coordinator's Operating Procedure, Process, or Plan that requires one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) shall be: R2.1. Agreed to by all the Reliability Coordinators required to take the indicated action(s). R2.2. Distributed to all Reliability Coordinators that are required to take the indicated action(s).	IRO-014-2 R2. Each Reliability Coordinator shall maintain its Operating Procedure, Operating Process, or Operating Plan identified in Requirement R1 as follows: <i>[Violation Risk Factor: Lower]</i> <i>[Time Horizon: Same Day Operations Planning and Long-term Planning]</i> 2.1 Review and update annually with no more that 15 months between reviews. <i>[Violation Risk Factor: Lower]</i> 2.2 Obtain written agreement from all of the Reliability Coordinators required to take the indicated action(s) for

Already Approved Standard	Proposed Replacement Requirement(s)
	each update. ~~Violation Risk Factor: Lower~~ 2.3 Distribute to all Reliability Coordinators that are required to take the indicated action(s) within 30 days of an update.
Notes: The RC SDT added a Time Horizon to the requirement and eliminated the VRFs that were applied to the subrequirements.	
IRO-014-1 R3. A Reliability Coordinator's Operating Procedures, Processes, or Plans developed to support a Reliability Coordinator-to-Reliability Coordinator Operating Procedure, Process, or Plan shall include: R3.1. A reference to the associated Reliability Coordinator-to-Reliability Coordinator Operating Procedure, Process, or Plan. R3.2. The agreed-upon actions from the associated Reliability Coordinator-to-Reliability Coordinator Operating Procedure, Process, or Plan.	None. Retire the requirement
Notes: This requirement is administrative in nature describing the contents of the plans and should not be in a standard. The RC SDT proposes retiring R3 and its subrequirements and recommends converting these good utility practices into a guideline document for use in developing the operating procedures, processes or plans.	
IRO-014-1 R4. Each of the Operating Procedures, Processes, and Plans addressed in Reliability Standard IRO-014 Requirement 1 and Requirement 3 shall: R4.1. Include version control number or date. R4.2. Include a distribution list. R4.3. Be reviewed, at least once every three years, and updated if needed	None. Retire the requirement.

Already Approved Standard	Proposed Replacement Requirement(s)
Notes: This requirement is administrative in nature describing the contents of the plans and should not be in a standard. The RC SDT proposes retiring R4 and its subrequirements and recommends converting these good utility practices into a guideline document for use in developing the operating procedures, processes or plans.	
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-015-1 R1. The Reliability Coordinator shall follow its Operating Procedures, Processes, or Plans for making notifications and exchanging reliability-related information with other Reliability Coordinators. <i>[Violation Risk Factor: Medium]</i> R1.1 The Reliability Coordinator shall make notifications to other Reliability Coordinators of conditions in its Reliability Coordinator Area that may impact other Reliability Coordinator Areas. <i>[Violation Risk Factor: Medium]</i> R2. The Reliability Coordinator shall participate in agreed upon conference calls and other communication forums with adjacent Reliability Coordinators. <i>[Violation Risk Factor: Lower]</i> R2.1 The frequency of these conference calls shall be agreed upon by all involved Reliability Coordinators and shall be at least weekly. <i>[Violation Risk Factor: Lower]</i> R3. The Reliability Coordinator shall provide reliability-related information as requested by other Reliability Coordinators. <i>[Violation Risk Factor: Medium]</i>	IRO-014-2 R3. Each Reliability Coordinator shall make notifications and exchange reliability-related information with other Reliability Coordinators in accordance with the Operating Procedures, Operating Processes, or Operating Plans identified in Requirement R1. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations and Operations Planning]</i> R4. Each Reliability Coordinator shall participate in agreed upon conference calls, at least weekly (per Requirement 1, Part 1.7) with other Reliability Coordinators within the same Interconnection. <i>[Violation Risk Factor: Lower] [Time Horizon: Real-time Operations]</i>
Notes: The RC SDT recommends retiring Standard IRO-015 and moving Requirements R1 and R2 to IRO-014-2 and revising as shown. The RC SDT proposes retiring R3 (as shown in the left column) as it is redundant with proposed R5 above. Reliability Coordinators already have several requirements aimed at providing data or information to other Reliability Coordinators in support of Reliability Coordinator responsibilities. For example, Reliability Coordinators provide reliability-related information to other Reliability Coordinators as part of IRO-010-1, R3 – they share information as they try to confirm the existence of operating issues as part of IRO-014-2 R5, etc.	

Already Approved Standard	Proposed Replacement Requirement(s)
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-016-1 R1. The Reliability Coordinator that identifies a potential, expected, or actual problem that requires the actions of one or more other Reliability Coordinators shall contact the other Reliability Coordinator(s) to confirm that there is a problem and then discuss options and decide upon a solution to prevent or resolve the identified problem. <i>[Violation Risk Factor: Medium]</i> R1.1 If the involved Reliability Coordinators agree on the problem and the actions to take to prevent or mitigate the system condition, each involved Reliability Coordinator shall implement the agreed-upon solution, and notify the involved Reliability Coordinators of the action(s) taken. <i>[Violation Risk Factor: Medium]</i> R1.2 If the involved Reliability Coordinators cannot agree on the problem(s) each Reliability Coordinator shall re-evaluate the causes of the disagreement (bad data, status, study results, tools, etc.). <i>[Violation Risk Factor: Medium]</i> R1.2.1 If time permits, this re-evaluation shall be done before taking corrective actions. <i>[Violation Risk Factor: Medium]</i> R1.2.2 If time does not permit, then each Reliability Coordinator shall operate as though the problem(s) exist(s) until the conflicting system status is resolved. <i>[Violation Risk Factor: Medium]</i> R1.3 If the involved Reliability Coordinators cannot agree on the solution, the more conservative solution shall be implemented. <i>[Violation Risk Factor: Medium]</i>	IRO-014-2 R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify all other Reliability Coordinators ~~that are involved~~. <i>[Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i> R6. During each instance where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact each impacted Reliability Coordinator shall operate as though the problem exists. <i>[Violation Risk Factor: High [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i> R7. During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, the Reliability Coordinator that identified the Adverse Reliability Impact shall develop an action plan to resolve the Adverse Reliability Impact. <i>[Violation Risk Factor: High][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i> R8. During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact , each Reliability Coordinator shall implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact unless such actions would violate safety, equipment, regulatory or statutory requirements. <i>[Violation Risk Factor: High][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i>

Already Approved Standard	Proposed Replacement Requirement(s)
Notes: IRO-014-2 R5 and R6 are revised versions of IRO-016-1, R1 and its subrequirements which were moved to this standard. The RC SDT removed the wording relating to the “most conservative solution” because it can not be measured. We are proposing to use the mitigation plan of the RC who is experiencing the issue in cases where an agreed to mitigation plan can not be developed. Note that stakeholders proposed revisions to these requirements, and the RC SDT subdivided the requirements to add more clarity.	
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-016-1 R2. The Reliability Coordinator shall document (via operator logs or other data sources) its actions taken for either the event or for the disagreement on the problem(s) or for both.	IRO-014-2 None. Retire the requirement as it is a measure of Requirement R1.

Implementation Plan
~~for IRO-014-2~~ — ~~Coordination Among Reliability Coordinators~~

Approvals Required

~~IRO-014-2 – Coordination Among Reliability Coordinators~~

Prerequisite Approvals

None ~~required~~

~~Conforming Changes to Requirements in Already Approved Standards~~

- ~~• IRO-001-2 – Reliability Coordination – Responsibilities and Authorities~~
- ~~• IRO-015-1 – Notifications and Information Exchange Between Reliability Coordinators~~
- ~~• IRO-016-1 – Coordination of Real-time Activities between Reliability Coordinators~~

~~Revision Summary~~

~~The Reliability Coordination SDT (RC SDT) revised the standard and is proposing retiring two requirements (R3 and R4). New requirements were brought into this standard from IRO-015-1 (R1-R2) and IRO-016-1 (R1 and its sub requirements). Changes were made to eliminate redundancies between standards (existing and proposed), eliminate administrative items, align with NERC's Rules of Procedure and to address issues in FERC Order 693.~~

~~Functions that Must Comply with the Requirements in the Standard~~

Revisions to Glossary Terms

~~Adverse Reliability Impact - The impact of an event that results in frequency-related Bulk Electric System instability; unplanned tripping of load or generation; or uncontrolled separation or cascading outages that affects a widespread area of the Interconnection.~~

Applicable Entities

Reliability Coordinator

Conforming Changes to Other Standards

~~Modify IRO-001.1 to eliminate R7, as discussed below.~~

Effective Dates

In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter that is 12 months after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter that is 12 months after Board of Trustees approval.

~~Revisions or~~ Retirements

IRO-014-1, IRO-015-1 and IRO-016-1 should be retired at midnight of the day immediately prior to the Effective Date of IRO-014-2 in the particular jurisdiction in which the new standard is becoming effective.

Summary of Changes

The Reliability Coordination Standard Drafting Team (RC SDT) revised the standard and proposes retiring two requirements (R3 and R4). New requirements were brought into this standard from IRO-015-1 (R1-R2) and IRO-016-1 (R1 and its sub requirements). Changes were made to eliminate redundancies between standards (existing and proposed), eliminate administrative items, Already Approved Standards and align with NERC's Rules of Procedure and to address issues in FERC Order 693.

The following tables identify the sections of approved standards that shall be retired or revised when this standard is implemented. ~~If the drafting team is recommending the retirement or revision of a requirement, that text is blue.~~

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1.1 R7. The Reliability Coordinator shall have clear, comprehensive coordination agreements with adjacent Reliability Coordinators to ensure that System Operating Limit or Interconnection Reliability Operating Limit violation mitigation requiring actions in adjacent Reliability Coordinator Areas are coordinated.	IRO-014-2 R1. Each Reliability Coordinator shall have Operating Procedures, Operating Processes, or Operating Plans for activities that require notification, exchange of information or coordination of actions that may impact other Reliability Coordinator Areas to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following: <i>[Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning]</i> 1.1. Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators. 1.2. Energy and capacity shortages. 1.3. Planned or unplanned outage information.

Already Approved Standard	Proposed Replacement Requirement(s)
	1.4. Control of voltage, including the coordination of reactive resources. 1.5. Coordination of information exchange to support reliability assessments. 1.6. Authority to act to prevent and mitigate system conditions which could cause Adverse Reliability Impacts to other Reliability Coordinator Areas. 1.7. Weekly conference calls
Notes: The RC SDT proposes retiring IRO-001.1 R7, as it is redundant with IRO-014, R1.	
IRO-014-1 R1. The Reliability Coordinator shall have Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with one or more other Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall address Scenarios that affect other Reliability Coordinator Areas as well as those developed in coordination with other Reliability Coordinators. <i>[Violation Risk Factor: Medium]</i> R1.1 These Operating Procedures, Processes, or Plans shall collectively address, as a minimum, the following: <i>[Violation Risk Factor: Lower]</i> R1.1.1 Communications and notifications, including the conditions¹ under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in	IRO-014-2 R1. Each Reliability Coordinator shall have Operating Procedures, Operating Processes, or Operating Plans for activities that require notification, exchange of information or coordination of actions that may impact other Reliability Coordinator Areas to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following: <i>[Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning]</i> 1.1 Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the

¹ Examples of conditions when one Reliability Coordinator may need to notify another Reliability Coordinator may include (but aren't limited to) sabotage events, Interconnection Reliability Operating Limit violations, voltage reductions, insufficient resources, arming of special protection systems, etc.

Already Approved Standard	Proposed Replacement Requirement(s)
making those notifications; and the data and information to be exchanged with other Reliability Coordinators. [Violation Risk Factor: Medium] R1.1.2 Energy and capacity shortages. [Violation Risk Factor: Medium] R1.1.3 Planned or unplanned outage information. [Violation Risk Factor: Medium] R1.1.4 Voltage control, including the coordination of reactive resources for voltage control. [Violation Risk Factor: Medium] R1.1.5 Coordination of information exchange to support reliability assessments. [Violation Risk Factor: Lower] R1.1.6 Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas. [Violation Risk Factor: Lower]	data and information to be exchanged with other Reliability Coordinators. 1.2 Energy and capacity shortages. 1.3 Planned or unplanned outage information. 1.4 Control of voltage, including the coordination of reactive resources. 1.5 Coordination of information exchange to support reliability assessments. 1.6 Authority to act to prevent and mitigate system conditions which could cause Adverse Reliability Impacts to other Reliability Coordinator Areas. 1.7 Weekly conference calls Authority to act to prevent and mitigate system conditions which could cause Adverse Reliability Impacts to other Reliability Coordinator Areas.
Notes: Revise R1 as shown and delete the footnote.	
IRO-014-1 R2. Each Reliability Coordinator's Operating Procedure, Process, or Plan that requires one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) shall be: R2.1. Agreed to by all the Reliability Coordinators required to take the indicated action(s). R2.2. Distributed to all Reliability Coordinators that are required to take the indicated action(s).	IRO-014-2 R2. Each Reliability Coordinator shall maintain its Operating Procedure, Operating Process, or Operating Plan identified in Requirement R1 as follows: <i>[Violation Risk Factor: Lower]</i> <i>[Time Horizon: Same Day Operations Planning and Long-term Planning]</i> 2.1 Review and update annually with no more that 15 months between reviews. <i>[Violation Risk Factor: Lower]</i> 2.2 Obtain written agreement from all of the Reliability Coordinators required to take the indicated action(s) for each update. <i>[Violation Risk Factor: Lower]</i>

Already Approved Standard	Proposed Replacement Requirement(s)
	2.3 Distribute to all Reliability Coordinators that are required to take the indicated action(s) within 30 days of an update.
Notes: The RC SDT added a Time Horizon to the requirement and eliminated the VRFs that were applied to the subrequirements.	
IRO-014-1 R3. A Reliability Coordinator's Operating Procedures, Processes, or Plans developed to support a Reliability Coordinator-to-Reliability Coordinator Operating Procedure, Process, or Plan shall include: R3.1. A reference to the associated Reliability Coordinator-to-Reliability Coordinator Operating Procedure, Process, or Plan. R3.2. The agreed-upon actions from the associated Reliability Coordinator-to-Reliability Coordinator Operating Procedure, Process, or Plan.	None. Retire the requirement
Notes: This requirement is administrative in nature describing the contents of the plans and should not be in a standard. The RC SDT proposes retiring R3 and its subrequirements and recommends converting these good utility practices into a guideline document for use in developing the operating procedures, processes or plans.	
IRO-014-1 R4. Each of the Operating Procedures, Processes, and Plans addressed in Reliability Standard IRO-014 Requirement 1 and Requirement 3 shall: R4.1. Include version control number or date. R4.2. Include a distribution list. R4.3. Be reviewed, at least once every three years, and updated if needed	None. Retire the requirement.
Notes: This requirement is administrative in nature describing the contents of the plans and should not be in a standard. The RC SDT proposes	

Already Approved Standard	Proposed Replacement Requirement(s)
retiring R4 and its subrequirements and recommends converting these good utility practices into a guideline document for use in developing the operating procedures, processes or plans.	
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-015-1 R1. The Reliability Coordinator shall follow its Operating Procedures, Processes, or Plans for making notifications and exchanging reliability-related information with other Reliability Coordinators. <i>[Violation Risk Factor: Medium]</i> R1.1 The Reliability Coordinator shall make notifications to other Reliability Coordinators of conditions in its Reliability Coordinator Area that may impact other Reliability Coordinator Areas. <i>[Violation Risk Factor: Medium]</i> R2. The Reliability Coordinator shall participate in agreed upon conference calls and other communication forums with adjacent Reliability Coordinators. <i>[Violation Risk Factor: Lower]</i> R2.1 The frequency of these conference calls shall be agreed upon by all involved Reliability Coordinators and shall be at least weekly. <i>[Violation Risk Factor: Lower]</i> R3. The Reliability Coordinator shall provide reliability-related information as requested by other Reliability Coordinators. <i>[Violation Risk Factor: Medium]</i>	IRO-014-2 R3. Each Reliability Coordinator shall make notifications and exchange reliability-related information with other Reliability Coordinators in accordance with the Operating Procedures, Operating Processes, or Operating Plans identified in Requirement R1. <i>[Violation Risk Factor: Medium][Time Horizon: Real-time Operations and Operations Planning]</i> R4. Each Reliability Coordinator shall participate in agreed upon conference calls, at least weekly (per Requirement 1, Part 1.7) with other Reliability Coordinators within the same Interconnection. <i>[Violation Risk Factor: Lower] [Time Horizon: Real-time Operations]</i>
Notes: The RC SDT recommends retiring Standard IRO-015 and moving Requirements R1 and R2 to IRO-014-2 and revising as shown. The RC SDT proposes retiring R3 (as shown in the left column) as it is redundant with proposed R5 above. Reliability Coordinators already have several requirements aimed at providing data or information to other Reliability Coordinators in support of Reliability Coordinator responsibilities. For example, Reliability Coordinators provide reliability-related information to other Reliability Coordinators as part of IRO-010-1, R3 – they share information as they try to confirm the existence of operating issues as part of IRO-014-2 R5, etc.	
Already Approved Standard	Proposed Replacement Requirement(s)

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-016-1 R1. The Reliability Coordinator that identifies a potential, expected, or actual problem that requires the actions of one or more other Reliability Coordinators shall contact the other Reliability Coordinator(s) to confirm that there is a problem and then discuss options and decide upon a solution to prevent or resolve the identified problem. <i>[Violation Risk Factor: Medium]</i> R1.1 If the involved Reliability Coordinators agree on the problem and the actions to take to prevent or mitigate the system condition, each involved Reliability Coordinator shall implement the agreed-upon solution, and notify the involved Reliability Coordinators of the action(s) taken. <i>[Violation Risk Factor: Medium]</i> R1.2 If the involved Reliability Coordinators cannot agree on the problem(s) each Reliability Coordinator shall re-evaluate the causes of the disagreement (bad data, status, study results, tools, etc.). <i>[Violation Risk Factor: Medium]</i> R1.2.1 If time permits, this re-evaluation shall be done before taking corrective actions. <i>[Violation Risk Factor: Medium]</i> R1.2.2 If time does not permit, then each Reliability Coordinator shall operate as though the problem(s) exist(s) until the conflicting system status is resolved. <i>[Violation Risk Factor: Medium]</i> R1.3 If the involved Reliability Coordinators cannot agree on the solution, the more conservative solution shall be implemented. <i>[Violation Risk Factor: Medium]</i>	IRO-014-2 R5. Each Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall notify all other Reliability Coordinators ~~that are involved~~. <i>[Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i> R6. During each instance where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact each impacted Reliability Coordinator shall operate as though the problem exists. <i>[Violation Risk Factor: High [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i> R7. During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact, the Reliability Coordinator that identified the Adverse Reliability Impact shall develop an action plan to resolve the Adverse Reliability Impact. <i>[Violation Risk Factor: High][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i> R8. During those instances where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact , each Reliability Coordinator shall implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact unless such actions would violate safety, equipment, regulatory or statutory requirements. <i>[Violation Risk Factor: High][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]</i>

Already Approved Standard	Proposed Replacement Requirement(s)
Notes: IRO-014-2 R5 and R6 are revised versions of IRO-016-1, R1 and its subrequirements which were moved to this standard. The RC SDT removed the wording relating to the “most conservative solution” because it can not be measured. We are proposing to use the mitigation plan of the RC who is experiencing the issue in cases where an agreed to mitigation plan can not be developed. Note that stakeholders proposed revisions to these requirements, and the RC SDT subdivided the requirements to add more clarity.	
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-016-1 R2. The Reliability Coordinator shall document (via operator logs or other data sources) its actions taken for either the event or for the disagreement on the problem(s) or for both.	IRO-014-2 None. Retire the requirement as it is a measure of Requirement R1.

VRFs and VSLs for IRO-014-2

R#	VRF	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	Medium	The Reliability Coordinator has Operating Procedures, Operating Processes, or Operating Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address one of the topical areas identified in Parts 1.1 through 1.7.	The Reliability Coordinator has Operating Procedures, Operating Processes, or Operating Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address two of the topical areas identified in Parts 1.1 through 1.7.	The Reliability Coordinator has Operating Procedures, Operating Processes, or Operating Plans in place for activities that require IRO-014-2 notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address three of the topical areas identified in Parts 1.1 through 1.7.	The Reliability Coordinator failed to have Operating Procedures, Operating Processes, or Operating Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability to address three or more of the topical areas identified in Parts 1.1 through 1.7.
R2	Lower	N/A	The Reliability Coordinator Operating Procedures, Operating Processes, or Operating Plans identified in R1 but failed to distribute these to all Reliability Coordinators that are required to take action.	The Reliability Coordinator has Operating Procedures, Operating Processes, or Operating Plans identified in R1 but failed to obtain agreement from all Reliability Coordinators that are required to take action. OR Failed to review and update the Operating Procedures, Operating Processes, and Operating Plans identified in R1 annually.	The Reliability Coordinator has Operating Procedures, Operating Processes, or Operating Plans identified in R1 but failed to review and update annually and obtain written agreement from all Reliability Coordinators that are required to take action and failed to distribute these to all Reliability Coordinators that are required to take action.
R3	Medium	N/A	N/A	The Reliability Coordinator failed to make notifications OR exchange reliability-related information with impacted Reliability Coordinators.	The Reliability Coordinator failed to make notifications AND exchange reliability-related information with impacted Reliability Coordinators.

VRFs and VSLs for IRO-014-2

R#	VRF	Lower VSL	Moderate VSL	High VSL	Severe VSL
R4	Lower	N/A	N/A	N/A	The Reliability Coordinator failed to participate in an agreed upon (at least weekly) conference call with impacted Reliability Coordinators within the same Interconnection.
R5	Medium	N/A	The Reliability Coordinator failed to notify one, but not all, of the impacted Reliability Coordinators upon identification of an Adverse Reliability Impact.	N/A	The Reliability Coordinator failed to notify more than one impacted Reliability Coordinators upon identification of an Adverse Reliability Impact. OR The Reliability Coordinator failed to notify the impacted Reliability Coordinator (when there is only one impacted Reliability Coordinator) upon identification of an Adverse Reliability Impact.
R6	High	N/A	N/A	N/A	The Reliability Coordinator failed to operate under the assumption that the Adverse Reliability Impact existed during an instance where Reliability Coordinators disagree on the existence of an Adverse Reliability Impact.
R7	High	N/A	N/A	N/A	The Reliability Coordinator that identified the Adverse Reliability Impact failed to develop an action plan to resolve the Adverse Reliability Impact during an

VRFs and VSLs for IRO-014-2

R#	VRF	Lower VSL	Moderate VSL	High VSL	Severe VSL
					instance where Reliability Coordinators disagreed on the existence of an Adverse Reliability Impact.
R8	High	N/A	N/A	N/A	The Reliability Coordinator failed to implement the action plan developed by the Reliability Coordinator that identified the Adverse Reliability Impact during an instance where Reliability Coordinators disagreed on the existence of an Adverse Reliability Impact.

A. Introduction

1. **Title:** **Reliability Coordination — Responsibilities and Authorities**
2. **Number:** IRO-001-2
3. **Purpose:** Reliability Coordinators must have the authority, plans, and agreements in place to immediately direct reliability entities within their Reliability Coordinator Areas to re-dispatch generation, reconfigure transmission, or reduce load to mitigate critical conditions to return the system to a reliable state. If a Reliability Coordinator delegates tasks to others, the Reliability Coordinator retains its responsibilities for complying with NERC and regional standards. Standards of conduct are necessary to ensure the Reliability Coordinator does not act in a manner that favors one market participant over another.
4. **Applicability**
 - 4.1. Reliability Coordinators.
 - 4.2. Regional Reliability Organizations.
 - 4.3. Transmission Operator.
 - 4.4. Balancing Authorities.
 - 4.5. Generator Operators.
 - 4.6. Transmission Service Providers.
 - 4.7. Load-Serving Entities.
 - 4.8. Purchasing-Selling Entities.
5. **Effective Date:**

B. Requirements

- R1. Each Regional Reliability Organization, subregion, or interregional coordinating group shall establish one or more Reliability Coordinators to continuously assess transmission reliability and coordinate emergency operations among the operating entities within the region and across the regional boundaries.
- R2. The Reliability Coordinator shall comply with a regional reliability plan approved by the NERC Operating Committee.
- R3. The Reliability Coordinator shall have clear decision-making authority to act and to direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities within its Reliability Coordinator Area to preserve the integrity and reliability of the Bulk Electric System. These actions shall be taken without delay, but no longer than 30 minutes.
- R4. Reliability Coordinators that delegate tasks to other entities shall have formal operating agreements with each entity to which tasks are delegated. The Reliability Coordinator shall verify that all delegated tasks are understood, communicated, and addressed within its Reliability Coordinator Area. All responsibilities for complying with NERC and regional standards applicable to Reliability Coordinators shall remain with the Reliability Coordinator.
- R5. The Reliability Coordinator shall list within its reliability plan all entities to which the Reliability Coordinator has delegated required tasks.
- R6. The Reliability Coordinator shall verify that all delegated tasks are carried out by NERC-certified Reliability Coordinator operating personnel.

- R7.** Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities shall comply with Reliability Coordinator directives unless such actions would violate safety, equipment, or regulatory or statutory requirements. Under these circumstances, the Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, or Purchasing-Selling Entity shall immediately inform the Reliability Coordinator of the inability to perform the directive so that the Reliability Coordinator may implement alternate remedial actions.
- R8.** The Reliability Coordinator shall act in the interests of reliability for the overall Reliability Coordinator Area and the Interconnection before the interests of any other entity.

C. Measures

- M1.** Each Regional Reliability Organization shall have, and provide upon request, evidence that could include, but is not limited to signed agreements or other equivalent evidence that will be used to confirm that it established one or more Reliability Coordinators to continuously assess transmission reliability and coordinate emergency operations among the operating entities within the region and across the regional boundaries as described in Requirement 1.
- M2.** Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, job descriptions, signed agreements, an authority letter signed by an officer of the company, or other equivalent evidence that will be used to confirm that the Reliability Coordinator has the authority to act as described in Requirement 3.
- M3.** The Reliability Coordinator shall have and provide upon request current formal operating agreements with entities that have been delegated any Reliability Coordinator tasks (Requirement 4 Part 1).
- M4.** The Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, job descriptions, signed agreements, records of training sessions, monitoring procedures or other equivalent evidence that will be used to confirm that all delegated tasks are understood, communicated, and addressed within its Reliability Coordinator Area (Requirement 4 Part 2 and Requirement 5).
- M5.** The Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, records that show each operating person assigned to perform a Reliability Coordinator delegated task has a NERC Reliability Coordinator certification credential, or equivalent evidence confirming that delegated tasks were carried out by NERC certified Reliability Coordinator operating personnel, as specified in Requirement 6.
- M6.** Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, or Purchasing-Selling Entity shall have and provide upon request evidence that could include, but is not limited to, operator logs, voice recordings or transcripts of voice recordings, or other equivalent evidence that will be used to confirm that it did comply with the Reliability Coordinator's directives, or if for safety, equipment, regulatory or statutory requirements it could not comply, it informed the Reliability Coordinator immediately. (Requirement 7)

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Monitoring Responsibility

NERC shall be responsible for compliance monitoring of the Regional Reliability Organization.

Regional Reliability Organizations shall be responsible for compliance monitoring of the Reliability Coordinators, Transmission Operators, Generator Operators, Distribution Providers, and Load Serving Entities.

1.2. Compliance Monitoring Period and Reset Time Frame

One or more of the following methods will be used to assess compliance:

- Self-certification (Conducted annually with submission according to schedule.)
- Spot Check Audits (Conducted anytime with up to 30 days notice given to prepare.)
- Periodic Audit (Conducted once every three years according to schedule.)
- Triggered Investigations (Notification of an investigation must be made within 60 days of an event or complaint of noncompliance. The entity will have up to 30 days to prepare for the investigation. An entity may request an extension of the preparation period and the extension will be considered by the Compliance Monitor on a case-by-case basis.)

The Performance-Reset Period shall be 12 months from the last finding of non-compliance.

1.3. Data Retention

Each Regional Reliability Organization shall have its current, in-force document for Measure 1.

Each Reliability Coordinator shall have its current, in-force documents or the latest copy of a record as evidence of compliance to Measures 2 through 6.

Each Transmission Operator, Generator Operator, Transmission Service Provider, and Load Serving Entity shall keep 90 days of historical data (evidence) for Measure 6.

If an entity is found non-compliant the entity shall keep information related to the noncompliance until found compliant or for two years plus the current year, whichever is longer.

Evidence used as part of a triggered investigation shall be retained by the entity being investigated for one year from the date that the investigation is closed, as determined by the Compliance Monitor,

The Compliance Monitor shall keep the last periodic audit report and all requested and submitted subsequent compliance records.

1.4. Additional Compliance Information

None.

2. Violation Severity Levels:

R #	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1.	N/A	N/A	N/A	N/A
R2.	N/A	N/A	N/A	The Reliability Coordinator did not comply with the regional reliability plan approved by the NERC Operating Committee.
R3.	N/A	N/A	The Reliability Coordinator cannot demonstrate that it has clear authority to act or direct actions to preserve transmission security and reliability of the Bulk Electric System.	The Reliability Coordinator failed to take or direct action to preserve the reliability and security of the Bulk Electric System within 30 minutes of identifying those actions.
R4.		The Reliability Coordinator has delegated tasks to other entities and had formal operating agreements with each of these entities but could not verify that delegated tasks were understood, communicated, and addressed within its Reliability Coordinator Area.		The Reliability Coordinator has delegated tasks to other entities but failed to have a formal operating agreement delegating tasks to each of these entities.
R5.	5% or less of the delegate entities are not identified in the reliability plan.	More than 5% up to (and including) 10% of the delegate entities are not identified in the reliability plan.	More than 10% up to (and including) 15% of the delegate entities are not identified in the reliability plan.	There is no reliability plan OR More than 15% of the delegate entities are not identified in the reliability plan.
R6.	There is no reliability plan OR More than 15% of the delegate	The Reliability Coordinator failed to demonstrate that more than 5% up to (and including) 10% of its delegated tasks were being	The Reliability Coordinator failed to demonstrate that more than 10% up to (and including) 15% of its delegated tasks were being	The Reliability Coordinator failed to demonstrate that more than 15% of its delegated tasks were being performed by NERC

R #	Lower VSL	Moderate VSL	High VSL	Severe VSL
	entities are not identified in the reliability plan.	performed by NERC certified Reliability Coordinator operating personnel	performed by NERC certified Reliability Coordinator Operating personnel.	certified Reliability Coordinator operating personnel.
R8.	N/A	The responsible entity could not comply with a directive due to qualified reasons (violation of safety, equipment or regulatory or statutory requirements) and did not immediately inform the Reliability Coordinator.	N/A	The responsible entity did not follow the Reliability Coordinator's directive.
R9.	N/A	N/A	N/A	The Reliability Coordinator did not act in the interests of reliability for the overall Reliability Coordinator Area and the Interconnection before the interests of one or more other entities.

E. Regional Differences

None identified.

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
1	November 19, 2006	Changes “Distribution Provider” to “Transmission Service Provider”	Errata
1	May 19, 2011	Replaced Levels of Noncompliance with FERC-approved VSLs	VSL Order
2	To be determined	Retired Requirement R7 to eliminate redundancy with IRO-014-2, Requirement R1	Project 2006-06

A. Introduction

1. **Title:** **Reliability Coordination — Responsibilities and Authorities**
2. **Number:** IRO-001-~~1.1~~2
3. **Purpose:** Reliability Coordinators must have the authority, plans, and agreements in place to immediately direct reliability entities within their Reliability Coordinator Areas to re-dispatch generation, reconfigure transmission, or reduce load to mitigate critical conditions to return the system to a reliable state. If a Reliability Coordinator delegates tasks to others, the Reliability Coordinator retains its responsibilities for complying with NERC and regional standards. Standards of conduct are necessary to ensure the Reliability Coordinator does not act in a manner that favors one market participant over another.
4. **Applicability**
 - 4.1. Reliability Coordinators.
 - 4.2. Regional Reliability Organizations.
 - 4.3. Transmission Operator.
 - 4.4. Balancing Authorities.
 - 4.5. Generator Operators.
 - 4.6. Transmission Service Providers.
 - 4.7. Load-Serving Entities.
 - 4.8. Purchasing-Selling Entities.
5. **Effective Date:** ~~May 13, 2009~~

B. Requirements

- R1. Each Regional Reliability Organization, subregion, or interregional coordinating group shall establish one or more Reliability Coordinators to continuously assess transmission reliability and coordinate emergency operations among the operating entities within the region and across the regional boundaries.
- R2. The Reliability Coordinator shall comply with a regional reliability plan approved by the NERC Operating Committee.
- R3. The Reliability Coordinator shall have clear decision-making authority to act and to direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities within its Reliability Coordinator Area to preserve the integrity and reliability of the Bulk Electric System. These actions shall be taken without delay, but no longer than 30 minutes.
- R4. Reliability Coordinators that delegate tasks to other entities shall have formal operating agreements with each entity to which tasks are delegated. The Reliability Coordinator shall verify that all delegated tasks are understood, communicated, and addressed within its Reliability Coordinator Area. All responsibilities for complying with NERC and regional standards applicable to Reliability Coordinators shall remain with the Reliability Coordinator.
- R5. The Reliability Coordinator shall list within its reliability plan all entities to which the Reliability Coordinator has delegated required tasks.

R6. The Reliability Coordinator shall verify that all delegated tasks are carried out by NERC-certified Reliability Coordinator operating personnel.

~~**R7.** The Reliability Coordinator shall have clear, comprehensive coordination agreements with adjacent Reliability Coordinators to ensure that System Operating Limit or Interconnection Reliability Operating Limit violation mitigation requiring actions in adjacent Reliability Coordinator Areas are coordinated.~~

~~**R8-R7.**~~ Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities shall comply with Reliability Coordinator directives unless such actions would violate safety, equipment, or regulatory or statutory requirements. Under these circumstances, the Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, or Purchasing-Selling Entity shall immediately inform the Reliability Coordinator of the inability to perform the directive so that the Reliability Coordinator may implement alternate remedial actions.

~~**R9-R8.**~~ The Reliability Coordinator shall act in the interests of reliability for the overall Reliability Coordinator Area and the Interconnection before the interests of any other entity.

C. Measures

M1. Each Regional Reliability Organization shall have, and provide upon request, evidence that could include, but is not limited to signed agreements or other equivalent evidence that will be used to confirm that it established one or more Reliability Coordinators to continuously assess transmission reliability and coordinate emergency operations among the operating entities within the region and across the regional boundaries as described in Requirement 1.

M2. Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, job descriptions, signed agreements, an authority letter signed by an officer of the company, or other equivalent evidence that will be used to confirm that the Reliability Coordinator has the authority to act as described in Requirement 3.

M3. The Reliability Coordinator shall have and provide upon request current formal operating agreements with entities that have been delegated any Reliability Coordinator tasks (Requirement 4 Part 1).

M4. The Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, job descriptions, signed agreements, records of training sessions, monitoring procedures or other equivalent evidence that will be used to confirm that all delegated tasks are understood, communicated, and addressed within its Reliability Coordinator Area (Requirement 4 Part 2 and Requirement 5).

M5. The Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, records that show each operating person assigned to perform a Reliability Coordinator delegated task has a NERC Reliability Coordinator certification credential, or equivalent evidence confirming that delegated tasks were carried out by NERC certified Reliability Coordinator operating personnel, as specified in Requirement 6.

~~**M6.** The Reliability Coordinator shall have and provide upon request as evidence, signed agreements with adjacent Reliability Coordinators that will be used to confirm that it will coordinate corrective actions in the event SOL and IROL mitigation actions within neighboring areas must be taken. (Requirement 7)~~

~~**M7-M6.**~~ Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, or Purchasing-Selling Entity shall have and provide upon request evidence that could include, but is not limited to, operator logs, voice recordings or transcripts of voice recordings, or other equivalent evidence that will be used to confirm that it did comply with the Reliability Coordinator's directives, or if for safety, equipment,

regulatory or statutory requirements it could not comply, it informed the Reliability Coordinator immediately. (Requirement ~~87~~)

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Monitoring Responsibility

NERC shall be responsible for compliance monitoring of the Regional Reliability Organization.

Regional Reliability Organizations shall be responsible for compliance monitoring of the Reliability Coordinators, Transmission Operators, Generator Operators, Distribution Providers, and Load Serving Entities.

1.2. Compliance Monitoring Period and Reset Time Frame

One or more of the following methods will be used to assess compliance:

- Self-certification (Conducted annually with submission according to schedule.)
- Spot Check Audits (Conducted anytime with up to 30 days notice given to prepare.)
- Periodic Audit (Conducted once every three years according to schedule.)
- Triggered Investigations (Notification of an investigation must be made within 60 days of an event or complaint of noncompliance. The entity will have up to 30 days to prepare for the investigation. An entity may request an extension of the preparation period and the extension will be considered by the Compliance Monitor on a case-by-case basis.)

The Performance-Reset Period shall be 12 months from the last finding of non-compliance.

1.3. Data Retention

Each Regional Reliability Organization shall have its current, in-force document for Measure 1.

Each Reliability Coordinator shall have its current, in-force documents or the latest copy of a record as evidence of compliance to Measures 2 through 6.

Each Transmission Operator, Generator Operator, ~~-~~Transmission Service Provider, and Load Serving Entity shall keep 90 days of historical data (evidence) for Measure ~~76~~.

If an entity is found non-compliant the entity shall keep information related to the noncompliance until found compliant or for two years plus the current year, whichever is longer.

Evidence used as part of a triggered investigation shall be retained by the entity being investigated for one year from the date that the investigation is closed, as determined by the Compliance Monitor,

The Compliance Monitor shall keep the last periodic audit report and all requested and submitted subsequent compliance records.

1.4. Additional Compliance Information

None.

2. Violation Severity Levels:

R #	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1.	N/A	N/A	N/A	N/A
R2.	N/A	N/A	N/A	The Reliability Coordinator did not comply with the regional reliability plan approved by the NERC Operating Committee.
R3.	N/A	N/A	The Reliability Coordinator cannot demonstrate that it has clear authority to act or direct actions to preserve transmission security and reliability of the Bulk Electric System.	The Reliability Coordinator failed to take or direct action to preserve the reliability and security of the Bulk Electric System within 30 minutes of identifying those actions.
R4.		The Reliability Coordinator has delegated tasks to other entities and had formal operating agreements with each of these entities but could not verify that delegated tasks were understood, communicated, and addressed within its Reliability Coordinator Area.		The Reliability Coordinator has delegated tasks to other entities but failed to have a formal operating agreement delegating tasks to each of these entities.
R5.	5% or less of the delegate entities are not identified in the reliability plan.	More than 5% up to (and including) 10% of the delegate entities are not identified in the reliability plan.	More than 10% up to (and including) 15% of the delegate entities are not identified in the reliability plan.	There is no reliability plan OR More than 15% of the delegate entities are not identified in the reliability plan.
R6.	There is no reliability plan OR More than 15% of the delegate	The Reliability Coordinator failed to demonstrate that more than 5% up to (and including) 10% of its delegated tasks were being	The Reliability Coordinator failed to demonstrate that more than 10% up to (and including) 15% of its delegated tasks were being	The Reliability Coordinator failed to demonstrate that more than 15% of its delegated tasks were being performed by NERC

R #	Lower VSL	Moderate VSL	High VSL	Severe VSL
	entities are not identified in the reliability plan.	performed by NERC certified Reliability Coordinator operating personnel	performed by NERC certified Reliability Coordinator Operating personnel.	certified Reliability Coordinator operating personnel.
~~R7.~~	~~The Reliability Coordinator has demonstrated the existence of coordination agreements with adjacent Reliability Coordinators but the agreements are not clear or comprehensive.~~	~~N/A~~	~~The Reliability Coordinator has demonstrated the existence of coordination agreements with adjacent Reliability Coordinators but the agreements do not coordinate actions required in the adjacent Reliability Coordinator Area to mitigate SOL and IROL violations in its own Reliability Coordinator area.~~	~~The Reliability Coordinator has failed to demonstrate the existence of any coordination agreements with adjacent Reliability Coordinators.~~
R8.	N/A	The responsible entity could not comply with a directive due to qualified reasons (violation of safety, equipment or regulatory or statutory requirements) and did not immediately inform the Reliability Coordinator.	N/A	The responsible entity did not follow the Reliability Coordinator's directive.
R9.	N/A	N/A	N/A	The Reliability Coordinator did not act in the interests of reliability for the overall Reliability Coordinator Area and the Interconnection before the interests of one or more other entities.

E. Regional Differences

None identified.

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
1	November 19, 2006	Changes “Distribution Provider” to “Transmission Service Provider”	Errata
1	May 19, 2011	Replaced Levels of Noncompliance with FERC-approved VSLs	VSL Order
<u>2</u>	<u>To be determined</u>	<u>Retired Requirement R7 to eliminate redundancy with IRO-014-2, Requirement R1</u>	<u>Project 2006-06</u>



NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

Standards Announcement

Project 2006-06 – Reliability Coordination
Recirculation Ballots and Non-binding Polls
Now Open for Three Standards
July 15 – 25, 2011

Now available at: <https://standards.nerc.net/Ballots.aspx>

Recirculation ballots of three standards and their implementation plans, and non-binding polls for the associated VRFs and VSL for each standard, are open through **8:00 p.m. Eastern on Monday, July 25, 2011**. Each standard is being balloted separately, with a separate non-binding poll of the VRFs and VSLs for each standard. The three standards are:

- IRO-002-3 – Reliability Coordination – Analysis Tools
- IRO-005-4 – Reliability Coordination – Current Day Operations
- IRO-014-2 – Coordination Among Reliability Coordinators

Note that the implementation plan for IRO-014-2 includes a conforming change (removal of Requirement R7) to IRO-001.1 - Reliability Coordination — Responsibilities and Authorities.

The drafting team has considered all comments received during an initial ballot and formal comment period that ended on March 7, 2011. The team received few comments or suggested modifications for the three standards and has made minor, non-substantive changes to each standard and its associated implementation plan.

The Standards Committee authorized the team to subdivide the set of standards and conduct individual recirculation ballots with those standards without substantive changes. Three other standards that are part of this project, COM-001-2, COM-002-3, IRO-001-3, have also been revised but because the revisions were more substantive, those standards have been submitted for quality review. Once the drafting team has responded to the feedback from the quality review, the standards will be posted for a parallel 30-day formal comment period and successive ballot.

Note: A version of IRO-001-2 showing only the revision proposed in the IRO-014-2 Implementation Plan (removal of IRO-001-1 R7) has been posted for information. If IRO-014-2 is approved, then the posted version of IRO-001-2 will be submitted to the Board of Trustees for adoption and subsequently filed for regulatory approval. Additional revisions to IRO-001 to respond to comments the drafting team received from the last posting would become IRO-001-3.

Instructions

In the recirculation ballot, votes are counted by exception. Only members of the ballot pool may cast a ballot; all ballot pool members may change their prior votes. A ballot pool member who failed to cast a ballot during

the last ballot window may cast a ballot in the recirculation ballot window. If a ballot pool member does not participate in the recirculation ballot, that member's last vote cast in the successive ballot that ended on May 31, 2011 will be carried over.

Members of the ballot pool associated with this project may log in and submit their votes (one vote and one non-binding opinion per standard) in the ballots and non-binding polls for each of the standards from the following page: <https://standards.nerc.net/CurrentBallots.aspx>

Documents associated with this project, including clean and redline copies of each standard and implementation plan that is being balloted, have been posted on the project Web page at:
http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html

Background

The Reliability Coordination Standards Drafting Team was tasked with 1) ensuring that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique, and enforceable; 2) ensuring that this set of requirements is sufficient to maintain reliability of the Bulk Electric System; and 3) revising the group of standards based on FERC Order 693.

During the course of this project, the Reliability Coordination Standards Drafting Team incorporated changes due to the work of the IROL Standards Drafting Team. Two standards from the original Standards Authorization Request (PER-004 and PRC-001) were moved to other projects due to scope overlap. In addition, the scope of Project 2006-06 was expanded to incorporate directives from FERC Order 693 associated with standards IRO-003-2.

For more information review the project Web page:

http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html

Next Steps

Ballot results will be announced when the recirculation ballots close. If the standards are approved by a two-thirds majority, each standard that is approved by its ballot pool will be submitted for adoption by the NERC Board of Trustees prior to filing with regulatory authorities for approval.

Standards Process

The [Standard Processes Manual](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate.

*For more information or assistance, please contact Monica Benson,
Standards Process Administrator, at monica.benson@nerc.net or at 404-446-2560.*

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NORTH AMERICAN ELECTRIC
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Standards Announcement

Project 2006-06 Reliability Coordination Recirculation Ballot Results

Now available at: <https://standards.nerc.net/Ballots.aspx>

Ballot Results for Three Reliability Coordination Standards

Recirculation ballots on revisions to IRO-002-3 – Reliability Coordination – Analysis Tools; IRO-005-4 – Reliability Coordination – Current Day Operations; and IRO-014-2 – Coordination Among Reliability Coordinators concluded on Monday, July 25, 2011. Non-binding polls of the VRFs and VSLs associated with each standard concluded on Tuesday, July 26. All three standards were approved by the associated ballot pool.

Voting statistics for each standard are listed in the table below, and the [Ballot Results](#) Web page provides a link to the detailed results.

Standard	Ballot Results	Non-binding Poll Results
IRO-002-3 – Reliability Coordination – Analysis Tools	Quorum: 94.13% Approval: 76.99 %	75.37% of those who registered to participate provided an opinion or abstention; 93% of those who provided an opinion indicated support for the VRFs and VSLs
IRO-005-4 – Reliability Coordination – Current Day Operations	Quorum: 94.13% Approval: 75.17 %	75.66% of those who registered to participate provided an opinion or abstention; 93% of those who provided an opinion indicated support for the VRFs and VSLs
IRO-014-2 – Coordination Among Reliability Coordinators	Quorum: 94.13% Approval: 76.27 %	75.37% of those who registered to participate provided an opinion or abstention; 89% of those who provided an opinion indicated support for the VRFs and VSLs

Next Steps

The three standards will be presented to the NERC Board of Trustees for adoption and filed with regulatory authorities.

Background

The Reliability Coordination Standards Drafting Team was tasked with 1) ensuring that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique, and enforceable; 2) ensuring that this set of requirements is sufficient to maintain reliability of the Bulk Electric System; and 3) revising the group of standards based on FERC Order 693.

During the course of this project, the Reliability Coordination Standards Drafting Team incorporated changes due to the work of the IROL Standards Drafting Team. Two standards from the original Standards Authorization Request (PER-004 and PRC-001) were moved to other projects due to scope overlap. In addition, the scope of Project 2006-06 was expanded to incorporate directives from FERC Order 693 associated with standards IRO-003-2.

Project 2006-06 also includes three other standards, (IRO-001, COM-001 and COM-002) which are still under development.

For more information review the project Web page:

http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html

Standards Development Process

The [Standard Processes Manual](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate. For more information or assistance, please contact Monica Benson at monica.benson@nerc.net.

Some stakeholders have asked for clarification on the process applied when a ballot pool member joins a ballot pool but is replaced (by his or her company) with another ballot pool member before the balloting has been finalized. This is rare, but does occur when, for instance, the original ballot pool member retires before completion of the balloting for a project. If an entity has a member registered to participate in the ballot pool and that person is replaced in the registered ballot body before the balloting has been completed we do allow the replacement balloter to cast a vote, but the vote is entered manually. The permanent record can only retain one name, and the name that is retained is the name of the person that originally joined the ballot pool.

*For more information or assistance, please contact Monica Benson,
Standards Process Administrator, at monica.benson@nerc.net or at 404-446-2560.*

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Ballot Results	
Ballot Name:	Project 2006-06 Recirculation Ballot IRO-002 July 2011_in
Ballot Period:	7/15/2011 - 7/25/2011
Ballot Type:	Initial
Total # Votes:	321
Total Ballot Pool:	341
Quorum:	94.13 % The Quorum has been reached
Weighted Segment Vote:	76.99 %
Ballot Results:	The standard has passed.

Summary of Ballot Results								
Segment	Ballot Pool	Segment Weight	Affirmative		Negative		Abstain	No Vote
			# Votes	Fraction	# Votes	Fraction	# Votes	
1 - Segment 1.	88	1	51	0.729	19	0.271	11	7
2 - Segment 2.	11	0.9	8	0.8	1	0.1	1	1
3 - Segment 3.	85	1	47	0.635	27	0.365	6	5
4 - Segment 4.	24	1	14	0.737	5	0.263	5	0
5 - Segment 5.	69	1	43	0.782	12	0.218	11	3
6 - Segment 6.	44	1	28	0.737	10	0.263	5	1
7 - Segment 7.	0	0	0	0	0	0	0	0
8 - Segment 8.	8	0.4	4	0.4	0	0	3	1
9 - Segment 9.	4	0.2	2	0.2	0	0	0	2
10 - Segment 10.	8	0.8	6	0.6	2	0.2	0	0
Totals	341	7.3	203	5.62	76	1.68	42	20

Individual Ballot Pool Results				
Segment	Organization	Member	Ballot	Comments
1	Allegheny Power	Rodney Phillips	Affirmative	
1	Ameren Services	Kirit S. Shah	Negative	
1	American Electric Power	Paul B. Johnson	Abstain	
1	American Transmission Company, LLC	Andrew Z Pusztai	Affirmative	
1	Arizona Public Service Co.	Robert Smith	Affirmative	
1	Avista Corp.	Scott J Kinney	Affirmative	
1	Baltimore Gas & Electric Company	Gregory S Miller	Affirmative	
1	BC Hydro and Power Authority	Patricia Robertson	Affirmative	

1	Beaches Energy Services	Joseph S Stonecipher	Affirmative	
1	Bonneville Power Administration	Donald S. Watkins	Affirmative	
1	Central Maine Power Company	Kevin L Howes	Abstain	
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G Choi	Affirmative	
1	City of Vero Beach	Randall McCamish	Negative	
1	City Water, Light & Power of Springfield	Shaun Anders	Negative	
1	Clark Public Utilities	Jack Stamper	Affirmative	
1	Cleco Power LLC	Danny McDaniel		
1	Colorado Springs Utilities	Paul Morland	Affirmative	
1	Consolidated Edison Co. of New York	Christopher L de Graffenried	Affirmative	
1	Dayton Power & Light Co.	Hertzel Shamash	Affirmative	
1	Dominion Virginia Power	Michael S Crowley	Affirmative	
1	Duke Energy Carolina	Douglas E. Hils	Affirmative	
1	East Kentucky Power Coop.	George S. Carruba	Negative	
1	Empire District Electric Co.	Ralph F Meyer	Affirmative	
1	Entergy Corporation	George R. Bartlett		
1	FirstEnergy Energy Delivery	Robert Martinko	Affirmative	
1	Florida Keys Electric Cooperative Assoc.	Michael Anderson	Negative	
1	Great River Energy	Gordon Pietsch	Affirmative	
1	Hoosier Energy Rural Electric Cooperative, Inc.	Robert Solomon	Affirmative	
1	Hydro One Networks, Inc.	Ajay Garg	Affirmative	
1	Hydro-Quebec TransEnergie	Bernard Pelletier		
1	Idaho Power Company	Ronald D. Schellberg	Affirmative	
1	International Transmission Company Holdings Corp	Michael Moltane	Negative	
1	Kansas City Power & Light Co.	Michael Gammon	Negative	View
1	Keys Energy Services	Stanley T Rzad	Negative	
1	Lake Worth Utilities	Walt J Gill	Negative	
1	Lakeland Electric	Larry E Watt	Affirmative	
1	Lee County Electric Cooperative	John W Delucca	Abstain	
1	Long Island Power Authority	Robert Ganley	Negative	
1	Manitoba Hydro	Joe D Petaski	Affirmative	
1	MEAG Power	Danny Dees	Abstain	
1	MidAmerican Energy Co.	Terry Harbour	Negative	View
1	Minnkota Power Coop. Inc.	Richard Burt	Affirmative	
1	National Grid	Saurabh Saksena		
1	Nebraska Public Power District	Richard L. Koch	Abstain	
1	New Brunswick Power Transmission Corporation	Randy MacDonald	Affirmative	
1	New York Power Authority	Arnold J. Schuff	Affirmative	
1	Northeast Utilities	David Boguslawski	Affirmative	
1	Northern Indiana Public Service Co.	Kevin M Largura	Negative	
1	NorthWestern Energy	John Canavan	Abstain	
1	Oklahoma Gas and Electric Co.	Marvin E VanBebber	Abstain	
1	Omaha Public Power District	Doug Peterchuck	Affirmative	
1	Oncor Electric Delivery	Michael T. Quinn	Abstain	
1	Orlando Utilities Commission	Brad Chase	Affirmative	
1	Otter Tail Power Company	Daryl Hanson	Affirmative	
1	PacifiCorp	Colt Norrish	Affirmative	
1	PECO Energy	Ronald Schloendorn	Negative	
1	Platte River Power Authority	John C. Collins	Affirmative	
1	Portland General Electric Co.	Frank F. Afranji	Affirmative	
1	Potomac Electric Power Co.	David Thorne	Affirmative	
1	PowerSouth Energy Cooperative	Larry D Avery	Negative	
1	PPL Electric Utilities Corp.	Brenda L Truhe	Affirmative	
1	Public Service Company of New Mexico	Laurie Williams		
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Negative	
1	Public Utility District No. 1 of Okanogan County	Dale Dunckel	Abstain	
1	Puget Sound Energy, Inc.	Catherine Koch		
1	Rochester Gas and Electric Corp.	John C. Allen	Affirmative	
1	Sacramento Municipal Utility District	Tim Kelley	Affirmative	
1	Salt River Project	Robert Kondziolka	Affirmative	
1	Santee Cooper	Terry L. Blackwell	Affirmative	
1	SCE&G	Henry Delk, Jr.	Abstain	
1	Seattle City Light	Pawel Krupa	Affirmative	

1	Sierra Pacific Power Co.	Rich Salgo	Affirmative	
1	South Texas Electric Cooperative	Richard McLeon	Affirmative	
1	Southern California Edison Co.	Dana Cabbell	Affirmative	
1	Southern Company Services, Inc.	Robert Schaffeld	Affirmative	
1	Southern Illinois Power Coop.	William Hutchison	Negative	
1	Southwest Transmission Cooperative, Inc.	James Jones	Affirmative	
1	Southwestern Power Administration	Gary W Cox	Affirmative	
1	Sunflower Electric Power Corporation	Noman Lee Williams	Affirmative	View
1	Tampa Electric Co.	Beth Young	Negative	
1	Tennessee Valley Authority	Larry Akens	Affirmative	
1	Tri-State G & T Association, Inc.	Tracy Sliman	Affirmative	
1	Tucson Electric Power Co.	John Tolo		
1	United Illuminating Co.	Jonathan Appelbaum	Affirmative	
1	Westar Energy	Allen Klassen	Negative	
1	Western Area Power Administration	Brandy A Dunn	Affirmative	
1	Western Farmers Electric Coop.	Forrest Brock	Negative	
1	Xcel Energy, Inc.	Gregory L Pieper	Abstain	
2	Alberta Electric System Operator	Mark B Thompson	Affirmative	
2	BC Hydro	Venkataramakrishnan Vinnakota	Affirmative	
2	California ISO	Gregory Van Pelt	Abstain	
2	Electric Reliability Council of Texas, Inc.	Charles B Manning	Affirmative	
2	Independent Electricity System Operator	Kim Warren	Affirmative	
2	ISO New England, Inc.	Kathleen Goodman	Affirmative	
2	Midwest ISO, Inc.	Jason L. Marshall	Negative	
2	New Brunswick System Operator	Alden Briggs	Affirmative	
2	New York Independent System Operator	Gregory Campoli	Affirmative	
2	PJM Interconnection, L.L.C.	Tom Bowe	Affirmative	
2	Southwest Power Pool	Charles Yeung		
3	Alabama Power Company	Richard J. Mandes	Affirmative	
3	Allegheny Power	Bob Reeping		
3	Anaheim Public Utilities Dept.	Kelly Nguyen	Abstain	
3	APS	Steven Norris	Affirmative	
3	Atlantic City Electric Company	James V. Petrella	Affirmative	
3	BC Hydro and Power Authority	Pat G. Harrington	Affirmative	
3	Blachly-Lane Electric Co-op	Bud Tracy	Negative	
3	Bonneville Power Administration	Rebecca Berdahl	Affirmative	
3	Central Electric Cooperative, Inc. (Redmond, Oregon)	Dave Markham	Negative	
3	Central Lincoln PUD	Steve Alexanderson	Negative	
3	City of Bartow, Florida	Matt Culverhouse		
3	City of Clewiston	Lynne Mila	Affirmative	
3	City of Farmington	Linda Jacobson	Affirmative	
3	City of Garland	Ronnie C Hoeinghaus	Affirmative	
3	City of Green Cove Springs	Gregg R Griffin	Affirmative	
3	City of Leesburg	Phil Janik	Affirmative	
3	City of Redding	Bill Hughes	Affirmative	
3	Clearwater Power Co.	Dave Hagen	Negative	
3	Cleco Corporation	Michelle A Corley		
3	ComEd	Bruce Krawczyk	Negative	
3	Consolidated Edison Co. of New York	Peter T Yost	Affirmative	
3	Constellation Energy	Carolyn Ingersoll	Affirmative	
3	Consumers Energy	David A. Lapinski	Abstain	
3	Consumers Power Inc.	Roman Gillen	Negative	
3	Coos-Curry Electric Cooperative, Inc	Roger Meader	Negative	
3	Cowlitz County PUD	Russell A Noble	Abstain	
3	Delmarva Power & Light Co.	Michael R. Mayer	Affirmative	
3	Detroit Edison Company	Kent Kujala	Affirmative	
3	Dominion Resources Services	Michael F. Gildea	Affirmative	
3	Douglas Electric Cooperative	Dave Sabala	Negative	
3	Duke Energy Carolina	Henry Ernst-Jr	Affirmative	
3	East Kentucky Power Coop.	Sally Witt	Negative	
3	Entergy	Joel T Plessinger	Affirmative	
3	Fall River Rural Electric Cooperative	Bryan Case	Negative	
3	FirstEnergy Solutions	Kevin Querry	Affirmative	
3	Georgia Power Company	Anthony L Wilson	Affirmative	
3	Georgia System Operations Corporation	Scott S. Barfield-McGinnis	Affirmative	

3	Great River Energy	Sam Kokkinen	Negative	
3	Hydro One Networks, Inc.	David Kiguel	Affirmative	
3	Idaho Power Company	Shaun Jensen	Negative	
3	JEA	Garry Baker	Affirmative	
3	Kansas City Power & Light Co.	Charles Locke	Negative	View
3	Kissimmee Utility Authority	Gregory D Woessner	Negative	
3	Lakeland Electric	Mace Hunter	Affirmative	
3	Lane Electric Cooperative, Inc.	Rick Crinklaw	Negative	
3	Lincoln Electric Cooperative, Inc.	Michael Henry	Negative	
3	Lincoln Electric System	Bruce Merrill	Negative	
3	Los Angeles Department of Water & Power	Daniel D Kurowski	Affirmative	
3	Lost River Electric Cooperative	Richard Reynolds	Negative	
3	Louisville Gas and Electric Co.	Charles A. Freibert	Affirmative	
3	Manitoba Hydro	Greg C. Parent	Affirmative	
3	MidAmerican Energy Co.	Thomas C. Mielnik	Affirmative	
3	Mississippi Power	Don Horsley	Affirmative	
3	Municipal Electric Authority of Georgia	Steven M. Jackson	Affirmative	
3	Muscatine Power & Water	John S Bos	Affirmative	
3	Nebraska Public Power District	Tony Eddleman	Abstain	
3	New York Power Authority	Marilyn Brown	Affirmative	
3	Niagara Mohawk (National Grid Company)	Michael Schiavone	Affirmative	
3	Northern Indiana Public Service Co.	William SeDoris	Negative	
3	Northern Lights Inc.	Jon Shelby	Negative	
3	Okanogan County Electric Cooperative, Inc.	Ray Ellis	Negative	
3	Orange and Rockland Utilities, Inc.	David Burke	Affirmative	
3	Orlando Utilities Commission	Ballard K Mutters	Abstain	
3	PacifiCorp	John Apperson	Affirmative	
3	Platte River Power Authority	Terry L Baker	Affirmative	
3	Potomac Electric Power Co.	Robert Reuter	Affirmative	
3	Public Service Electric and Gas Co.	Jeffrey Mueller	Negative	View
3	Public Utility District No. 2 of Grant County	Greg Lange	Affirmative	
3	Raft River Rural Electric Cooperative	Heber Carpenter	Negative	
3	Sacramento Municipal Utility District	James Leigh-Kendall	Affirmative	
3	Salmon River Electric Cooperative	Ken Dizes	Negative	
3	Salt River Project	John T. Underhill	Affirmative	
3	San Diego Gas & Electric	Scott Peterson		
3	Santee Cooper	Zack Dusenbury	Affirmative	
3	Seattle City Light	Dana Wheelock	Affirmative	
3	Seminole Electric Cooperative, Inc.	James R Frauen	Affirmative	
3	Southern California Edison Co.	David Schiada	Affirmative	
3	Tacoma Public Utilities	Travis Metcalfe	Affirmative	
3	Tampa Electric Co.	Ronald L Donahey	Negative	
3	Tennessee Valley Authority	Ian S Grant	Affirmative	
3	Umatilla Electric Cooperative	Steve Eldrige	Negative	
3	West Oregon Electric Cooperative, Inc.	Marc Farmer	Negative	
3	Wisconsin Electric Power Marketing	James R Keller	Affirmative	
3	Wisconsin Public Service Corp.	Gregory J Le Grave		
3	Xcel Energy, Inc.	Michael Ibold	Abstain	
4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Affirmative	
4	American Municipal Power	Kevin Koloini	Negative	
4	Blue Ridge Power Agency	Duane S Dahlquist	Abstain	
4	Central Lincoln PUD	Shamus J Gamache	Negative	
4	City of Clewiston	Kevin McCarthy	Affirmative	
4	City of New Smyrna Beach Utilities Commission	Tim Beyrle	Negative	
4	City Utilities of Springfield, Missouri	John Allen	Affirmative	
4	Consumers Energy	David Frank Ronk	Abstain	
4	Cowlitz County PUD	Rick Syring	Abstain	
4	Florida Municipal Power Agency	Frank Gaffney	Affirmative	
4	Fort Pierce Utilities Authority	Thomas W. Richards	Negative	
4	Georgia System Operations Corporation	Guy Andrews	Abstain	
4	Illinois Municipal Electric Agency	Bob C. Thomas	Abstain	
4	Madison Gas and Electric Co.	Joseph DePoorter	Affirmative	
4	Ohio Edison Company	Douglas Hohlbaugh	Affirmative	
4	Pacific Northwest Generating Cooperative	Aleka K Scott	Negative	
4	Public Utility District No. 1 of Douglas County	Henry E. LuBean	Affirmative	
4	Public Utility District No. 1 of Snohomish	John D. Martinsen	Affirmative	

	County			
4	Sacramento Municipal Utility District	Mike Ramirez	Affirmative	
4	Seattle City Light	Hao Li	Affirmative	
4	Seminole Electric Cooperative, Inc.	Steven R Wallace	Affirmative	
4	Tacoma Public Utilities	Keith Morisette	Affirmative	
4	Tallahassee Electric	Allan Morales	Affirmative	
4	Wisconsin Energy Corp.	Anthony Jankowski	Affirmative	
5	AEP Service Corp.	Brock Odayko	Abstain	
5	AES Corporation	Leo Bernier	Affirmative	
5	Amerenue	Sam Dwyer	Negative	
5	Arizona Public Service Co.	Edward Cambridge	Affirmative	
5	Avista Corp.	Edward F. Groce	Affirmative	
5	BC Hydro and Power Authority	Clement Ma	Affirmative	
5	Bonneville Power Administration	Francis J. Halpin	Affirmative	
5	City of Grand Island	Jeff Mead	Negative	
5	City of Redding	Paul Cummings	Affirmative	
5	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Max Emrick	Affirmative	
5	City of Tallahassee	Alan Gale	Abstain	
5	Cleco Power	Stephanie Huffman	Affirmative	
5	Cogentrix Energy, Inc.	Mike D Hirst	Abstain	
5	Consolidated Edison Co. of New York	Willet (Jack) Ng	Affirmative	
5	Constellation Power Source Generation, Inc.	Amir Y Hammad	Affirmative	
5	Consumers Energy	James B Lewis	Affirmative	
5	Cowlitz County PUD	Bob Essex	Abstain	
5	CPS Energy	Robert Stevens		
5	Detroit Edison Company	Christy Wicke	Affirmative	
5	Dominion Resources, Inc.	Mike Garton	Affirmative	
5	Duke Energy	Dale Q Goodwine	Affirmative	
5	Dynegy Inc.	Dan Roethemeyer	Affirmative	
5	Electric Power Supply Association	John R Cashin	Affirmative	
5	Entergy Corporation	Stanley M Jaskot	Affirmative	
5	Exelon Nuclear	Michael Korchynsky	Negative	
5	ExxonMobil Research and Engineering	Martin Kaufman	Negative	
5	FirstEnergy Solutions	Kenneth Dresner		
5	Florida Municipal Power Agency	David Schumann	Affirmative	
5	Great River Energy	Preston L Walsh	Affirmative	
5	Green Country Energy	Greg Froehling	Abstain	
5	Indeck Energy Services, Inc.	Rex A Roehl	Negative	
5	Kansas City Power & Light Co.	Scott Heidtbrink	Negative	
5	Kissimmee Utility Authority	Mike Blough	Affirmative	
5	Lakeland Electric	James M Howard	Negative	
5	Liberty Electric Power LLC	Daniel Duff	Abstain	
5	Lincoln Electric System	Dennis Florom	Affirmative	
5	Los Angeles Department of Water & Power	Kenneth Silver	Affirmative	
5	Luminant Generation Company LLC	Mike Laney	Affirmative	
5	Manitoba Hydro	S N Fernando	Affirmative	
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Abstain	
5	MEAG Power	Steven Grego	Affirmative	
5	MidAmerican Energy Co.	Christopher Schneider	Negative	View
5	Muscatine Power & Water	Mike Avesing	Affirmative	
5	Nebraska Public Power District	Don Schmit	Abstain	
5	New York Power Authority	Gerald Mannarino	Affirmative	
5	Occidental Chemical	Michelle R DAntuono	Abstain	
5	Omaha Public Power District	Mahmood Z. Safi	Affirmative	
5	Orlando Utilities Commission	Richard Kinass		
5	PacifiCorp	Sandra L. Shaffer	Affirmative	
5	Platte River Power Authority	Pete Ungerman	Affirmative	
5	Portland General Electric Co.	Gary L Tingley	Affirmative	
5	PPL Generation LLC	Annette M Bannon	Affirmative	
5	Public Service Enterprise Group Incorporated	Dominick Grasso	Negative	View
5	Public Utility District No. 1 of Lewis County	Steven Grega	Negative	
5	Sacramento Municipal Utility District	Bethany Hunter	Affirmative	
5	Salt River Project	Glen Reeves	Affirmative	
5	Santee Cooper	Lewis P Pierce	Affirmative	
5	Seattle City Light	Michael J. Haynes	Affirmative	

5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins	Affirmative	
5	Snohomish County PUD No. 1	Sam Nietfeld	Abstain	
5	Southern Company Generation	William D Shultz	Affirmative	
5	Tampa Electric Co.	RJames Rocha	Negative	
5	Tenaska, Inc.	Scott M Helyer	Negative	View
5	Tennessee Valley Authority	David Thompson	Affirmative	
5	Tri-State G & T Association, Inc.	Barry Ingold	Affirmative	
5	U.S. Army Corps of Engineers	Melissa Kurtz	Affirmative	
5	US Power Generating Company	Bohdan M Dackow	Affirmative	
5	Wisconsin Electric Power Co.	Linda Horn	Affirmative	
5	Wisconsin Public Service Corp.	Leonard Rentmeester	Abstain	
6	AEP Marketing	Edward P. Cox	Abstain	
6	Ameren Energy Marketing Co.	Jennifer Richardson	Negative	
6	Arizona Public Service Co.	Justin Thompson	Affirmative	
6	Black Hills Power	andrew heinle	Affirmative	
6	Bonneville Power Administration	Brenda S. Anderson	Affirmative	
6	City of Austin dba Austin Energy	Lisa L Martin	Abstain	
6	Cleco Power LLC	Robert Hirschak	Affirmative	
6	Consolidated Edison Co. of New York	Nickesha P Carrol	Affirmative	
6	Constellation Energy Commodities Group	Brenda Powell	Affirmative	
6	Dominion Resources, Inc.	Louis S. Slade	Affirmative	
6	Duke Energy Carolina	Walter Yeager	Negative	
6	Entergy Services, Inc.	Terri F Benoit	Affirmative	
6	Exelon Power Team	Pulin Shah	Negative	
6	FirstEnergy Solutions	Mark S Travaglianti	Affirmative	
6	Florida Municipal Power Agency	Richard L. Montgomery	Affirmative	
6	Florida Municipal Power Pool	Thomas Washburn	Affirmative	
6	Florida Power & Light Co.	Silvia P. Mitchell	Negative	
6	Great River Energy	Donna Stephenson		
6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Negative	View
6	Lakeland Electric	Paul Shipps	Negative	
6	Lincoln Electric System	Eric Ruskamp	Abstain	
6	Manitoba Hydro	Daniel Prowse	Affirmative	
6	MidAmerican Energy Co.	Dennis Kimm	Affirmative	
6	Muscatine Power & Water	Brandy D Olson	Negative	
6	New York Power Authority	William Palazzo	Affirmative	
6	Northern Indiana Public Service Co.	Joseph O'Brien	Affirmative	
6	Omaha Public Power District	David Ried	Affirmative	
6	PacifiCorp	Scott L Smith	Affirmative	
6	Platte River Power Authority	Carol Ballantine	Affirmative	
6	PPL EnergyPlus LLC	Mark A Heimbach	Affirmative	
6	Progress Energy	John T Sturgeon	Abstain	
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Negative	View
6	Sacramento Municipal Utility District	Claire Warshaw	Affirmative	
6	Salt River Project	Steven J Hulet	Abstain	
6	Santee Cooper	Suzanne Ritter	Affirmative	
6	Seattle City Light	Dennis Sismaet	Affirmative	
6	Seminole Electric Cooperative, Inc.	Trudy S. Novak	Affirmative	
6	Shell Energy North America (US), L.P.	Paul Kerr	Affirmative	
6	South California Edison Company	Lujuanna Medina	Affirmative	
6	Tacoma Public Utilities	Michael C Hill	Affirmative	
6	Tampa Electric Co.	Benjamin F Smith II	Negative	
6	Tennessee Valley Authority	Marjorie S. Parsons	Affirmative	
6	Western Area Power Administration - UGP Marketing	Peter H Kinney	Affirmative	
6	Xcel Energy, Inc.	David F. Lemmons	Negative	
8		James A Maenner	Affirmative	
8		Roger C Zaklukiewicz	Affirmative	
8		Edward C Stein	Affirmative	
8	JDRJC Associates	Jim Cyrulewski	Abstain	
8	Pacific Northwest Generating Cooperative	Margaret Ryan	Abstain	
8	Power Energy Group LLC	Peggy Abbadini		
8	Utility Services, Inc.	Brian Evans-Mongeon	Abstain	
8	Volkman Consulting, Inc.	Terry Volkman	Affirmative	
9	Commonwealth of Massachusetts Department of Public Utilities	Donald E. Nelson	Affirmative	
9	National Association of Regulatory Utility Commissioners	Diane J Barney		



9	Oregon Public Utility Commission	Jerry Murray	Affirmative	
9	Snohomish County PUD No. 1	William T Moojen		
10	Florida Reliability Coordinating Council	Linda Campbell	Affirmative	
10	Midwest Reliability Organization	James D Burley	Negative	
10	New York State Reliability Council	Alan Adamson	Affirmative	
10	Northeast Power Coordinating Council, Inc.	Guy V. Zito	Affirmative	
10	ReliabilityFirst Corporation	Anthony E Jablonski	Affirmative	
10	SERC Reliability Corporation	Carter B. Edge	Affirmative	
10	Texas Reliability Entity	Larry D Grimm	Negative	View
10	Western Electricity Coordinating Council	Louise McCarren	Affirmative	

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Ballot Results	
Ballot Name:	Project 2006-06 Recirculation Ballot IRO-005 July 2011_in
Ballot Period:	7/15/2011 - 7/25/2011
Ballot Type:	Initial
Total # Votes:	321
Total Ballot Pool:	341
Quorum:	94.13 % The Quorum has been reached
Weighted Segment Vote:	75.17 %
Ballot Results:	The standard has passed.

Summary of Ballot Results								
Segment	Ballot Pool	Segment Weight	Affirmative		Negative		Abstain	No Vote
			# Votes	Fraction	# Votes	Fraction	# Votes	
1 - Segment 1.	88	1	51	0.729	19	0.271	11	7
2 - Segment 2.	11	0.9	8	0.8	1	0.1	1	1
3 - Segment 3.	85	1	46	0.63	27	0.37	7	5
4 - Segment 4.	24	1	14	0.737	5	0.263	5	0
5 - Segment 5.	69	1	44	0.786	12	0.214	10	3
6 - Segment 6.	44	1	27	0.73	10	0.27	6	1
7 - Segment 7.	0	0	0	0	0	0	0	0
8 - Segment 8.	8	0.4	3	0.3	1	0.1	3	1
9 - Segment 9.	4	0.1	1	0.1	0	0	1	2
10 - Segment 10.	8	0.8	6	0.6	2	0.2	0	0
Totals	341	7.2	200	5.412	77	1.788	44	20

Individual Ballot Pool Results				
Segment	Organization	Member	Ballot	Comments
1	Allegheny Power	Rodney Phillips	Affirmative	
1	Ameren Services	Kirit Shah	Negative	
1	American Electric Power	Paul B. Johnson	Abstain	
1	American Transmission Company, LLC	Andrew Z Pusztai	Affirmative	View
1	Arizona Public Service Co.	Robert Smith	Affirmative	
1	Avista Corp.	Scott J Kinney	Affirmative	
1	Baltimore Gas & Electric Company	Gregory S Miller	Affirmative	
1	BC Hydro and Power Authority	Patricia Robertson	Affirmative	

1	Beaches Energy Services	Joseph S Stonecipher	Affirmative	
1	Bonneville Power Administration	Donald S. Watkins	Affirmative	
1	Central Maine Power Company	Kevin L Howes	Affirmative	
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G Choi	Affirmative	
1	City of Vero Beach	Randall McCamish	Negative	
1	City Water, Light & Power of Springfield	Shaun Anders	Negative	
1	Clark Public Utilities	Jack Stamper	Affirmative	
1	Cleco Power LLC	Danny McDaniel		
1	Colorado Springs Utilities	Paul Morland	Affirmative	
1	Consolidated Edison Co. of New York	Christopher L de Graffenried	Affirmative	
1	Dayton Power & Light Co.	Hertzel Shamash	Affirmative	
1	Dominion Virginia Power	Michael S Crowley	Affirmative	
1	Duke Energy Carolina	Douglas E. Hils	Affirmative	
1	East Kentucky Power Coop.	George S. Carruba	Negative	
1	Empire District Electric Co.	Ralph F Meyer	Affirmative	
1	Entergy Corporation	George R. Bartlett		
1	FirstEnergy Energy Delivery	Robert Martinko	Affirmative	
1	Florida Keys Electric Cooperative Assoc.	Michael Anderson	Negative	
1	Great River Energy	Gordon Pietsch	Affirmative	
1	Hoosier Energy Rural Electric Cooperative, Inc.	Robert Solomon	Affirmative	
1	Hydro One Networks, Inc.	Ajay Garg	Affirmative	
1	Hydro-Quebec TransEnergie	Bernard Pelletier		
1	Idaho Power Company	Ronald D. Schellberg	Affirmative	
1	International Transmission Company Holdings Corp	Michael Moltane	Negative	
1	Kansas City Power & Light Co.	Michael Gammon	Negative	
1	Keys Energy Services	Stanley T Rzad	Negative	
1	Lake Worth Utilities	Walt J Gill	Negative	
1	Lakeland Electric	Larry E Watt	Affirmative	
1	Lee County Electric Cooperative	John W Delucca	Abstain	
1	Long Island Power Authority	Robert Ganley	Negative	
1	Manitoba Hydro	Joe D Petaski	Affirmative	
1	MEAG Power	Danny Dees	Abstain	
1	MidAmerican Energy Co.	Terry Harbour	Negative	View
1	Minnkota Power Coop. Inc.	Richard Burt	Affirmative	
1	National Grid	Saurabh Saksena		
1	Nebraska Public Power District	Richard L. Koch	Abstain	
1	New Brunswick Power Transmission Corporation	Randy MacDonald	Affirmative	
1	New York Power Authority	Arnold J. Schuff	Affirmative	
1	Northeast Utilities	David Boguslawski	Affirmative	
1	Northern Indiana Public Service Co.	Kevin M Largura	Negative	
1	NorthWestern Energy	John Canavan	Abstain	
1	Oklahoma Gas and Electric Co.	Marvin E VanBebber	Abstain	
1	Omaha Public Power District	Doug Peterchuck	Affirmative	
1	Oncor Electric Delivery	Michael T. Quinn	Abstain	
1	Orlando Utilities Commission	Brad Chase	Affirmative	
1	Otter Tail Power Company	Daryl Hanson	Affirmative	
1	PacifiCorp	Colt Norrish	Affirmative	
1	PECO Energy	Ronald Schloendorn	Negative	
1	Platte River Power Authority	John C. Collins	Affirmative	
1	Portland General Electric Co.	Frank F. Afranji	Affirmative	
1	Potomac Electric Power Co.	David Thorne	Affirmative	
1	PowerSouth Energy Cooperative	Larry D Avery	Negative	
1	PPL Electric Utilities Corp.	Brenda L Truhe	Abstain	View
1	Public Service Company of New Mexico	Laurie Williams		
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Negative	
1	Public Utility District No. 1 of Okanogan County	Dale Dunckel	Abstain	
1	Puget Sound Energy, Inc.	Catherine Koch		
1	Rochester Gas and Electric Corp.	John C. Allen	Affirmative	
1	Sacramento Municipal Utility District	Tim Kelley	Affirmative	
1	Salt River Project	Robert Kondziolka	Affirmative	
1	Santee Cooper	Terry L. Blackwell	Affirmative	
1	SCE&G	Henry Delk, Jr.	Abstain	
1	Seattle City Light	Pawel Krupa	Affirmative	

1	Sierra Pacific Power Co.	Rich Salgo	Affirmative	
1	South Texas Electric Cooperative	Richard McLeon	Affirmative	
1	Southern California Edison Co.	Dana Cabbell	Affirmative	
1	Southern Company Services, Inc.	Robert Schaffeld	Affirmative	
1	Southern Illinois Power Coop.	William Hutchison	Negative	
1	Southwest Transmission Cooperative, Inc.	James Jones	Affirmative	
1	Southwestern Power Administration	Gary W Cox	Affirmative	
1	Sunflower Electric Power Corporation	Noman Lee Williams	Affirmative	View
1	Tampa Electric Co.	Beth Young	Negative	
1	Tennessee Valley Authority	Larry Akens	Affirmative	
1	Tri-State G & T Association, Inc.	Tracy Sliman	Affirmative	
1	Tucson Electric Power Co.	John Tolo		
1	United Illuminating Co.	Jonathan Appelbaum	Affirmative	
1	Westar Energy	Allen Klassen	Negative	
1	Western Area Power Administration	Brandy A Dunn	Affirmative	
1	Western Farmers Electric Coop.	Forrest Brock	Negative	
1	Xcel Energy, Inc.	Gregory L Pieper	Abstain	
2	Alberta Electric System Operator	Mark B Thompson	Affirmative	
2	BC Hydro	Venkataramakrishnan Vinnakota	Affirmative	
2	California ISO	Gregory Van Pelt	Abstain	
2	Electric Reliability Council of Texas, Inc.	Charles B Manning	Affirmative	
2	Independent Electricity System Operator	Kim Warren	Affirmative	
2	ISO New England, Inc.	Kathleen Goodman	Affirmative	
2	Midwest ISO, Inc.	Jason L. Marshall	Negative	
2	New Brunswick System Operator	Alden Briggs	Affirmative	
2	New York Independent System Operator	Gregory Campoli	Affirmative	
2	PJM Interconnection, L.L.C.	Tom Bowe	Affirmative	
2	Southwest Power Pool	Charles Yeung		
3	Alabama Power Company	Richard J. Mandes	Affirmative	
3	Allegheny Power	Bob Reeping		
3	Anaheim Public Utilities Dept.	Kelly Nguyen	Abstain	
3	APS	Steven Norris	Affirmative	
3	Atlantic City Electric Company	James V. Petrella	Affirmative	
3	BC Hydro and Power Authority	Pat G. Harrington	Affirmative	
3	Blachly-Lane Electric Co-op	Bud Tracy	Negative	
3	Bonneville Power Administration	Rebecca Berdahl	Affirmative	
3	Central Electric Cooperative, Inc. (Redmond, Oregon)	Dave Markham	Negative	
3	Central Lincoln PUD	Steve Alexanderson	Negative	
3	City of Bartow, Florida	Matt Culverhouse		
3	City of Clewiston	Lynne Mila	Affirmative	
3	City of Farmington	Linda Jacobson	Affirmative	
3	City of Garland	Ronnie C Hoeinghaus	Affirmative	
3	City of Green Cove Springs	Gregg R Griffin	Affirmative	
3	City of Leesburg	Phil Janik	Affirmative	
3	City of Redding	Bill Hughes	Affirmative	
3	Clearwater Power Co.	Dave Hagen	Negative	
3	Cleco Corporation	Michelle A Corley		
3	ComEd	Bruce Krawczyk	Negative	
3	Consolidated Edison Co. of New York	Peter T Yost	Affirmative	
3	Constellation Energy	Carolyn Ingersoll	Affirmative	
3	Consumers Energy	David A. Lapinski	Abstain	
3	Consumers Power Inc.	Roman Gillen	Negative	
3	Coos-Curry Electric Cooperative, Inc	Roger Meader	Negative	
3	Cowlitz County PUD	Russell A Noble	Abstain	
3	Delmarva Power & Light Co.	Michael R. Mayer	Affirmative	
3	Detroit Edison Company	Kent Kujala	Affirmative	
3	Dominion Resources Services	Michael F. Gildea	Affirmative	
3	Douglas Electric Cooperative	Dave Sabala	Negative	
3	Duke Energy Carolina	Henry Ernst-Jr	Affirmative	
3	East Kentucky Power Coop.	Sally Witt	Negative	
3	Entergy	Joel T Plessinger	Affirmative	
3	Fall River Rural Electric Cooperative	Bryan Case	Negative	
3	FirstEnergy Solutions	Kevin Querry	Affirmative	
3	Georgia Power Company	Anthony L Wilson	Affirmative	
3	Georgia System Operations Corporation	Scott S. Barfield-McGinnis	Affirmative	

3	Great River Energy	Sam Kokkinen	Negative	
3	Hydro One Networks, Inc.	David Kiguel	Affirmative	
3	Idaho Power Company	Shaun Jensen	Negative	
3	JEA	Garry Baker	Affirmative	
3	Kansas City Power & Light Co.	Charles Locke	Negative	
3	Kissimmee Utility Authority	Gregory D Woessner	Negative	
3	Lakeland Electric	Mace Hunter	Affirmative	
3	Lane Electric Cooperative, Inc.	Rick Crinklaw	Negative	
3	Lincoln Electric Cooperative, Inc.	Michael Henry	Negative	
3	Lincoln Electric System	Bruce Merrill	Negative	
3	Los Angeles Department of Water & Power	Daniel D Kurowski	Affirmative	
3	Lost River Electric Cooperative	Richard Reynolds	Negative	
3	Louisville Gas and Electric Co.	Charles A. Freibert	Abstain	View
3	Manitoba Hydro	Greg C. Parent	Affirmative	
3	MidAmerican Energy Co.	Thomas C. Mielnik	Affirmative	
3	Mississippi Power	Don Horsley	Affirmative	
3	Municipal Electric Authority of Georgia	Steven M. Jackson	Affirmative	
3	Muscatine Power & Water	John S Bos	Affirmative	
3	Nebraska Public Power District	Tony Eddleman	Abstain	
3	New York Power Authority	Marilyn Brown	Affirmative	
3	Niagara Mohawk (National Grid Company)	Michael Schiavone	Affirmative	
3	Northern Indiana Public Service Co.	William SeDoris	Negative	
3	Northern Lights Inc.	Jon Shelby	Negative	
3	Okanogan County Electric Cooperative, Inc.	Ray Ellis	Negative	
3	Orange and Rockland Utilities, Inc.	David Burke	Affirmative	
3	Orlando Utilities Commission	Ballard K Mutters	Abstain	
3	PacifiCorp	John Apperson	Affirmative	
3	Platte River Power Authority	Terry L Baker	Affirmative	
3	Potomac Electric Power Co.	Robert Reuter	Affirmative	
3	Public Service Electric and Gas Co.	Jeffrey Mueller	Negative	View
3	Public Utility District No. 2 of Grant County	Greg Lange	Affirmative	
3	Raft River Rural Electric Cooperative	Heber Carpenter	Negative	
3	Sacramento Municipal Utility District	James Leigh-Kendall	Affirmative	
3	Salmon River Electric Cooperative	Ken Dizes	Negative	
3	Salt River Project	John T. Underhill	Affirmative	
3	San Diego Gas & Electric	Scott Peterson		
3	Santee Cooper	Zack Dusenbury	Affirmative	
3	Seattle City Light	Dana Wheelock	Affirmative	
3	Seminole Electric Cooperative, Inc.	James R Frauen	Affirmative	
3	Southern California Edison Co.	David Schiada	Affirmative	
3	Tacoma Public Utilities	Travis Metcalfe	Affirmative	
3	Tampa Electric Co.	Ronald L Donahey	Negative	
3	Tennessee Valley Authority	Ian S Grant	Affirmative	
3	Umatilla Electric Cooperative	Steve Eldrige	Negative	
3	West Oregon Electric Cooperative, Inc.	Marc Farmer	Negative	
3	Wisconsin Electric Power Marketing	James R Keller	Affirmative	
3	Wisconsin Public Service Corp.	Gregory J Le Grave		
3	Xcel Energy, Inc.	Michael Ibold	Abstain	
4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Affirmative	
4	American Municipal Power	Kevin Koloini	Negative	
4	Blue Ridge Power Agency	Duane S Dahlquist	Abstain	
4	Central Lincoln PUD	Shamus J Gamache	Negative	
4	City of Clewiston	Kevin McCarthy	Affirmative	
4	City of New Smyrna Beach Utilities Commission	Tim Beyrle	Negative	
4	City Utilities of Springfield, Missouri	John Allen	Affirmative	
4	Consumers Energy	David Frank Ronk	Abstain	
4	Cowlitz County PUD	Rick Syring	Abstain	
4	Florida Municipal Power Agency	Frank Gaffney	Affirmative	
4	Fort Pierce Utilities Authority	Thomas Richards	Negative	
4	Georgia System Operations Corporation	Guy Andrews	Abstain	
4	Illinois Municipal Electric Agency	Bob C. Thomas	Abstain	
4	Madison Gas and Electric Co.	Joseph DePoorter	Affirmative	
4	Ohio Edison Company	Douglas Hohlbaugh	Affirmative	
4	Pacific Northwest Generating Cooperative	Aleka K Scott	Negative	
4	Public Utility District No. 1 of Douglas County	Henry E. LuBean	Affirmative	
4	Public Utility District No. 1 of Snohomish	John D. Martinsen	Affirmative	

	County			
4	Sacramento Municipal Utility District	Mike Ramirez	Affirmative	
4	Seattle City Light	Hao Li	Affirmative	
4	Seminole Electric Cooperative, Inc.	Steven R Wallace	Affirmative	
4	Tacoma Public Utilities	Keith Morisette	Affirmative	
4	Tallahassee Electric	Allan Morales	Affirmative	
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5	Avista Corp.	Edward F. Groce	Affirmative	
5	BC Hydro and Power Authority	Clement Ma	Affirmative	
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5	Cowlitz County PUD	Bob Essex	Abstain	
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5	Los Angeles Department of Water & Power	Kenneth Silver	Affirmative	
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5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Abstain	
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5	New York Power Authority	Gerald Mannarino	Affirmative	
5	Occidental Chemical	Michelle R DAntuono	Affirmative	
5	Omaha Public Power District	Mahmood Z. Safi	Affirmative	
5	Orlando Utilities Commission	Richard Kinass		
5	PacifiCorp	Sandra L. Shaffer	Affirmative	
5	Platte River Power Authority	Pete Ungerman	Affirmative	
5	Portland General Electric Co.	Gary L Tingley	Affirmative	
5	PPL Generation LLC	Annette M Bannon	Abstain	View
5	Public Service Enterprise Group Incorporated	Dominick Grasso	Negative	View
5	Public Utility District No. 1 of Lewis County	Steven Grega	Negative	
5	Sacramento Municipal Utility District	Bethany Hunter	Affirmative	
5	Salt River Project	Glen Reeves	Affirmative	
5	Santee Cooper	Lewis P Pierce	Affirmative	
5	Seattle City Light	Michael J. Haynes	Affirmative	

5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins	Affirmative	
5	Snohomish County PUD No. 1	Sam Nietfeld	Abstain	
5	Southern Company Generation	William D Shultz	Affirmative	
5	Tampa Electric Co.	RJames Rocha	Negative	
5	Tenaska, Inc.	Scott M Helyer	Negative	View
5	Tennessee Valley Authority	David Thompson	Affirmative	
5	Tri-State G & T Association, Inc.	Barry Ingold	Affirmative	
5	U.S. Army Corps of Engineers	Melissa Kurtz	Affirmative	
5	US Power Generating Company	Bohdan M Dackow	Affirmative	
5	Wisconsin Electric Power Co.	Linda Horn	Affirmative	
5	Wisconsin Public Service Corp.	Leonard Rentmeester	Abstain	
6	AEP Marketing	Edward P. Cox	Abstain	
6	Ameren Energy Marketing Co.	Jennifer Richardson	Negative	
6	Arizona Public Service Co.	Justin Thompson	Affirmative	
6	Black Hills Power	andrew heinle	Affirmative	
6	Bonneville Power Administration	Brenda S. Anderson	Affirmative	
6	City of Austin dba Austin Energy	Lisa L Martin	Abstain	
6	Cleco Power LLC	Robert Hirschak	Affirmative	
6	Consolidated Edison Co. of New York	Nickesha P Carrol	Affirmative	
6	Constellation Energy Commodities Group	Brenda Powell	Affirmative	
6	Dominion Resources, Inc.	Louis S. Slade	Affirmative	
6	Duke Energy Carolina	Walter Yeager	Negative	
6	Entergy Services, Inc.	Terri F Benoit	Affirmative	
6	Exelon Power Team	Pulin Shah	Negative	
6	FirstEnergy Solutions	Mark S Travaglianti	Affirmative	
6	Florida Municipal Power Agency	Richard L. Montgomery	Affirmative	
6	Florida Municipal Power Pool	Thomas Washburn	Affirmative	
6	Florida Power & Light Co.	Silvia P. Mitchell	Negative	
6	Great River Energy	Donna Stephenson		
6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Negative	
6	Lakeland Electric	Paul Shipps	Negative	
6	Lincoln Electric System	Eric Ruskamp	Abstain	
6	Manitoba Hydro	Daniel Prowse	Affirmative	
6	MidAmerican Energy Co.	Dennis Kimm	Affirmative	
6	Muscatine Power & Water	Brandy D Olson	Negative	
6	New York Power Authority	William Palazzo	Affirmative	
6	Northern Indiana Public Service Co.	Joseph O'Brien	Affirmative	
6	Omaha Public Power District	David Ried	Affirmative	
6	PacifiCorp	Scott L Smith	Affirmative	
6	Platte River Power Authority	Carol Ballantine	Affirmative	
6	PPL EnergyPlus LLC	Mark A Heimbach	Abstain	View
6	Progress Energy	John T Sturgeon	Abstain	
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Negative	View
6	Sacramento Municipal Utility District	Claire Warshaw	Affirmative	
6	Salt River Project	Steven J Hulet	Abstain	
6	Santee Cooper	Suzanne Ritter	Affirmative	
6	Seattle City Light	Dennis Sismaet	Affirmative	
6	Seminole Electric Cooperative, Inc.	Trudy S. Novak	Affirmative	
6	Shell Energy North America (US), L.P.	Paul Kerr	Affirmative	
6	South California Edison Company	Lujuanna Medina	Affirmative	
6	Tacoma Public Utilities	Michael C Hill	Affirmative	
6	Tampa Electric Co.	Benjamin F Smith II	Negative	
6	Tennessee Valley Authority	Marjorie S. Parsons	Affirmative	
6	Western Area Power Administration - UGP Marketing	Peter H Kinney	Affirmative	
6	Xcel Energy, Inc.	David F. Lemmons	Negative	
8		James A Maenner	Negative	
8		Roger C Zaklukiewicz	Affirmative	
8		Edward C Stein	Affirmative	
8	JDRJC Associates	Jim Cyrulewski	Abstain	
8	Pacific Northwest Generating Cooperative	Margaret Ryan	Abstain	
8	Power Energy Group LLC	Peggy Abbadini		
8	Utility Services, Inc.	Brian Evans-Mongeon	Abstain	
8	Volkman Consulting, Inc.	Terry Volkman	Affirmative	
9	Commonwealth of Massachusetts Department of Public Utilities	Donald E. Nelson	Affirmative	
9	National Association of Regulatory Utility Commissioners	Diane J Barney		



9	Oregon Public Utility Commission	Jerry Murray	Abstain	
9	Snohomish County PUD No. 1	William T Moojen		
10	Florida Reliability Coordinating Council	Linda Campbell	Affirmative	
10	Midwest Reliability Organization	James D Burley	Negative	
10	New York State Reliability Council	Alan Adamson	Affirmative	
10	Northeast Power Coordinating Council, Inc.	Guy V. Zito	Affirmative	
10	ReliabilityFirst Corporation	Anthony E Jablonski	Affirmative	
10	SERC Reliability Corporation	Carter B. Edge	Affirmative	
10	Texas Reliability Entity, Inc.	Larry D Grimm	Negative	View
10	Western Electricity Coordinating Council	Louise McCarren	Affirmative	

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Washington Office: 1120 G Street, N.W. : Suite 990 : Washington, DC 20005-3801

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Ballot Results	
Ballot Name:	Project 2006-06 Recirculation Ballot IRO-014 July 2011_in
Ballot Period:	7/15/2011 - 7/25/2011
Ballot Type:	Initial
Total # Votes:	321
Total Ballot Pool:	341
Quorum:	94.13 % The Quorum has been reached
Weighted Segment Vote:	76.27 %
Ballot Results:	The standard has passed.

Summary of Ballot Results								
Segment	Ballot Pool	Segment Weight	Affirmative		Negative		Abstain	No Vote
			# Votes	Fraction	# Votes	Fraction	# Votes	
1 - Segment 1.	88	1	48	0.686	22	0.314	11	7
2 - Segment 2.	11	0.9	8	0.8	1	0.1	1	1
3 - Segment 3.	85	1	46	0.622	28	0.378	6	5
4 - Segment 4.	24	1	14	0.737	5	0.263	5	0
5 - Segment 5.	69	1	41	0.759	13	0.241	12	3
6 - Segment 6.	44	1	27	0.711	11	0.289	5	1
7 - Segment 7.	0	0	0	0	0	0	0	0
8 - Segment 8.	8	0.3	3	0.3	0	0	4	1
9 - Segment 9.	4	0.1	1	0.1	0	0	1	2
10 - Segment 10.	8	0.8	7	0.7	1	0.1	0	0
Totals	341	7.1	195	5.415	81	1.685	45	20

Individual Ballot Pool Results				
Segment	Organization	Member	Ballot	Comments
1	Allegheny Power	Rodney Phillips	Affirmative	
1	Ameren Services	Kirit Shah	Negative	
1	American Electric Power	Paul B. Johnson	Abstain	
1	American Transmission Company, LLC	Andrew Z Pusztai	Affirmative	
1	Arizona Public Service Co.	Robert Smith	Affirmative	
1	Avista Corp.	Scott J Kinney	Affirmative	
1	Baltimore Gas & Electric Company	Gregory S Miller	Affirmative	
1	BC Hydro and Power Authority	Patricia Robertson	Affirmative	

1	Beaches Energy Services	Joseph S Stonecipher	Affirmative	
1	Bonneville Power Administration	Donald S. Watkins	Affirmative	
1	Central Maine Power Company	Kevin L Howes	Abstain	
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G Choi	Affirmative	
1	City of Vero Beach	Randall McCamish	Negative	
1	City Water, Light & Power of Springfield	Shaun Anders	Negative	
1	Clark Public Utilities	Jack Stamper	Affirmative	
1	Cleco Power LLC	Danny McDaniel		
1	Colorado Springs Utilities	Paul Morland	Affirmative	
1	Consolidated Edison Co. of New York	Christopher L de Graffenried	Affirmative	
1	Dayton Power & Light Co.	Hertzel Shamash	Affirmative	
1	Dominion Virginia Power	Michael S Crowley	Affirmative	
1	Duke Energy Carolina	Douglas E. Hils	Affirmative	
1	East Kentucky Power Coop.	George S. Carruba	Negative	
1	Empire District Electric Co.	Ralph F Meyer	Affirmative	
1	Entergy Corporation	George R. Bartlett		
1	FirstEnergy Energy Delivery	Robert Martinko	Affirmative	
1	Florida Keys Electric Cooperative Assoc.	Michael Anderson	Negative	
1	Great River Energy	Gordon Pietsch	Affirmative	
1	Hoosier Energy Rural Electric Cooperative, Inc.	Robert Solomon	Negative	
1	Hydro One Networks, Inc.	Ajay Garg	Affirmative	
1	Hydro-Quebec TransEnergie	Bernard Pelletier		
1	Idaho Power Company	Ronald D. Schellberg	Affirmative	
1	International Transmission Company Holdings Corp	Michael Moltane	Negative	
1	Kansas City Power & Light Co.	Michael Gammon	Negative	View
1	Keys Energy Services	Stanley T Rzad	Negative	
1	Lake Worth Utilities	Walt J Gill	Negative	
1	Lakeland Electric	Larry E Watt	Affirmative	
1	Lee County Electric Cooperative	John W Delucca	Abstain	
1	Long Island Power Authority	Robert Ganley	Negative	
1	Manitoba Hydro	Joe D Petaski	Affirmative	
1	MEAG Power	Danny Dees	Abstain	
1	MidAmerican Energy Co.	Terry Harbour	Negative	View
1	Minnkota Power Coop. Inc.	Richard Burt	Affirmative	
1	National Grid	Saurabh Saksena		
1	Nebraska Public Power District	Richard L. Koch	Abstain	
1	New Brunswick Power Transmission Corporation	Randy MacDonald	Affirmative	
1	New York Power Authority	Arnold J. Schuff	Affirmative	
1	Northeast Utilities	David Boguslawski	Affirmative	
1	Northern Indiana Public Service Co.	Kevin M Largura	Negative	
1	NorthWestern Energy	John Canavan	Abstain	
1	Oklahoma Gas and Electric Co.	Marvin E VanBebber	Abstain	
1	Omaha Public Power District	Doug Peterchuck	Affirmative	
1	Oncor Electric Delivery	Michael T. Quinn	Abstain	
1	Orlando Utilities Commission	Brad Chase	Affirmative	
1	Otter Tail Power Company	Daryl Hanson	Affirmative	
1	PacifiCorp	Colt Norrish	Affirmative	
1	PECO Energy	Ronald Schloendorn	Negative	
1	Platte River Power Authority	John C. Collins	Affirmative	
1	Portland General Electric Co.	Frank F. Afranji	Affirmative	
1	Potomac Electric Power Co.	David Thorne	Affirmative	
1	PowerSouth Energy Cooperative	Larry D Avery	Negative	
1	PPL Electric Utilities Corp.	Brenda L Truhe	Affirmative	
1	Public Service Company of New Mexico	Laurie Williams		
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Negative	
1	Public Utility District No. 1 of Okanogan County	Dale Dunckel	Abstain	
1	Puget Sound Energy, Inc.	Catherine Koch		
1	Rochester Gas and Electric Corp.	John C. Allen	Affirmative	
1	Sacramento Municipal Utility District	Tim Kelley	Affirmative	
1	Salt River Project	Robert Kondziolka	Affirmative	
1	Santee Cooper	Terry L. Blackwell	Affirmative	
1	SCE&G	Henry Delk, Jr.	Abstain	
1	Seattle City Light	Pawel Krupa	Affirmative	

1	Sierra Pacific Power Co.	Rich Salgo	Affirmative	
1	South Texas Electric Cooperative	Richard McLeon	Affirmative	
1	Southern California Edison Co.	Dana Cabbell	Affirmative	
1	Southern Company Services, Inc.	Robert Schaffeld	Affirmative	
1	Southern Illinois Power Coop.	William Hutchison	Negative	
1	Southwest Transmission Cooperative, Inc.	James Jones	Affirmative	
1	Southwestern Power Administration	Gary W Cox	Affirmative	
1	Sunflower Electric Power Corporation	Noman Lee Williams	Negative	View
1	Tampa Electric Co.	Beth Young	Negative	
1	Tennessee Valley Authority	Larry Akens	Negative	
1	Tri-State G & T Association, Inc.	Tracy Sliman	Affirmative	
1	Tucson Electric Power Co.	John Tolo		
1	United Illuminating Co.	Jonathan Appelbaum	Affirmative	
1	Westar Energy	Allen Klassen	Negative	
1	Western Area Power Administration	Brandy A Dunn	Affirmative	
1	Western Farmers Electric Coop.	Forrest Brock	Negative	
1	Xcel Energy, Inc.	Gregory L Pieper	Abstain	
2	Alberta Electric System Operator	Mark B Thompson	Affirmative	
2	BC Hydro	Venkataramakrishnan Vinnakota	Affirmative	
2	California ISO	Gregory Van Pelt	Abstain	
2	Electric Reliability Council of Texas, Inc.	Charles B Manning	Affirmative	
2	Independent Electricity System Operator	Kim Warren	Affirmative	
2	ISO New England, Inc.	Kathleen Goodman	Affirmative	
2	Midwest ISO, Inc.	Jason L. Marshall	Negative	
2	New Brunswick System Operator	Alden Briggs	Affirmative	
2	New York Independent System Operator	Gregory Campoli	Affirmative	
2	PJM Interconnection, L.L.C.	Tom Bowe	Affirmative	
2	Southwest Power Pool	Charles Yeung		
3	Alabama Power Company	Richard J. Mandes	Affirmative	
3	Allegheny Power	Bob Reeping		
3	Anaheim Public Utilities Dept.	Kelly Nguyen	Abstain	
3	APS	Steven Norris	Affirmative	
3	Atlantic City Electric Company	James V. Petrella	Affirmative	
3	BC Hydro and Power Authority	Pat G. Harrington	Affirmative	
3	Blachly-Lane Electric Co-op	Bud Tracy	Negative	
3	Bonneville Power Administration	Rebecca Berdahl	Affirmative	
3	Central Electric Cooperative, Inc. (Redmond, Oregon)	Dave Markham	Negative	
3	Central Lincoln PUD	Steve Alexanderson	Negative	
3	City of Bartow, Florida	Matt Culverhouse		
3	City of Clewiston	Lynne Mila	Affirmative	
3	City of Farmington	Linda Jacobson	Affirmative	
3	City of Garland	Ronnie C Hoeinghaus	Affirmative	
3	City of Green Cove Springs	Gregg R Griffin	Affirmative	
3	City of Leesburg	Phil Janik	Affirmative	
3	City of Redding	Bill Hughes	Affirmative	
3	Clearwater Power Co.	Dave Hagen	Negative	
3	Cleco Corporation	Michelle A Corley		
3	ComEd	Bruce Krawczyk	Negative	
3	Consolidated Edison Co. of New York	Peter T Yost	Affirmative	
3	Constellation Energy	Carolyn Ingersoll	Affirmative	
3	Consumers Energy	David A. Lapinski	Abstain	
3	Consumers Power Inc.	Roman Gillen	Negative	
3	Coos-Curry Electric Cooperative, Inc	Roger Meader	Negative	
3	Cowlitz County PUD	Russell A Noble	Abstain	
3	Delmarva Power & Light Co.	Michael R. Mayer	Affirmative	
3	Detroit Edison Company	Kent Kujala	Affirmative	
3	Dominion Resources Services	Michael F. Gildea	Affirmative	
3	Douglas Electric Cooperative	Dave Sabala	Negative	
3	Duke Energy Carolina	Henry Ernst-Jr	Affirmative	
3	East Kentucky Power Coop.	Sally Witt	Negative	
3	Entergy	Joel T Plessinger	Affirmative	
3	Fall River Rural Electric Cooperative	Bryan Case	Negative	
3	FirstEnergy Solutions	Kevin Querry	Affirmative	
3	Georgia Power Company	Anthony L Wilson	Affirmative	
3	Georgia System Operations Corporation	Scott S. Barfield-McGinnis	Affirmative	

3	Great River Energy	Sam Kokkinen	Negative	
3	Hydro One Networks, Inc.	David Kiguel	Affirmative	
3	Idaho Power Company	Shaun Jensen	Negative	
3	JEA	Garry Baker	Affirmative	
3	Kansas City Power & Light Co.	Charles Locke	Negative	View
3	Kissimmee Utility Authority	Gregory D Woessner	Negative	
3	Lakeland Electric	Mace Hunter	Affirmative	
3	Lane Electric Cooperative, Inc.	Rick Crinklaw	Negative	
3	Lincoln Electric Cooperative, Inc.	Michael Henry	Negative	
3	Lincoln Electric System	Bruce Merrill	Negative	
3	Los Angeles Department of Water & Power	Daniel D Kurowski	Affirmative	
3	Lost River Electric Cooperative	Richard Reynolds	Negative	
3	Louisville Gas and Electric Co.	Charles A. Freibert	Affirmative	
3	Manitoba Hydro	Greg C. Parent	Affirmative	
3	MidAmerican Energy Co.	Thomas C. Mielnik	Affirmative	
3	Mississippi Power	Don Horsley	Affirmative	
3	Municipal Electric Authority of Georgia	Steven M. Jackson	Affirmative	
3	Muscatine Power & Water	John S Bos	Affirmative	
3	Nebraska Public Power District	Tony Eddleman	Abstain	
3	New York Power Authority	Marilyn Brown	Affirmative	
3	Niagara Mohawk (National Grid Company)	Michael Schiavone	Affirmative	
3	Northern Indiana Public Service Co.	William SeDoris	Negative	
3	Northern Lights Inc.	Jon Shelby	Negative	
3	Okanogan County Electric Cooperative, Inc.	Ray Ellis	Negative	
3	Orange and Rockland Utilities, Inc.	David Burke	Affirmative	
3	Orlando Utilities Commission	Ballard K Mutters	Abstain	
3	PacifiCorp	John Apperson	Affirmative	
3	Platte River Power Authority	Terry L Baker	Affirmative	
3	Potomac Electric Power Co.	Robert Reuter	Affirmative	
3	Public Service Electric and Gas Co.	Jeffrey Mueller	Negative	View
3	Public Utility District No. 2 of Grant County	Greg Lange	Affirmative	
3	Raft River Rural Electric Cooperative	Heber Carpenter	Negative	
3	Sacramento Municipal Utility District	James Leigh-Kendall	Affirmative	
3	Salmon River Electric Cooperative	Ken Dizes	Negative	
3	Salt River Project	John T. Underhill	Affirmative	
3	San Diego Gas & Electric	Scott Peterson		
3	Santee Cooper	Zack Dusenbury	Affirmative	
3	Seattle City Light	Dana Wheelock	Affirmative	
3	Seminole Electric Cooperative, Inc.	James R Frauen	Affirmative	
3	Southern California Edison Co.	David Schiada	Affirmative	
3	Tacoma Public Utilities	Travis Metcalfe	Affirmative	
3	Tampa Electric Co.	Ronald L Donahey	Negative	
3	Tennessee Valley Authority	Ian S Grant	Negative	View
3	Umatilla Electric Cooperative	Steve Eldrige	Negative	
3	West Oregon Electric Cooperative, Inc.	Marc Farmer	Negative	
3	Wisconsin Electric Power Marketing	James R Keller	Affirmative	
3	Wisconsin Public Service Corp.	Gregory J Le Grave		
3	Xcel Energy, Inc.	Michael Ibold	Abstain	
4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Affirmative	
4	American Municipal Power	Kevin Koloini	Negative	
4	Blue Ridge Power Agency	Duane S Dahlquist	Abstain	
4	Central Lincoln PUD	Shamus J Gamache	Negative	
4	City of Clewiston	Kevin McCarthy	Affirmative	
4	City of New Smyrna Beach Utilities Commission	Tim Beyrle	Negative	
4	City Utilities of Springfield, Missouri	John Allen	Affirmative	
4	Consumers Energy	David Frank Ronk	Abstain	
4	Cowlitz County PUD	Rick Syring	Abstain	
4	Florida Municipal Power Agency	Frank Gaffney	Affirmative	
4	Fort Pierce Utilities Authority	Thomas Richards	Negative	
4	Georgia System Operations Corporation	Guy Andrews	Abstain	
4	Illinois Municipal Electric Agency	Bob C. Thomas	Abstain	
4	Madison Gas and Electric Co.	Joseph DePoorter	Affirmative	
4	Ohio Edison Company	Douglas Hohlbaugh	Affirmative	
4	Pacific Northwest Generating Cooperative	Aleka K Scott	Negative	
4	Public Utility District No. 1 of Douglas County	Henry E. LuBean	Affirmative	
4	Public Utility District No. 1 of Snohomish	John D. Martinsen	Affirmative	

	County			
4	Sacramento Municipal Utility District	Mike Ramirez	Affirmative	
4	Seattle City Light	Hao Li	Affirmative	
4	Seminole Electric Cooperative, Inc.	Steven R Wallace	Affirmative	
4	Tacoma Public Utilities	Keith Morisette	Affirmative	
4	Tallahassee Electric	Allan Morales	Affirmative	
4	Wisconsin Energy Corp.	Anthony Jankowski	Affirmative	
5	AEP Service Corp.	Brock Odayko	Abstain	
5	AES Corporation	Leo Bernier	Affirmative	
5	Amerenue	Sam Dwyer	Negative	
5	Arizona Public Service Co.	Edward Cambridge	Affirmative	
5	Avista Corp.	Edward F. Groce	Affirmative	
5	BC Hydro and Power Authority	Clement Ma	Affirmative	
5	Bonneville Power Administration	Francis J. Halpin	Affirmative	
5	City of Grand Island	Jeff Mead	Negative	
5	City of Redding	Paul Cummings	Affirmative	
5	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Max Emrick	Affirmative	
5	City of Tallahassee	Alan Gale	Abstain	
5	Cleco Power	Stephanie Huffman	Affirmative	
5	Cogentrix Energy, Inc.	Mike D Hirst	Abstain	
5	Consolidated Edison Co. of New York	Willet (Jack) Ng	Affirmative	
5	Constellation Power Source Generation, Inc.	Amir Y Hammad	Affirmative	
5	Consumers Energy	James B Lewis	Affirmative	
5	Cowlitz County PUD	Bob Essex	Abstain	
5	CPS Energy	Robert Stevens		
5	Detroit Edison Company	Christy Wicke	Affirmative	
5	Dominion Resources, Inc.	Mike Garton	Affirmative	
5	Duke Energy	Dale Q Goodwine	Affirmative	
5	Dynegy Inc.	Dan Roethemeyer	Affirmative	
5	Electric Power Supply Association	John R Cashin	Affirmative	
5	Entergy Corporation	Stanley M Jaskot	Affirmative	
5	Exelon Nuclear	Michael Korchynsky	Negative	
5	ExxonMobil Research and Engineering	Martin Kaufman	Negative	
5	FirstEnergy Solutions	Kenneth Dresner		
5	Florida Municipal Power Agency	David Schumann	Affirmative	
5	Great River Energy	Preston L Walsh	Affirmative	
5	Green Country Energy	Greg Froehling	Abstain	
5	Indeck Energy Services, Inc.	Rex A Roehl	Negative	
5	Kansas City Power & Light Co.	Scott Heidtbrink	Negative	
5	Kissimmee Utility Authority	Mike Blough	Affirmative	
5	Lakeland Electric	James M Howard	Negative	
5	Liberty Electric Power LLC	Daniel Duff	Abstain	
5	Lincoln Electric System	Dennis Florom	Abstain	
5	Los Angeles Department of Water & Power	Kenneth Silver	Affirmative	
5	Luminant Generation Company LLC	Mike Laney	Affirmative	
5	Manitoba Hydro	S N Fernando	Affirmative	
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Abstain	
5	MEAG Power	Steven Grego	Affirmative	
5	MidAmerican Energy Co.	Christopher Schneider	Negative	View
5	Muscatine Power & Water	Mike Avesing	Affirmative	
5	Nebraska Public Power District	Don Schmit	Abstain	
5	New York Power Authority	Gerald Mannarino	Affirmative	
5	Occidental Chemical	Michelle R DAntuono	Abstain	
5	Omaha Public Power District	Mahmood Z. Safi	Affirmative	
5	Orlando Utilities Commission	Richard Kinass		
5	PacifiCorp	Sandra L. Shaffer	Affirmative	
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5	Santee Cooper	Lewis P Pierce	Affirmative	
5	Seattle City Light	Michael J. Haynes	Affirmative	

5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins	Affirmative	
5	Snohomish County PUD No. 1	Sam Nietfeld	Abstain	
5	Southern Company Generation	William D Shultz	Affirmative	
5	Tampa Electric Co.	RJames Rocha	Negative	
5	Tenaska, Inc.	Scott M Helyer	Negative	View
5	Tennessee Valley Authority	David Thompson	Negative	View
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6	City of Austin dba Austin Energy	Lisa L Martin	Abstain	
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6	Consolidated Edison Co. of New York	Nickesha P Carrol	Affirmative	
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6	Florida Municipal Power Pool	Thomas Washburn	Affirmative	
6	Florida Power & Light Co.	Silvia P. Mitchell	Negative	
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6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Negative	View
6	Lakeland Electric	Paul Shipps	Negative	
6	Lincoln Electric System	Eric Ruskamp	Abstain	
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6	Omaha Public Power District	David Ried	Affirmative	
6	PacifiCorp	Scott L Smith	Affirmative	
6	Platte River Power Authority	Carol Ballantine	Affirmative	
6	PPL EnergyPlus LLC	Mark A Heimbach	Affirmative	
6	Progress Energy	John T Sturgeon	Abstain	
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Negative	View
6	Sacramento Municipal Utility District	Claire Warshaw	Affirmative	
6	Salt River Project	Steven J Hulet	Abstain	
6	Santee Cooper	Suzanne Ritter	Affirmative	
6	Seattle City Light	Dennis Sismaet	Affirmative	
6	Seminole Electric Cooperative, Inc.	Trudy S. Novak	Affirmative	
6	Shell Energy North America (US), L.P.	Paul Kerr	Affirmative	
6	South California Edison Company	Lujuanna Medina	Affirmative	
6	Tacoma Public Utilities	Michael C Hill	Affirmative	
6	Tampa Electric Co.	Benjamin F Smith II	Negative	
6	Tennessee Valley Authority	Marjorie S. Parsons	Negative	View
6	Western Area Power Administration - UGP Marketing	Peter H Kinney	Affirmative	
6	Xcel Energy, Inc.	David F. Lemmons	Negative	
8		James A Maenner	Abstain	
8		Roger C Zaklukiewicz	Affirmative	
8		Edward C Stein	Affirmative	
8	JDRJC Associates	Jim Cyrulewski	Abstain	
8	Pacific Northwest Generating Cooperative	Margaret Ryan	Abstain	
8	Power Energy Group LLC	Peggy Abbadini		
8	Utility Services, Inc.	Brian Evans-Mongeon	Abstain	
8	Volkman Consulting, Inc.	Terry Volkman	Affirmative	
9	Commonwealth of Massachusetts Department of Public Utilities	Donald E. Nelson	Affirmative	
9	National Association of Regulatory Utility Commissioners	Diane J Barney		



9	Oregon Public Utility Commission	Jerry Murray	Abstain	
9	Snohomish County PUD No. 1	William T Moojen		
10	Florida Reliability Coordinating Council	Linda Campbell	Affirmative	
10	Midwest Reliability Organization	James D Burley	Negative	
10	New York State Reliability Council	Alan Adamson	Affirmative	
10	Northeast Power Coordinating Council, Inc.	Guy V. Zito	Affirmative	
10	ReliabilityFirst Corporation	Anthony E Jablonski	Affirmative	
10	SERC Reliability Corporation	Carter B. Edge	Affirmative	
10	Texas Reliability Entity, Inc.	Larry D Grimm	Affirmative	
10	Western Electricity Coordinating Council	Louise McCarren	Affirmative	

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Ballot Results				
Non-Binding Poll Name:		Project 2006-06 Non-Binding Poll IRO-002		
Poll Period:		7/15/2011 - 7/26/2011		
Total # Opinions:		144		
Total Ballot Pool:		341		
Summary Results:		75.37% of those who registered to participate provided an opinion or abstention; 93% of those who provided an opinion indicated support for the VRFs and VSLs.		
Individual Ballot Pool Results				
Segment	Organization	Member	Ballot	Comments
1	Allegheny Power	Rodney Phillips		
1	Ameren Services	Kirit Shah	Abstain	
1	American Electric Power	Paul B. Johnson	Abstain	
1	American Transmission Company, LLC	Andrew Z Pusztai	Abstain	
1	Arizona Public Service Co.	Robert Smith		
1	Avista Corp.	Scott J Kinney	Affirmative	
1	Baltimore Gas & Electric Company	Gregory S Miller	Abstain	View
1	BC Hydro and Power Authority	Patricia Robertson	Affirmative	
1	Beaches Energy Services	Joseph S Stonecipher	Affirmative	
1	Bonneville Power Administration	Donald S. Watkins	Affirmative	
1	Central Maine Power Company	Kevin L Howes	Abstain	
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G Choi		
1	City of Vero Beach	Randall McCamish		
1	City Water, Light & Power of Springfield	Shaun Anders	Abstain	

1	Clark Public Utilities	Jack Stamper	Affirmative	
1	Cleco Power LLC	Danny McDaniel	Affirmative	
1	Colorado Springs Utilities	Paul Morland		
1	Consolidated Edison Co. of New York	Christopher L de Graffenried	Abstain	
1	Dayton Power & Light Co.	Hertzel Shamash		
1	Dominion Virginia Power	Michael S Crowley	Abstain	
1	Duke Energy Carolina	Douglas E. Hils	Affirmative	
1	East Kentucky Power Coop.	George S. Carruba	Abstain	
1	Empire District Electric Co.	Ralph F Meyer	Affirmative	
1	Entergy Corporation	George R. Bartlett		
1	FirstEnergy Energy Delivery	Robert Martinko	Affirmative	
1	Florida Keys Electric Cooperative Assoc.	Michael Anderson	Negative	
1	Great River Energy	Gordon Pietsch	Affirmative	
1	Hoosier Energy Rural Electric Cooperative, Inc.	Robert Solomon	Affirmative	
1	Hydro One Networks, Inc.	Ajay Garg	Affirmative	
1	Hydro-Quebec TransEnergie	Bernard Pelletier		
1	Idaho Power Company	Ronald D. Schellberg	Affirmative	
1	International Transmission Company Holdings Corp	Michael Moltane	Negative	View
1	Kansas City Power & Light Co.	Michael Gammon	Negative	
1	Keys Energy Services	Stanley T Rza	Affirmative	
1	Lake Worth Utilities	Walt J Gill	Abstain	
1	Lakeland Electric	Larry E Watt	Affirmative	
1	Lee County Electric Cooperative	John W Delucca	Abstain	

1	Long Island Power Authority	Robert Ganley	Negative	
1	Manitoba Hydro	Joe D Petaski	Affirmative	
1	MEAG Power	Danny Dees	Abstain	
1	MidAmerican Energy Co.	Terry Harbour	Negative	View
1	Minnkota Power Coop. Inc.	Richard Burt	Affirmative	
1	National Grid	Saurabh Saksena		
1	Nebraska Public Power District	Richard L. Koch		
1	New Brunswick Power Transmission Corporation	Randy MacDonald	Abstain	
1	New York Power Authority	Arnold J. Schuff	Affirmative	
1	Northeast Utilities	David Boguslawski	Affirmative	
1	Northern Indiana Public Service Co.	Kevin M Largura	Affirmative	
1	NorthWestern Energy	John Canavan	Abstain	
1	Oklahoma Gas and Electric Co.	Marvin E VanBebber	Abstain	
1	Omaha Public Power District	Doug Peterchuck	Affirmative	
1	Oncor Electric Delivery	Michael T. Quinn	Abstain	
1	Orlando Utilities Commission	Brad Chase	Affirmative	
1	Otter Tail Power Company	Daryl Hanson	Abstain	
1	PacifiCorp	Colt Norrish		
1	PECO Energy	Ronald Schloendorn		
1	Platte River Power Authority	John C. Collins	Affirmative	
1	Portland General Electric Co.	Frank F Afranji		
1	Potomac Electric Power Co.	David Thorne		
1	PowerSouth Energy Cooperative	Larry D Avery	Negative	
1	PPL Electric Utilities Corp.	Brenda L Truhe	Affirmative	

1	Public Service Company of New Mexico	Laurie Williams		
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Abstain	
1	Public Utility District No. 1 of Okanogan County	Dale Dunckel	Abstain	
1	Puget Sound Energy, Inc.	Catherine Koch		
1	Rochester Gas and Electric Corp.	John C. Allen	Abstain	
1	Sacramento Municipal Utility District	Tim Kelley	Abstain	
1	Salt River Project	Robert Kondziolka		
1	Santee Cooper	Terry L. Blackwell		
1	SCE&G	Henry Delk, Jr.	Abstain	
1	Seattle City Light	Pawel Krupa	Affirmative	
1	Sierra Pacific Power Co.	Rich Salgo	Abstain	
1	South Texas Electric Cooperative	Richard McLeon	Affirmative	
1	Southern California Edison Co.	Dana Cabbell	Affirmative	
1	Southern Company Services, Inc.	Robert Schaffeld	Affirmative	
1	Southern Illinois Power Coop.	William Hutchison		
1	Southwest Transmission Cooperative, Inc.	James Jones	Affirmative	
1	Southwestern Power Administration	Gary W Cox	Affirmative	
1	Sunflower Electric Power Corporation	Noman Lee Williams	Affirmative	View
1	Tampa Electric Co.	Beth Young		
1	Tennessee Valley Authority	Larry Akens	Abstain	
1	Tri-State G & T Association, Inc.	Tracy Sliman	Affirmative	
1	Tucson Electric Power Co.	John Tolo		

1	United Illuminating Co.	Jonathan Appelbaum	Affirmative	
1	Westar Energy	Allen Klassen		
1	Western Area Power Administration	Brandy A Dunn	Affirmative	
1	Western Farmers Electric Coop.	Forrest Brock	Affirmative	
1	Xcel Energy, Inc.	Gregory L Pieper		
2	Alberta Electric System Operator	Mark B Thompson	Abstain	
2	BC Hydro	Venkataramakrishnan Vinnakota	Abstain	
2	California ISO	Gregory Van Pelt		
2	Electric Reliability Council of Texas, Inc.	Charles B Manning	Affirmative	
2	Independent Electricity System Operator	Kim Warren	Negative	View
2	ISO New England, Inc.	Kathleen Goodman		
2	Midwest ISO, Inc.	Jason L. Marshall		
2	New Brunswick System Operator	Alden Briggs	Abstain	
2	New York Independent System Operator	Gregory Campoli	Abstain	
2	PJM Interconnection, L.L.C.	Tom Bowe	Affirmative	
2	Southwest Power Pool	Charles Yeung		
3	Alabama Power Company	Richard J. Mandes	Affirmative	
3	Allegheny Power	Bob Reeping		
3	Anaheim Public Utilities Dept.	Kelly Nguyen	Affirmative	
3	APS	Steven Norris	Abstain	
3	Atlantic City Electric Company	James V. Petrella		
3	BC Hydro and Power Authority	Pat G. Harrington	Abstain	
3	Blachly-Lane Electric Co-op	Bud Tracy	Abstain	

3	Bonneville Power Administration	Rebecca Berdahl	Affirmative	
3	Central Electric Cooperative, Inc. (Redmond, Oregon)	Dave Markham	Abstain	
3	Central Lincoln PUD	Steve Alexanderson	Abstain	
3	City of Bartow, Florida	Matt Culverhouse		
3	City of Clewiston	Lynne Mila	Affirmative	
3	City of Farmington	Linda Jacobson	Affirmative	
3	City of Garland	Ronnie C Hoeinghaus	Abstain	
3	City of Green Cove Springs	Gregg R Griffin	Affirmative	
3	City of Leesburg	Phil Janik	Affirmative	
3	City of Redding	Bill Hughes		
3	Clearwater Power Co.	Dave Hagen	Abstain	
3	Cleco Corporation	Michelle A Corley	Affirmative	
3	ComEd	Bruce Krawczyk	Affirmative	
3	Consolidated Edison Co. of New York	Peter T Yost	Abstain	
3	Constellation Energy	Carolyn Ingersoll	Affirmative	
3	Consumers Energy	David A. Lapinski	Abstain	
3	Consumers Power Inc.	Roman Gillen	Abstain	
3	Coos-Curry Electric Cooperative, Inc	Roger Meader	Abstain	
3	Cowlitz County PUD	Russell A Noble	Abstain	
3	Delmarva Power & Light Co.	Michael R. Mayer	Abstain	
3	Detroit Edison Company	Kent Kujala	Affirmative	
3	Dominion Resources Services	Michael F. Gildea	Abstain	
3	Douglas Electric Cooperative	Dave Sabala	Abstain	
3	Duke Energy Carolina	Henry Ernst-Jr	Affirmative	

3	East Kentucky Power Coop.	Sally Witt	Abstain	
3	Entergy	Joel T Plessinger	Affirmative	
3	Fall River Rural Electric Cooperative	Bryan Case	Abstain	
3	FirstEnergy Solutions	Kevin Querry	Affirmative	
3	Georgia Power Company	Anthony L Wilson	Affirmative	
3	Georgia System Operations Corporation	Scott S. Barfield-McGinnis		
3	Great River Energy	Sam Kokkinen		
3	Hydro One Networks, Inc.	David Kiguel	Affirmative	
3	Idaho Power Company	Shaun Jensen		
3	JEA	Garry Baker		
3	Kansas City Power & Light Co.	Charles Locke	Negative	
3	Kissimmee Utility Authority	Gregory D Woessner		
3	Lakeland Electric	Mace Hunter	Affirmative	
3	Lane Electric Cooperative, Inc.	Rick Crinklaw	Abstain	
3	Lincoln Electric Cooperative, Inc.	Michael Henry	Abstain	
3	Lincoln Electric System	Bruce Merrill		
3	Los Angeles Department of Water & Power	Daniel D Kurowski		
3	Lost River Electric Cooperative	Richard Reynolds	Abstain	
3	Louisville Gas and Electric Co.	Charles A. Freibert		
3	Manitoba Hydro	Greg C. Parent	Affirmative	
3	MidAmerican Energy Co.	Thomas C. Mielnik		
3	Mississippi Power	Don Horsley	Affirmative	
3	Municipal Electric Authority of Georgia	Steven M. Jackson	Affirmative	

3	Muscatine Power & Water	John S Bos	Affirmative	
3	Nebraska Public Power District	Tony Eddleman	Abstain	
3	New York Power Authority	Marilyn Brown	Affirmative	
3	Niagara Mohawk (National Grid Company)	Michael Schiavone	Affirmative	
3	Northern Indiana Public Service Co.	William SeDoris	Affirmative	
3	Northern Lights Inc.	Jon Shelby	Abstain	
3	Okanogan County Electric Cooperative, Inc.	Ray Ellis	Abstain	
3	Orange and Rockland Utilities, Inc.	David Burke	Abstain	
3	Orlando Utilities Commission	Ballard K Mutters	Abstain	
3	PacifiCorp	John Apperson	Abstain	
3	Platte River Power Authority	Terry L Baker	Affirmative	
3	Potomac Electric Power Co.	Robert Reuter		
3	Public Service Electric and Gas Co.	Jeffrey Mueller	Abstain	
3	Public Utility District No. 2 of Grant County	Greg Lange		
3	Raft River Rural Electric Cooperative	Heber Carpenter	Abstain	
3	Sacramento Municipal Utility District	James Leigh-Kendall	Abstain	
3	Salmon River Electric Cooperative	Ken Dizes	Abstain	
3	Salt River Project	John T. Underhill		
3	San Diego Gas & Electric	Scott Peterson		
3	Santee Cooper	Zack Dusenbury		
3	Seattle City Light	Dana Wheelock	Affirmative	
3	Seminole Electric Cooperative, Inc.	James R Frauen	Affirmative	

3	Southern California Edison Co.	David Schiada	Affirmative	
3	Tacoma Public Utilities	Travis Metcalfe	Affirmative	
3	Tampa Electric Co.	Ronald L Donahey		
3	Tennessee Valley Authority	Ian S Grant	Abstain	
3	Umatilla Electric Cooperative	Steve Eldrige	Abstain	
3	West Oregon Electric Cooperative, Inc.	Marc Farmer	Abstain	
3	Wisconsin Electric Power Marketing	James R Keller	Abstain	
3	Wisconsin Public Service Corp.	Gregory J Le Grave		
3	Xcel Energy, Inc.	Michael Ibold	Abstain	
4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Affirmative	
4	American Municipal Power	Kevin Koloini		
4	Blue Ridge Power Agency	Duane S Dahlquist		
4	Central Lincoln PUD	Shamus J Gamache		
4	City of Clewiston	Kevin McCarthy	Affirmative	
4	City of New Smyrna Beach Utilities Commission	Tim Beyrle	Affirmative	
4	City Utilities of Springfield, Missouri	John Allen	Affirmative	
4	Consumers Energy	David Frank Ronk	Abstain	
4	Cowlitz County PUD	Rick Syring	Abstain	
4	Florida Municipal Power Agency	Frank Gaffney	Affirmative	
4	Fort Pierce Utilities Authority	Thomas Richards		
4	Georgia System Operations Corporation	Guy Andrews	Abstain	
4	Illinois Municipal Electric Agency	Bob C. Thomas	Abstain	
4	Madison Gas and Electric Co.	Joseph DePoorter	Abstain	

4	Ohio Edison Company	Douglas Hohlbaugh	Affirmative	
4	Pacific Northwest Generating Cooperative	Aleka K Scott	Abstain	
4	Public Utility District No. 1 of Douglas County	Henry E. LuBean		
4	Public Utility District No. 1 of Snohomish County	John D. Martinsen		
4	Sacramento Municipal Utility District	Mike Ramirez	Abstain	
4	Seattle City Light	Hao Li	Affirmative	
4	Seminole Electric Cooperative, Inc.	Steven R Wallace	Affirmative	
4	Tacoma Public Utilities	Keith Morisette	Affirmative	
4	Tallahassee Electric	Allan Morales	Affirmative	
4	Wisconsin Energy Corp.	Anthony Jankowski	Affirmative	
5	AEP Service Corp.	Brock Ondayko	Abstain	
5	AES Corporation	Leo Bernier	Affirmative	
5	Amerenue	Sam Dwyer	Abstain	
5	Arizona Public Service Co.	Edward Cambridge		
5	Avista Corp.	Edward F. Groce	Affirmative	
5	BC Hydro and Power Authority	Clement Ma	Abstain	
5	Bonneville Power Administration	Francis J. Halpin	Affirmative	
5	City of Grand Island	Jeff Mead	Abstain	
5	City of Redding	Paul Cummings		
5	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Max Emrick		
5	City of Tallahassee	Alan Gale		
5	Cleco Power	Stephanie Huffman	Affirmative	

5	Cogentrix Energy, Inc.	Mike D Hirst	Abstain	
5	Consolidated Edison Co. of New York	Wilket (Jack) Ng	Abstain	
5	Constellation Power Source Generation, Inc.	Amir Y Hammad		
5	Consumers Energy	James B Lewis		
5	Cowlitz County PUD	Bob Essex	Abstain	
5	CPS Energy	Robert Stevens		
5	Detroit Edison Company	Christy Wicke	Affirmative	
5	Dominion Resources, Inc.	Mike Garton	Abstain	
5	Duke Energy	Dale Q Goodwine	Affirmative	
5	Dynegy Inc.	Dan Roethemeyer	Affirmative	
5	Electric Power Supply Association	John R Cashin		
5	Entergy Corporation	Stanley M Jaskot		
5	Exelon Nuclear	Michael Korchynsky		
5	ExxonMobil Research and Engineering	Martin Kaufman		
5	FirstEnergy Solutions	Kenneth Dresner	Affirmative	
5	Florida Municipal Power Agency	David Schumann	Affirmative	
5	Great River Energy	Preston L Walsh	Affirmative	
5	Green Country Energy	Greg Froehling	Abstain	
5	Indeck Energy Services, Inc.	Rex A Roehl	Abstain	
5	Kansas City Power & Light Co.	Scott Heidtbrink	Negative	
5	Kissimmee Utility Authority	Mike Blough	Affirmative	
5	Lakeland Electric	James M Howard	Affirmative	
5	Liberty Electric Power LLC	Daniel Duff	Abstain	
5	Lincoln Electric System	Dennis Florom	Affirmative	

5	Los Angeles Department of Water & Power	Kenneth Silver		
5	Luminant Generation Company LLC	Mike Laney	Affirmative	
5	Manitoba Hydro	S N Fernando	Affirmative	
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Abstain	
5	MEAG Power	Steven Grego	Affirmative	
5	MidAmerican Energy Co.	Christopher Schneider		
5	Muscatine Power & Water	Mike Avesing	Affirmative	
5	Nebraska Public Power District	Don Schmit	Abstain	
5	New York Power Authority	Gerald Mannarino	Affirmative	
5	Occidental Chemical	Michelle R DAntuono	Abstain	
5	Omaha Public Power District	Mahmood Z. Safi	Abstain	
5	Orlando Utilities Commission	Richard Kinas		
5	PacifiCorp	Sandra L. Shaffer	Abstain	
5	Platte River Power Authority	Pete Ungerman		
5	Portland General Electric Co.	Gary L Tingley	Affirmative	
5	PPL Generation LLC	Annette M Bannon	Affirmative	
5	Public Service Enterprise Group Incorporated	Dominick Grasso	Abstain	
5	Public Utility District No. 1 of Lewis County	Steven Grega	Abstain	
5	Sacramento Municipal Utility District	Bethany Hunter	Abstain	
5	Salt River Project	Glen Reeves		
5	Santee Cooper	Lewis P Pierce		
5	Seattle City Light	Michael J. Haynes	Affirmative	

5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins	Affirmative	
5	Snohomish County PUD No. 1	Sam Nietfeld	Abstain	
5	Southern Company Generation	William D Shultz	Affirmative	
5	Tampa Electric Co.	RJames Rocha	Abstain	
5	Tenaska, Inc.	Scott M Helyer	Abstain	
5	Tennessee Valley Authority	David Thompson	Abstain	
5	Tri-State G & T Association, Inc.	Barry Ingold	Affirmative	
5	U.S. Army Corps of Engineers	Melissa Kurtz	Affirmative	
5	US Power Generating Company	Bohdan M Dackow		
5	Wisconsin Electric Power Co.	Linda Horn	Abstain	
5	Wisconsin Public Service Corp.	Leonard Rentmeester		
6	AEP Marketing	Edward P. Cox	Abstain	
6	Ameren Energy Marketing Co.	Jennifer Richardson	Abstain	
6	Arizona Public Service Co.	Justin Thompson		
6	Black Hills Power	andrew heinle	Affirmative	
6	Bonneville Power Administration	Brenda S. Anderson	Affirmative	
6	City of Austin dba Austin Energy	Lisa L Martin	Abstain	
6	Cleco Power LLC	Robert Hirschak	Affirmative	
6	Consolidated Edison Co. of New York	Nickesha P Carrol	Abstain	
6	Constellation Energy Commodities Group	Brenda Powell	Affirmative	
6	Dominion Resources, Inc.	Louis S. Slade	Abstain	
6	Duke Energy Carolina	Walter Yeager	Affirmative	
6	Entergy Services, Inc.	Terri F Benoit	Affirmative	
6	Exelon Power Team	Pulin Shah		

6	FirstEnergy Solutions	Mark S Travaglianti	Affirmative	
6	Florida Municipal Power Agency	Richard L. Montgomery	Affirmative	
6	Florida Municipal Power Pool	Thomas Washburn	Affirmative	
6	Florida Power & Light Co.	Silvia P. Mitchell	Abstain	
6	Great River Energy	Donna Stephenson		
6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Negative	
6	Lakeland Electric	Paul Shipps	Affirmative	
6	Lincoln Electric System	Eric Ruskamp	Affirmative	
6	Manitoba Hydro	Daniel Prowse	Affirmative	
6	MidAmerican Energy Co.	Dennis Kimm		
6	Muscatine Power & Water	Brandy D Olson		
6	New York Power Authority	William Palazzo	Affirmative	
6	Northern Indiana Public Service Co.	Joseph O'Brien	Affirmative	
6	Omaha Public Power District	David Ried	Affirmative	
6	PacifiCorp	Scott L Smith	Abstain	
6	Platte River Power Authority	Carol Ballantine	Affirmative	
6	PPL EnergyPlus LLC	Mark A Heimbach	Abstain	
6	Progress Energy	John T Sturgeon	Abstain	
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6	Sacramento Municipal Utility District	Claire Warshaw	Abstain	
6	Salt River Project	Steven J Hulet		
6	Santee Cooper	Suzanne Ritter		
6	Seattle City Light	Dennis Sismaet	Abstain	

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6	Shell Energy North America (US), L.P.	Paul Kerr	Abstain	
6	South California Edison Company	Lujuanna Medina	Affirmative	
6	Tacoma Public Utilities	Michael C Hill	Affirmative	
6	Tampa Electric Co.	Benjamin F Smith II		
6	Tennessee Valley Authority	Marjorie S. Parsons	Affirmative	
6	Western Area Power Administration - UGP Marketing	Peter H Kinney	Affirmative	
6	Xcel Energy, Inc.	David F. Lemmons		
8		James A Maenner	Affirmative	
8		Roger C Zaklukiewicz	Affirmative	
8		Edward C Stein	Affirmative	
8	JDRJC Associates	Jim Cyrulewski	Abstain	
8	Pacific Northwest Generating Cooperative	Margaret Ryan	Abstain	
8	Power Energy Group LLC	Peggy Abbadini		
8	Utility Services, Inc.	Brian Evans-Mongeon		
8	Volkman Consulting, Inc.	Terry Volkman	Affirmative	
9	Commonwealth of Massachusetts Department of Public Utilities	Donald E. Nelson	Abstain	
9	National Association of Regulatory Utility Commissioners	Diane J Barney	Affirmative	
9	Oregon Public Utility Commission	Jerry Murray	Abstain	
9	Snohomish County PUD No. 1	William T Moojen		
10	Florida Reliability Coordinating Council	Linda Campbell	Abstain	
10	Midwest Reliability Organization	James D Burley	Affirmative	

10	New York State Reliability Council	Alan Adamson	Affirmative	
10	Northeast Power Coordinating Council, Inc.	Guy V. Zito	Affirmative	
10	ReliabilityFirst Corporation	Anthony E Jablonski	Affirmative	
10	SERC Reliability Corporation	Carter B. Edge	Abstain	
10	Texas Reliability Entity, Inc.	Larry D Grimm	Affirmative	
10	Western Electricity Coordinating Council	Louise McCarren	Affirmative	

Ballot Results				
Non-Binding Poll Name:		Project 2006-06 Non-Binding Poll IRO-005		
Poll Period:		7/15/2011 - 7/26/2011		
Total # Opinions:		144		
Total Ballot Pool:		341		
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1	American Transmission Company, LLC	Andrew Z Pusztai	Abstain	
1	Arizona Public Service Co.	Robert Smith		
1	Avista Corp.	Scott J Kinney	Affirmative	
1	Baltimore Gas & Electric Company	Gregory S Miller	Abstain	View
1	BC Hydro and Power Authority	Patricia Robertson	Abstain	
1	Beaches Energy Services	Joseph S Stonecipher	Affirmative	
1	Bonneville Power Administration	Donald S. Watkins	Affirmative	
1	Central Maine Power Company	Kevin L Howes	Affirmative	
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G Choi		
1	City of Vero Beach	Randall McCamish		
1	City Water, Light & Power of Springfield	Shaun Anders	Abstain	

1	Clark Public Utilities	Jack Stamper	Affirmative	
1	Cleco Power LLC	Danny McDaniel	Affirmative	
1	Colorado Springs Utilities	Paul Morland		
1	Consolidated Edison Co. of New York	Christopher L de Graffenried	Abstain	
1	Dayton Power & Light Co.	Hertzel Shamash	Affirmative	
1	Dominion Virginia Power	Michael S Crowley	Abstain	
1	Duke Energy Carolina	Douglas E. Hils	Affirmative	
1	East Kentucky Power Coop.	George S. Carruba	Abstain	
1	Empire District Electric Co.	Ralph F Meyer	Affirmative	
1	Entergy Corporation	George R. Bartlett		
1	FirstEnergy Energy Delivery	Robert Martinko	Affirmative	
1	Florida Keys Electric Cooperative Assoc.	Michael Anderson	Negative	
1	Great River Energy	Gordon Pietsch	Affirmative	
1	Hoosier Energy Rural Electric Cooperative, Inc.	Robert Solomon	Affirmative	
1	Hydro One Networks, Inc.	Ajay Garg	Affirmative	
1	Hydro-Quebec TransEnergie	Bernard Pelletier		
1	Idaho Power Company	Ronald D. Schellberg	Affirmative	
1	International Transmission Company Holdings Corp	Michael Moltane	Affirmative	
1	Kansas City Power & Light Co.	Michael Gammon	Negative	
1	Keys Energy Services	Stanley T Rzađ	Affirmative	
1	Lake Worth Utilities	Walt J Gill	Abstain	
1	Lakeland Electric	Larry E Watt	Affirmative	
1	Lee County Electric Cooperative	John W Delucca	Abstain	

1	Long Island Power Authority	Robert Ganley	Negative	
1	Manitoba Hydro	Joe D Petaski	Affirmative	
1	MEAG Power	Danny Dees	Abstain	
1	MidAmerican Energy Co.	Terry Harbour	Negative	View
1	Minnkota Power Coop. Inc.	Richard Burt	Affirmative	
1	National Grid	Saurabh Saksena		
1	Nebraska Public Power District	Richard L. Koch		
1	New Brunswick Power Transmission Corporation	Randy MacDonald	Abstain	
1	New York Power Authority	Arnold J. Schuff	Affirmative	
1	Northeast Utilities	David Boguslawski	Affirmative	
1	Northern Indiana Public Service Co.	Kevin M Largura	Affirmative	
1	NorthWestern Energy	John Canavan	Abstain	
1	Oklahoma Gas and Electric Co.	Marvin E VanBebber	Abstain	
1	Omaha Public Power District	Doug Peterchuck	Affirmative	
1	Oncor Electric Delivery	Michael T. Quinn	Abstain	
1	Orlando Utilities Commission	Brad Chase	Affirmative	
1	Otter Tail Power Company	Daryl Hanson	Abstain	
1	PacifiCorp	Colt Norrish		
1	PECO Energy	Ronald Schloendorn		
1	Platte River Power Authority	John C. Collins	Affirmative	
1	Portland General Electric Co.	Frank F. Afranji		
1	Potomac Electric Power Co.	David Thorne		
1	PowerSouth Energy Cooperative	Larry D Avery	Negative	
1	PPL Electric Utilities Corp.	Brenda L Truhe	Abstain	View

1	Public Service Company of New Mexico	Laurie Williams		
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Abstain	
1	Public Utility District No. 1 of Okanogan County	Dale Dunckel	Abstain	
1	Puget Sound Energy, Inc.	Catherine Koch		
1	Rochester Gas and Electric Corp.	John C. Allen	Abstain	
1	Sacramento Municipal Utility District	Tim Kelley	Abstain	
1	Salt River Project	Robert Kondziolka		
1	Santee Cooper	Terry L. Blackwell		
1	SCE&G	Henry Delk, Jr.	Abstain	
1	Seattle City Light	Pawel Krupa	Affirmative	
1	Sierra Pacific Power Co.	Rich Salgo	Abstain	
1	South Texas Electric Cooperative	Richard McLeon	Affirmative	
1	Southern California Edison Co.	Dana Cabbell	Affirmative	
1	Southern Company Services, Inc.	Robert Schaffeld	Affirmative	
1	Southern Illinois Power Coop.	William Hutchison		
1	Southwest Transmission Cooperative, Inc.	James Jones	Affirmative	
1	Southwestern Power Administration	Gary W Cox	Affirmative	
1	Sunflower Electric Power Corporation	Noman Lee Williams	Affirmative	View
1	Tampa Electric Co.	Beth Young		
1	Tennessee Valley Authority	Larry Akens	Abstain	
1	Tri-State G & T Association, Inc.	Tracy Sliman	Affirmative	
1	Tucson Electric Power Co.	John Tolo		

1	United Illuminating Co.	Jonathan Appelbaum	Affirmative	
1	Westar Energy	Allen Klassen		
1	Western Area Power Administration	Brandy A Dunn	Affirmative	
1	Western Farmers Electric Coop.	Forrest Brock	Affirmative	
1	Xcel Energy, Inc.	Gregory L Pieper		
2	Alberta Electric System Operator	Mark B Thompson	Abstain	
2	BC Hydro	Venkataramakrishnan Vinnakota	Abstain	
2	California ISO	Gregory Van Pelt		
2	Electric Reliability Council of Texas, Inc.	Charles B Manning	Affirmative	
2	Independent Electricity System Operator	Kim Warren	Affirmative	
2	ISO New England, Inc.	Kathleen Goodman		
2	Midwest ISO, Inc.	Jason L. Marshall		
2	New Brunswick System Operator	Alden Briggs	Abstain	
2	New York Independent System Operator	Gregory Campoli	Abstain	
2	PJM Interconnection, L.L.C.	Tom Bowe	Affirmative	
2	Southwest Power Pool	Charles Yeung		
3	Alabama Power Company	Richard J. Mandes	Affirmative	
3	Allegheny Power	Bob Reeping		
3	Anaheim Public Utilities Dept.	Kelly Nguyen	Affirmative	
3	APS	Steven Norris	Abstain	
3	Atlantic City Electric Company	James V. Petrella		
3	BC Hydro and Power Authority	Pat G. Harrington	Abstain	
3	Blachly-Lane Electric Co-op	Bud Tracy	Abstain	

3	Bonneville Power Administration	Rebecca Berdahl	Affirmative	
3	Central Electric Cooperative, Inc. (Redmond, Oregon)	Dave Markham	Abstain	
3	Central Lincoln PUD	Steve Alexanderson	Abstain	
3	City of Bartow, Florida	Matt Culverhouse		
3	City of Clewiston	Lynne Mila	Affirmative	
3	City of Farmington	Linda Jacobson	Negative	View
3	City of Garland	Ronnie C Hoeinghaus	Abstain	
3	City of Green Cove Springs	Gregg R Griffin	Affirmative	
3	City of Leesburg	Phil Janik	Affirmative	
3	City of Redding	Bill Hughes		
3	Clearwater Power Co.	Dave Hagen	Abstain	
3	Cleco Corporation	Michelle A Corley	Affirmative	
3	ComEd	Bruce Krawczyk	Affirmative	
3	Consolidated Edison Co. of New York	Peter T Yost	Abstain	
3	Constellation Energy	Carolyn Ingersoll	Affirmative	
3	Consumers Energy	David A. Lapinski	Abstain	
3	Consumers Power Inc.	Roman Gillen	Abstain	
3	Coos-Curry Electric Cooperative, Inc	Roger Meader	Abstain	
3	Cowlitz County PUD	Russell A Noble	Abstain	
3	Delmarva Power & Light Co.	Michael R. Mayer	Abstain	
3	Detroit Edison Company	Kent Kujala	Affirmative	
3	Dominion Resources Services	Michael F. Gildea	Abstain	
3	Douglas Electric Cooperative	Dave Sabala	Abstain	
3	Duke Energy Carolina	Henry Ernst-Jr	Affirmative	

3	East Kentucky Power Coop.	Sally Witt	Abstain	
3	Entergy	Joel T Plessinger	Affirmative	
3	Fall River Rural Electric Cooperative	Bryan Case	Abstain	
3	FirstEnergy Solutions	Kevin Querry	Affirmative	
3	Georgia Power Company	Anthony L Wilson	Affirmative	
3	Georgia System Operations Corporation	Scott S. Barfield-McGinnis		
3	Great River Energy	Sam Kokkinen		
3	Hydro One Networks, Inc.	David Kiguel	Affirmative	
3	Idaho Power Company	Shaun Jensen		
3	JEA	Garry Baker		
3	Kansas City Power & Light Co.	Charles Locke	Negative	
3	Kissimmee Utility Authority	Gregory D Woessner		
3	Lakeland Electric	Mace Hunter	Affirmative	
3	Lane Electric Cooperative, Inc.	Rick Crinklaw	Abstain	
3	Lincoln Electric Cooperative, Inc.	Michael Henry	Abstain	
3	Lincoln Electric System	Bruce Merrill		
3	Los Angeles Department of Water & Power	Daniel D Kurowski		
3	Lost River Electric Cooperative	Richard Reynolds	Abstain	
3	Louisville Gas and Electric Co.	Charles A. Freibert		
3	Manitoba Hydro	Greg C. Parent	Affirmative	
3	MidAmerican Energy Co.	Thomas C. Mielnik		
3	Mississippi Power	Don Horsley	Affirmative	
3	Municipal Electric Authority of Georgia	Steven M. Jackson	Affirmative	

3	Muscatine Power & Water	John S Bos	Affirmative	
3	Nebraska Public Power District	Tony Eddleman	Abstain	
3	New York Power Authority	Marilyn Brown	Affirmative	
3	Niagara Mohawk (National Grid Company)	Michael Schiavone	Affirmative	
3	Northern Indiana Public Service Co.	William SeDoris	Affirmative	
3	Northern Lights Inc.	Jon Shelby	Abstain	
3	Okanogan County Electric Cooperative, Inc.	Ray Ellis	Abstain	
3	Orange and Rockland Utilities, Inc.	David Burke	Abstain	
3	Orlando Utilities Commission	Ballard K Mutters	Abstain	
3	PacifiCorp	John Apperson	Abstain	
3	Platte River Power Authority	Terry L Baker	Affirmative	
3	Potomac Electric Power Co.	Robert Reuter		
3	Public Service Electric and Gas Co.	Jeffrey Mueller	Abstain	
3	Public Utility District No. 2 of Grant County	Greg Lange		
3	Raft River Rural Electric Cooperative	Heber Carpenter	Abstain	
3	Sacramento Municipal Utility District	James Leigh-Kendall	Abstain	
3	Salmon River Electric Cooperative	Ken Dizes	Abstain	
3	Salt River Project	John T. Underhill		
3	San Diego Gas & Electric	Scott Peterson		
3	Santee Cooper	Zack Dusenbury		
3	Seattle City Light	Dana Wheelock	Affirmative	
3	Seminole Electric Cooperative, Inc.	James R Frauen	Affirmative	

3	Southern California Edison Co.	David Schiada	Affirmative	
3	Tacoma Public Utilities	Travis Metcalfe	Affirmative	
3	Tampa Electric Co.	Ronald L Donahey		
3	Tennessee Valley Authority	Ian S Grant	Abstain	
3	Umatilla Electric Cooperative	Steve Eldrige	Abstain	
3	West Oregon Electric Cooperative, Inc.	Marc Farmer	Abstain	
3	Wisconsin Electric Power Marketing	James R Keller	Abstain	
3	Wisconsin Public Service Corp.	Gregory J Le Grave		
3	Xcel Energy, Inc.	Michael Ibold	Abstain	
4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Affirmative	
4	American Municipal Power	Kevin Koloini		
4	Blue Ridge Power Agency	Duane S Dahlquist		
4	Central Lincoln PUD	Shamus J Gamache		
4	City of Clewiston	Kevin McCarthy	Affirmative	
4	City of New Smyrna Beach Utilities Commission	Tim Beyrle	Affirmative	
4	City Utilities of Springfield, Missouri	John Allen	Affirmative	
4	Consumers Energy	David Frank Ronk	Abstain	
4	Cowlitz County PUD	Rick Syring	Abstain	
4	Florida Municipal Power Agency	Frank Gaffney	Affirmative	
4	Fort Pierce Utilities Authority	Thomas Richards		
4	Georgia System Operations Corporation	Guy Andrews	Abstain	
4	Illinois Municipal Electric Agency	Bob C. Thomas	Abstain	
4	Madison Gas and Electric Co.	Joseph DePoorter	Abstain	

4	Ohio Edison Company	Douglas Hohlbaugh	Affirmative	
4	Pacific Northwest Generating Cooperative	Aleka K Scott	Abstain	
4	Public Utility District No. 1 of Douglas County	Henry E. LuBean		
4	Public Utility District No. 1 of Snohomish County	John D. Martinsen		
4	Sacramento Municipal Utility District	Mike Ramirez	Abstain	
4	Seattle City Light	Hao Li	Affirmative	
4	Seminole Electric Cooperative, Inc.	Steven R Wallace	Affirmative	
4	Tacoma Public Utilities	Keith Morisette	Affirmative	
4	Tallahassee Electric	Allan Morales	Affirmative	
4	Wisconsin Energy Corp.	Anthony Jankowski	Affirmative	
5	AEP Service Corp.	Brock Ondayko	Abstain	
5	AES Corporation	Leo Bernier	Affirmative	
5	Amerenue	Sam Dwyer	Abstain	
5	Arizona Public Service Co.	Edward Cambridge		
5	Avista Corp.	Edward F. Groce	Affirmative	
5	BC Hydro and Power Authority	Clement Ma	Abstain	
5	Bonneville Power Administration	Francis J. Halpin	Affirmative	
5	City of Grand Island	Jeff Mead	Abstain	
5	City of Redding	Paul Cummings		
5	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Max Emrick		
5	City of Tallahassee	Alan Gale		
5	Cleco Power	Stephanie Huffman	Affirmative	

5	Cogentrix Energy, Inc.	Mike D Hirst	Affirmative	
5	Consolidated Edison Co. of New York	Wilket (Jack) Ng	Abstain	
5	Constellation Power Source Generation, Inc.	Amir Y Hammad		
5	Consumers Energy	James B Lewis		
5	Cowlitz County PUD	Bob Essex	Abstain	
5	CPS Energy	Robert Stevens		
5	Detroit Edison Company	Christy Wicke	Affirmative	
5	Dominion Resources, Inc.	Mike Garton	Abstain	
5	Duke Energy	Dale Q Goodwine	Affirmative	
5	Dynegy Inc.	Dan Roethemeyer	Affirmative	
5	Electric Power Supply Association	John R Cashin		
5	Entergy Corporation	Stanley M Jaskot		
5	Exelon Nuclear	Michael Korchynsky		
5	ExxonMobil Research and Engineering	Martin Kaufman		
5	FirstEnergy Solutions	Kenneth Dresner	Affirmative	
5	Florida Municipal Power Agency	David Schumann	Affirmative	
5	Great River Energy	Preston L Walsh	Affirmative	
5	Green Country Energy	Greg Froehling	Abstain	
5	Indeck Energy Services, Inc.	Rex A Roehl	Abstain	
5	Kansas City Power & Light Co.	Scott Heidtbrink	Negative	
5	Kissimmee Utility Authority	Mike Blough	Affirmative	
5	Lakeland Electric	James M Howard	Affirmative	
5	Liberty Electric Power LLC	Daniel Duff	Abstain	
5	Lincoln Electric System	Dennis Florom	Affirmative	

5	Los Angeles Department of Water & Power	Kenneth Silver		
5	Luminant Generation Company LLC	Mike Laney	Affirmative	
5	Manitoba Hydro	S N Fernando	Affirmative	
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Abstain	
5	MEAG Power	Steven Grego	Affirmative	
5	MidAmerican Energy Co.	Christopher Schneider		
5	Muscatine Power & Water	Mike Avesing	Affirmative	
5	Nebraska Public Power District	Don Schmit	Abstain	
5	New York Power Authority	Gerald Mannarino	Affirmative	
5	Occidental Chemical	Michelle R DAntuono	Affirmative	
5	Omaha Public Power District	Mahmood Z. Safi	Abstain	
5	Orlando Utilities Commission	Richard Kinas		
5	PacifiCorp	Sandra L. Shaffer	Abstain	
5	Platte River Power Authority	Pete Ungerman		
5	Portland General Electric Co.	Gary L Tingley	Affirmative	
5	PPL Generation LLC	Annette M Bannon	Abstain	View
5	Public Service Enterprise Group Incorporated	Dominick Grasso	Abstain	
5	Public Utility District No. 1 of Lewis County	Steven Grega	Abstain	
5	Sacramento Municipal Utility District	Bethany Hunter	Abstain	
5	Salt River Project	Glen Reeves		
5	Santee Cooper	Lewis P Pierce		
5	Seattle City Light	Michael J. Haynes	Affirmative	

5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins	Affirmative	
5	Snohomish County PUD No. 1	Sam Nietfeld	Abstain	
5	Southern Company Generation	William D Shultz	Affirmative	
5	Tampa Electric Co.	RJames Rocha	Abstain	
5	Tenaska, Inc.	Scott M Helyer	Abstain	
5	Tennessee Valley Authority	David Thompson	Abstain	
5	Tri-State G & T Association, Inc.	Barry Ingold	Affirmative	
5	U.S. Army Corps of Engineers	Melissa Kurtz	Affirmative	
5	US Power Generating Company	Bohdan M Dackow		
5	Wisconsin Electric Power Co.	Linda Horn	Abstain	
5	Wisconsin Public Service Corp.	Leonard Rentmeester		
6	AEP Marketing	Edward P. Cox	Abstain	
6	Ameren Energy Marketing Co.	Jennifer Richardson	Abstain	
6	Arizona Public Service Co.	Justin Thompson		
6	Black Hills Power	andrew heinle	Affirmative	
6	Bonneville Power Administration	Brenda S. Anderson	Affirmative	
6	City of Austin dba Austin Energy	Lisa L Martin	Abstain	
6	Cleco Power LLC	Robert Hirschak	Affirmative	
6	Consolidated Edison Co. of New York	Nickesha P Carrol	Abstain	
6	Constellation Energy Commodities Group	Brenda Powell	Affirmative	
6	Dominion Resources, Inc.	Louis S. Slade	Abstain	
6	Duke Energy Carolina	Walter Yeager	Affirmative	
6	Entergy Services, Inc.	Terri F Benoit	Affirmative	
6	Exelon Power Team	Pulin Shah		

6	FirstEnergy Solutions	Mark S Travaglianti	Affirmative	
6	Florida Municipal Power Agency	Richard L. Montgomery	Affirmative	
6	Florida Municipal Power Pool	Thomas Washburn	Affirmative	
6	Florida Power & Light Co.	Silvia P. Mitchell	Abstain	
6	Great River Energy	Donna Stephenson		
6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Negative	
6	Lakeland Electric	Paul Shipps	Abstain	
6	Lincoln Electric System	Eric Ruskamp	Affirmative	
6	Manitoba Hydro	Daniel Prowse	Affirmative	
6	MidAmerican Energy Co.	Dennis Kimm		
6	Muscatine Power & Water	Brandy D Olson		
6	New York Power Authority	William Palazzo	Affirmative	
6	Northern Indiana Public Service Co.	Joseph O'Brien	Affirmative	
6	Omaha Public Power District	David Ried	Affirmative	
6	PacifiCorp	Scott L Smith	Abstain	
6	Platte River Power Authority	Carol Ballantine	Affirmative	
6	PPL EnergyPlus LLC	Mark A Heimbach	Abstain	
6	Progress Energy	John T Sturgeon	Abstain	
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Abstain	
6	Sacramento Municipal Utility District	Claire Warshaw	Abstain	
6	Salt River Project	Steven J Hulet		
6	Santee Cooper	Suzanne Ritter		
6	Seattle City Light	Dennis Sismaet	Abstain	

6	Seminole Electric Cooperative, Inc.	Trudy S. Novak	Affirmative	
6	Shell Energy North America (US), L.P.	Paul Kerr	Affirmative	
6	South California Edison Company	Lujuanna Medina	Affirmative	
6	Tacoma Public Utilities	Michael C Hill	Affirmative	
6	Tampa Electric Co.	Benjamin F Smith II		
6	Tennessee Valley Authority	Marjorie S. Parsons	Affirmative	
6	Western Area Power Administration - UGP Marketing	Peter H Kinney	Affirmative	
6	Xcel Energy, Inc.	David F. Lemmons		
8		James A Maenner	Abstain	
8		Roger C Zaklukiewicz	Affirmative	
8		Edward C Stein	Affirmative	
8	JDRJC Associates	Jim Cyrulewski	Abstain	
8	Pacific Northwest Generating Cooperative	Margaret Ryan	Abstain	
8	Power Energy Group LLC	Peggy Abbadini		
8	Utility Services, Inc.	Brian Evans-Mongeon		
8	Volkman Consulting, Inc.	Terry Volkman	Affirmative	
9	Commonwealth of Massachusetts Department of Public Utilities	Donald E. Nelson	Abstain	
9	National Association of Regulatory Utility Commissioners	Diane J Barney	Affirmative	
9	Oregon Public Utility Commission	Jerry Murray	Abstain	
9	Snohomish County PUD No. 1	William T Moojen		
10	Florida Reliability Coordinating Council	Linda Campbell	Abstain	
10	Midwest Reliability Organization	James D Burley	Affirmative	

10	New York State Reliability Council	Alan Adamson	Affirmative	
10	Northeast Power Coordinating Council, Inc.	Guy V. Zito	Affirmative	
10	ReliabilityFirst Corporation	Anthony E Jablonski	Affirmative	
10	SERC Reliability Corporation	Carter B. Edge	Abstain	
10	Texas Reliability Entity, Inc.	Larry D Grimm	Negative	View
10	Western Electricity Coordinating Council	Louise McCarren	Affirmative	

Ballot Results	
Non-Binding Poll Name:	Project 2006-06 Non-Binding Poll IRO-014
Poll Period:	7/15/2011 - 7/26/2011
Total # Opinions:	139
Total Ballot Pool:	341
Summary Results:	75.37% of those who registered to participate provided an opinion or abstention; 89% of those who provided an opinion indicated support for the VRFs and VSLs.

Individual Ballot Pool Results				
Segment	Organization	Member	Ballot	Comments
1	Allegheny Power	Rodney Phillips		
1	Ameren Services	Kirit Shah	Abstain	
1	American Electric Power	Paul B. Johnson	Abstain	
1	American Transmission Company, LLC	Andrew Z Pusztai	Abstain	
1	Arizona Public Service Co.	Robert Smith		
1	Avista Corp.	Scott J Kinney	Affirmative	
1	Baltimore Gas & Electric Company	Gregory S Miller	Abstain	View
1	BC Hydro and Power Authority	Patricia Robertson	Abstain	
1	Beaches Energy Services	Joseph S Stonecipher	Affirmative	
1	Bonneville Power Administration	Donald S. Watkins	Affirmative	
1	Central Maine Power Company	Kevin L Howes	Abstain	
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G Choi		
1	City of Vero Beach	Randall McCamish		
1	City Water, Light & Power of Springfield	Shaun Anders	Abstain	

1	Clark Public Utilities	Jack Stamper	Affirmative	
1	Cleco Power LLC	Danny McDaniel	Affirmative	
1	Colorado Springs Utilities	Paul Morland		
1	Consolidated Edison Co. of New York	Christopher L de Graffenried	Abstain	
1	Dayton Power & Light Co.	Hertzel Shamash		
1	Dominion Virginia Power	Michael S Crowley	Abstain	
1	Duke Energy Carolina	Douglas E. Hils	Affirmative	
1	East Kentucky Power Coop.	George S. Carruba	Abstain	
1	Empire District Electric Co.	Ralph F Meyer	Affirmative	
1	Entergy Corporation	George R. Bartlett		
1	FirstEnergy Energy Delivery	Robert Martinko	Affirmative	
1	Florida Keys Electric Cooperative Assoc.	Michael Anderson	Negative	
1	Great River Energy	Gordon Pietsch	Affirmative	
1	Hoosier Energy Rural Electric Cooperative, Inc.	Robert Solomon	Negative	
1	Hydro One Networks, Inc.	Ajay Garg	Affirmative	
1	Hydro-Quebec TransEnergie	Bernard Pelletier		
1	Idaho Power Company	Ronald D. Schellberg	Affirmative	
1	International Transmission Company Holdings Corp	Michael Moltane	Negative	
1	Kansas City Power & Light Co.	Michael Gammon	Negative	
1	Keys Energy Services	Stanley T Rzad	Affirmative	
1	Lake Worth Utilities	Walt J Gill	Abstain	
1	Lakeland Electric	Larry E Watt	Affirmative	
1	Lee County Electric Cooperative	John W Delucca	Abstain	

1	Long Island Power Authority	Robert Ganley	Negative	
1	Manitoba Hydro	Joe D Petaski	Affirmative	
1	MEAG Power	Danny Dees	Abstain	
1	MidAmerican Energy Co.	Terry Harbour	Negative	View
1	Minnkota Power Coop. Inc.	Richard Burt	Affirmative	
1	National Grid	Saurabh Saksena		
1	Nebraska Public Power District	Richard L. Koch		
1	New Brunswick Power Transmission Corporation	Randy MacDonald	Abstain	
1	New York Power Authority	Arnold J. Schuff	Affirmative	
1	Northeast Utilities	David Boguslawski	Affirmative	
1	Northern Indiana Public Service Co.	Kevin M Largura	Affirmative	
1	NorthWestern Energy	John Canavan	Abstain	
1	Oklahoma Gas and Electric Co.	Marvin E VanBebber	Abstain	
1	Omaha Public Power District	Doug Peterchuck	Affirmative	
1	Oncor Electric Delivery	Michael T. Quinn	Abstain	
1	Orlando Utilities Commission	Brad Chase	Affirmative	
1	Otter Tail Power Company	Daryl Hanson	Abstain	
1	PacifiCorp	Colt Norrish		
1	PECO Energy	Ronald Schloendorn		
1	Platte River Power Authority	John C. Collins	Affirmative	
1	Portland General Electric Co.	Frank F. Afranji		
1	Potomac Electric Power Co.	David Thorne		
1	PowerSouth Energy Cooperative	Larry D Avery	Negative	
1	PPL Electric Utilities Corp.	Brenda L Truhe	Affirmative	

1	Public Service Company of New Mexico	Laurie Williams		
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Abstain	
1	Public Utility District No. 1 of Okanogan County	Dale Dunckel	Abstain	
1	Puget Sound Energy, Inc.	Catherine Koch		
1	Rochester Gas and Electric Corp.	John C. Allen	Abstain	
1	Sacramento Municipal Utility District	Tim Kelley	Abstain	
1	Salt River Project	Robert Kondziolka		
1	Santee Cooper	Terry L. Blackwell		
1	SCE&G	Henry Delk, Jr.	Abstain	
1	Seattle City Light	Pawel Krupa	Affirmative	
1	Sierra Pacific Power Co.	Rich Salgo	Abstain	
1	South Texas Electric Cooperative	Richard McLeon	Affirmative	
1	Southern California Edison Co.	Dana Cabbell	Affirmative	
1	Southern Company Services, Inc.	Robert Schaffeld	Affirmative	
1	Southern Illinois Power Coop.	William Hutchison		
1	Southwest Transmission Cooperative, Inc.	James Jones	Affirmative	
1	Southwestern Power Administration	Gary W Cox	Affirmative	
1	Sunflower Electric Power Corporation	Noman Lee Williams	Negative	View
1	Tampa Electric Co.	Beth Young		
1	Tennessee Valley Authority	Larry Akens	Abstain	
1	Tri-State G & T Association, Inc.	Tracy Sliman	Affirmative	
1	Tucson Electric Power Co.	John Tolo		

1	United Illuminating Co.	Jonathan Appelbaum	Affirmative	
1	Westar Energy	Allen Klassen		
1	Western Area Power Administration	Brandy A Dunn	Affirmative	
1	Western Farmers Electric Coop.	Forrest Brock	Affirmative	
1	Xcel Energy, Inc.	Gregory L Pieper		
2	Alberta Electric System Operator	Mark B Thompson	Abstain	
2	BC Hydro	Venkataramakrishnan Vinnakota	Abstain	
2	California ISO	Gregory Van Pelt		
2	Electric Reliability Council of Texas, Inc.	Charles B Manning	Affirmative	
2	Independent Electricity System Operator	Kim Warren	Negative	View
2	ISO New England, Inc.	Kathleen Goodman		
2	Midwest ISO, Inc.	Jason L. Marshall		
2	New Brunswick System Operator	Alden Briggs	Abstain	
2	New York Independent System Operator	Gregory Campoli	Abstain	
2	PJM Interconnection, L.L.C.	Tom Bowe	Affirmative	
2	Southwest Power Pool	Charles Yeung		
3	Alabama Power Company	Richard J. Mandes	Affirmative	
3	Allegheny Power	Bob Reeping		
3	Anaheim Public Utilities Dept.	Kelly Nguyen	Affirmative	
3	APS	Steven Norris	Abstain	
3	Atlantic City Electric Company	James V. Petrella		
3	BC Hydro and Power Authority	Pat G. Harrington	Abstain	
3	Blachly-Lane Electric Co-op	Bud Tracy	Abstain	

3	Bonneville Power Administration	Rebecca Berdahl	Affirmative	
3	Central Electric Cooperative, Inc. (Redmond, Oregon)	Dave Markham	Abstain	
3	Central Lincoln PUD	Steve Alexanderson	Abstain	
3	City of Bartow, Florida	Matt Culverhouse		
3	City of Clewiston	Lynne Mila	Affirmative	
3	City of Farmington	Linda Jacobson	Abstain	
3	City of Garland	Ronnie C Hoeinghaus	Abstain	
3	City of Green Cove Springs	Gregg R Griffin	Affirmative	
3	City of Leesburg	Phil Janik	Affirmative	
3	City of Redding	Bill Hughes		
3	Clearwater Power Co.	Dave Hagen	Abstain	
3	Cleco Corporation	Michelle A Corley	Affirmative	
3	ComEd	Bruce Krawczyk	Affirmative	
3	Consolidated Edison Co. of New York	Peter T Yost	Abstain	
3	Constellation Energy	Carolyn Ingersoll	Affirmative	
3	Consumers Energy	David A. Lapinski	Abstain	
3	Consumers Power Inc.	Roman Gillen	Abstain	
3	Coos-Curry Electric Cooperative, Inc	Roger Meader	Abstain	
3	Cowlitz County PUD	Russell A Noble	Abstain	
3	Delmarva Power & Light Co.	Michael R. Mayer	Abstain	
3	Detroit Edison Company	Kent Kujala	Affirmative	
3	Dominion Resources Services	Michael F. Gildea	Abstain	
3	Douglas Electric Cooperative	Dave Sabala	Abstain	

3	Duke Energy Carolina	Henry Ernst-Jr	Affirmative	
3	East Kentucky Power Coop.	Sally Witt	Abstain	
3	Entergy	Joel T Plessinger	Affirmative	
3	Fall River Rural Electric Cooperative	Bryan Case	Abstain	
3	FirstEnergy Solutions	Kevin Querry	Affirmative	
3	Georgia Power Company	Anthony L Wilson	Affirmative	
3	Georgia System Operations Corporation	Scott S. Barfield-McGinnis		
3	Great River Energy	Sam Kokkinen		
3	Hydro One Networks, Inc.	David Kiguel	Affirmative	
3	Idaho Power Company	Shaun Jensen		
3	JEA	Garry Baker		
3	Kansas City Power & Light Co.	Charles Locke	Negative	
3	Kissimmee Utility Authority	Gregory D Woessner		
3	Lakeland Electric	Mace Hunter	Affirmative	
3	Lane Electric Cooperative, Inc.	Rick Crinklaw	Abstain	
3	Lincoln Electric Cooperative, Inc.	Michael Henry	Abstain	
3	Lincoln Electric System	Bruce Merrill		
3	Los Angeles Department of Water & Power	Daniel D Kurowski		
3	Lost River Electric Cooperative	Richard Reynolds	Abstain	
3	Louisville Gas and Electric Co.	Charles A. Freibert		
3	Manitoba Hydro	Greg C. Parent	Affirmative	
3	MidAmerican Energy Co.	Thomas C. Mielnik		
3	Mississippi Power	Don Horsley	Affirmative	

3	Municipal Electric Authority of Georgia	Steven M. Jackson	Affirmative	
3	Muscataine Power & Water	John S Bos	Affirmative	
3	Nebraska Public Power District	Tony Eddleman	Abstain	
3	New York Power Authority	Marilyn Brown	Affirmative	
3	Niagara Mohawk (National Grid Company)	Michael Schiavone	Affirmative	
3	Northern Indiana Public Service Co.	William SeDoris	Affirmative	
3	Northern Lights Inc.	Jon Shelby	Abstain	
3	Okanogan County Electric Cooperative, Inc.	Ray Ellis	Abstain	
3	Orange and Rockland Utilities, Inc.	David Burke	Abstain	
3	Orlando Utilities Commission	Ballard K Mutters	Abstain	
3	PacifiCorp	John Apperson	Abstain	
3	Platte River Power Authority	Terry L Baker	Affirmative	
3	Potomac Electric Power Co.	Robert Reuter		
3	Public Service Electric and Gas Co.	Jeffrey Mueller	Abstain	
3	Public Utility District No. 2 of Grant County	Greg Lange		
3	Raft River Rural Electric Cooperative	Heber Carpenter	Abstain	
3	Sacramento Municipal Utility District	James Leigh-Kendall	Abstain	
3	Salmon River Electric Cooperative	Ken Dizes	Abstain	
3	Salt River Project	John T. Underhill		
3	San Diego Gas & Electric	Scott Peterson		
3	Santee Cooper	Zack Dusenbury		
3	Seattle City Light	Dana Wheelock	Affirmative	

3	Seminole Electric Cooperative, Inc.	James R Frauen	Affirmative	
3	Southern California Edison Co.	David Schiada	Affirmative	
3	Tacoma Public Utilities	Travis Metcalfe	Affirmative	
3	Tampa Electric Co.	Ronald L Donahey		
3	Tennessee Valley Authority	Ian S Grant	Abstain	
3	Umatilla Electric Cooperative	Steve Eldrige	Abstain	
3	West Oregon Electric Cooperative, Inc.	Marc Farmer	Abstain	
3	Wisconsin Electric Power Marketing	James R Keller	Abstain	
3	Wisconsin Public Service Corp.	Gregory J Le Grave		
3	Xcel Energy, Inc.	Michael Ibold	Abstain	
4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Affirmative	
4	American Municipal Power	Kevin Koloini		
4	Blue Ridge Power Agency	Duane S Dahlquist		
4	Central Lincoln PUD	Shamus J Gamache		
4	City of Clewiston	Kevin McCarthy	Affirmative	
4	City of New Smyrna Beach Utilities Commission	Tim Beyrle	Affirmative	
4	City Utilities of Springfield, Missouri	John Allen	Affirmative	
4	Consumers Energy	David Frank Ronk	Abstain	
4	Cowlitz County PUD	Rick Syring	Abstain	
4	Florida Municipal Power Agency	Frank Gaffney	Affirmative	
4	Fort Pierce Utilities Authority	Thomas Richards		
4	Georgia System Operations Corporation	Guy Andrews	Abstain	
4	Illinois Municipal Electric Agency	Bob C. Thomas	Abstain	

4	Madison Gas and Electric Co.	Joseph DePoorter	Abstain	
4	Ohio Edison Company	Douglas Hohlbaugh	Affirmative	
4	Pacific Northwest Generating Cooperative	Aleka K Scott	Abstain	
4	Public Utility District No. 1 of Douglas County	Henry E. LuBean		
4	Public Utility District No. 1 of Snohomish County	John D. Martinsen		
4	Sacramento Municipal Utility District	Mike Ramirez	Abstain	
4	Seattle City Light	Hao Li	Affirmative	
4	Seminole Electric Cooperative, Inc.	Steven R Wallace	Affirmative	
4	Tacoma Public Utilities	Keith Morisette	Affirmative	
4	Tallahassee Electric	Allan Morales	Affirmative	
4	Wisconsin Energy Corp.	Anthony Jankowski	Affirmative	
5	AEP Service Corp.	Brock Ondayko	Abstain	
5	AES Corporation	Leo Bernier	Affirmative	
5	Amerenue	Sam Dwyer	Abstain	
5	Arizona Public Service Co.	Edward Cambridge		
5	Avista Corp.	Edward F. Groce	Affirmative	
5	BC Hydro and Power Authority	Clement Ma	Abstain	
5	Bonneville Power Administration	Francis J. Halpin	Affirmative	
5	City of Grand Island	Jeff Mead	Abstain	
5	City of Redding	Paul Cummings		
5	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Max Emrick		
5	City of Tallahassee	Alan Gale		

5	Cleco Power	Stephanie Huffman	Affirmative	
5	Cogentrix Energy, Inc.	Mike D Hirst	Abstain	
5	Consolidated Edison Co. of New York	Wilket (Jack) Ng	Abstain	
5	Constellation Power Source Generation, Inc.	Amir Y Hammad		
5	Consumers Energy	James B Lewis		
5	Cowlitz County PUD	Bob Essex	Abstain	
5	CPS Energy	Robert Stevens		
5	Detroit Edison Company	Christy Wicke	Affirmative	
5	Dominion Resources, Inc.	Mike Garton	Abstain	
5	Duke Energy	Dale Q Goodwine	Affirmative	
5	Dynegy Inc.	Dan Roethemeyer	Affirmative	
5	Electric Power Supply Association	John R Cashin		
5	Entergy Corporation	Stanley M Jaskot		
5	Exelon Nuclear	Michael Korchynsky		
5	ExxonMobil Research and Engineering	Martin Kaufman		
5	FirstEnergy Solutions	Kenneth Dresner	Affirmative	
5	Florida Municipal Power Agency	David Schumann	Affirmative	
5	Great River Energy	Preston L Walsh	Affirmative	
5	Green Country Energy	Greg Froehling	Abstain	
5	Indeck Energy Services, Inc.	Rex A Roehl	Abstain	
5	Kansas City Power & Light Co.	Scott Heidtbrink	Negative	
5	Kissimmee Utility Authority	Mike Blough	Affirmative	
5	Lakeland Electric	James M Howard	Affirmative	

5	Liberty Electric Power LLC	Daniel Duff	Abstain	
5	Lincoln Electric System	Dennis Florom	Affirmative	
5	Los Angeles Department of Water & Power	Kenneth Silver		
5	Luminant Generation Company LLC	Mike Laney	Affirmative	
5	Manitoba Hydro	S N Fernando	Affirmative	
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Abstain	
5	MEAG Power	Steven Grego	Affirmative	
5	MidAmerican Energy Co.	Christopher Schneider		
5	Muscatine Power & Water	Mike Avesing	Affirmative	
5	Nebraska Public Power District	Don Schmit	Abstain	
5	New York Power Authority	Gerald Mannarino	Affirmative	
5	Occidental Chemical	Michelle R DAntuono	Abstain	
5	Omaha Public Power District	Mahmood Z. Safi	Abstain	
5	Orlando Utilities Commission	Richard Kinas		
5	PacifiCorp	Sandra L. Shaffer	Abstain	
5	Platte River Power Authority	Pete Ungerman		
5	Portland General Electric Co.	Gary L Tingley	Affirmative	
5	PPL Generation LLC	Annette M Bannon	Affirmative	
5	Public Service Enterprise Group Incorporated	Dominick Grasso	Abstain	
5	Public Utility District No. 1 of Lewis County	Steven Grega	Abstain	
5	Sacramento Municipal Utility District	Bethany Hunter	Abstain	
5	Salt River Project	Glen Reeves		

5	Santee Cooper	Lewis P Pierce		
5	Seattle City Light	Michael J. Haynes	Affirmative	
5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins	Affirmative	
5	Snohomish County PUD No. 1	Sam Nietfeld	Abstain	
5	Southern Company Generation	William D Shultz	Affirmative	
5	Tampa Electric Co.	RJames Rocha	Abstain	
5	Tenaska, Inc.	Scott M Helyer	Abstain	
5	Tennessee Valley Authority	David Thompson	Abstain	
5	Tri-State G & T Association, Inc.	Barry Ingold	Affirmative	
5	U.S. Army Corps of Engineers	Melissa Kurtz	Affirmative	
5	US Power Generating Company	Bohdan M Dackow		
5	Wisconsin Electric Power Co.	Linda Horn	Abstain	
5	Wisconsin Public Service Corp.	Leonard Rentmeester		
6	AEP Marketing	Edward P. Cox	Abstain	
6	Ameren Energy Marketing Co.	Jennifer Richardson	Abstain	
6	Arizona Public Service Co.	Justin Thompson		
6	Black Hills Power	andrew heinle	Affirmative	
6	Bonneville Power Administration	Brenda S. Anderson	Affirmative	
6	City of Austin dba Austin Energy	Lisa L Martin	Abstain	
6	Cleco Power LLC	Robert Hirschak	Affirmative	
6	Consolidated Edison Co. of New York	Nickesha P Carrol	Abstain	
6	Constellation Energy Commodities Group	Brenda Powell	Affirmative	
6	Dominion Resources, Inc.	Louis S. Slade	Abstain	
6	Duke Energy Carolina	Walter Yeager	Affirmative	

6	Entergy Services, Inc.	Terri F Benoit	Affirmative	
6	Exelon Power Team	Pulin Shah		
6	FirstEnergy Solutions	Mark S Travagianti	Affirmative	
6	Florida Municipal Power Agency	Richard L. Montgomery	Affirmative	
6	Florida Municipal Power Pool	Thomas Washburn	Affirmative	
6	Florida Power & Light Co.	Silvia P. Mitchell	Abstain	
6	Great River Energy	Donna Stephenson		
6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Negative	
6	Lakeland Electric	Paul Shipps	Abstain	
6	Lincoln Electric System	Eric Ruskamp	Affirmative	
6	Manitoba Hydro	Daniel Prowse	Affirmative	
6	MidAmerican Energy Co.	Dennis Kimm		
6	Muscatine Power & Water	Brandy D Olson		
6	New York Power Authority	William Palazzo	Affirmative	
6	Northern Indiana Public Service Co.	Joseph O'Brien	Affirmative	
6	Omaha Public Power District	David Ried	Affirmative	
6	PacifiCorp	Scott L Smith	Abstain	
6	Platte River Power Authority	Carol Ballantine	Affirmative	
6	PPL EnergyPlus LLC	Mark A Heimbach	Abstain	
6	Progress Energy	John T Sturgeon	Abstain	
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Abstain	
6	Sacramento Municipal Utility District	Claire Warshaw	Abstain	
6	Salt River Project	Steven J Hulet		

6	Santee Cooper	Suzanne Ritter		
6	Seattle City Light	Dennis Sismaet	Abstain	
6	Seminole Electric Cooperative, Inc.	Trudy S. Novak	Affirmative	
6	Shell Energy North America (US), L.P.	Paul Kerr	Abstain	
6	South California Edison Company	Lujuanna Medina	Affirmative	
6	Tacoma Public Utilities	Michael C Hill	Affirmative	
6	Tampa Electric Co.	Benjamin F Smith II		
6	Tennessee Valley Authority	Marjorie S. Parsons	Negative	View
6	Western Area Power Administration - UGP Marketing	Peter H Kinney	Affirmative	
6	Xcel Energy, Inc.	David F. Lemmons		
8		James A Maenner	Abstain	
8		Roger C Zaklukiewicz	Affirmative	
8		Edward C Stein	Affirmative	
8	JDRJC Associates	Jim Cyrulewski	Abstain	
8	Pacific Northwest Generating Cooperative	Margaret Ryan	Abstain	
8	Power Energy Group LLC	Peggy Abbadini		
8	Utility Services, Inc.	Brian Evans-Mongeon		
8	Volkman Consulting, Inc.	Terry Volkman	Affirmative	
9	Commonwealth of Massachusetts Department of Public Utilities	Donald E. Nelson	Abstain	
9	National Association of Regulatory Utility Commissioners	Diane J Barney	Abstain	
9	Oregon Public Utility Commission	Jerry Murray	Abstain	
9	Snohomish County PUD No. 1	William T Moojen		
10	Florida Reliability Coordinating	Linda Campbell	Abstain	

	Council			
10	Midwest Reliability Organization	James D Burley	Affirmative	
10	New York State Reliability Council	Alan Adamson	Affirmative	
10	Northeast Power Coordinating Council, Inc.	Guy V. Zito	Affirmative	
10	ReliabilityFirst Corporation	Anthony E Jablonski	Negative	View
10	SERC Reliability Corporation	Carter B. Edge	Abstain	
10	Texas Reliability Entity, Inc.	Larry D Grimm	Negative	View
10	Western Electricity Coordinating Council	Louise McCarren	Affirmative	

Standard Development Roadmap

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed:

1. Draft SAR Version 1 posted January 15, 2007
2. Draft SAR Version 1 Comment Period ended February 14, 2007
3. Draft SAR Version 2 and comment responses on SAR version 1 posted March 19, 2007
4. Draft Version 2 SAR comment period ended April 17, 2007
5. SAR version 2 and comment responses for SAR version 2 accepted by SC and SDT appointed in June 2007.
6. First posting of revised standards on August 5, 2008 with comment period closed on September 16, 2008.
7. Draft Version 2 of standards and response to comments September 16, 2008–May 26, 2009.
8. Second posting of revised standards on July 10, 2009 with comment period closed on August 9, 2009.
9. RC SDT coordinated with OPCP SDT and RTO SDT on definitions relating to directives and three part communication and Draft Version 3 of standards and response to comments August 9–November 20, 2009.
10. Third posting of revised standards on January 4, 2010 with comment period closed on February 3, 2010.
11. Initial Ballot conducted February 25 through March 7, 2011.

Proposed Action Plan and Description of Current Draft:

The SDT began working on revisions to the standards in August 2007. Following the initial ballot the project was subdivided with some standards moving forward ahead of others. Proposed modifications to IRO-001 were subdivided into two phases – with the first phase the recommended retirement of Requirement R7 as a conforming change associated with approval of IRO-014-2. IRO-001-3 is the second phase and includes more extensive edits to the standard. The current posting contains revisions based on stakeholder comments on the initial ballot. The team is posting for a successive ballot.

Future Development Plan:

Anticipated Actions	Anticipated Date
1. Post Standards for a successive ballot.	January-February 2012
2. Respond to comments on Successive ballot	March - April 2012
3. Standards posted for recirculation ballot	May 2012
4. Standards to be sent to BOT for approval.	June 2012
5. Standards filed with regulatory authorities.	August 2012

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

The RC SDT proposes the following new definition:

Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact.

This defined term is contained in draft COM-002-3 and IRO-001-3.

As a reference, we have included the existing definition of Emergency and the BOT approved definition of Adverse Reliability Impact¹:

Emergency: Any abnormal system condition that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System.

Adverse Reliability Impact: The impact of an event that results in Bulk Electric System instability or Cascading.

¹ This definition was approved by the NERC Board of Trustees on August 4, 2011. Filing with regulatory authorities is pending.

A. Introduction

1. **Title:** **Reliability Coordination – Responsibilities and Authorities**
2. **Number:** IRO-001-3
3. **Purpose:** To establish the authority of Reliability Coordinators to direct other entities to prevent an Emergency or Adverse Reliability Impacts to the Bulk Electric System.
4. **Applicability**
 - 4.1. Reliability Coordinator
 - 4.2. Transmission Operator
 - 4.3. Balancing Authority
 - 4.4. Generator Operator
 - 4.5. Distribution Provider
5. **Effective Date:** In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the second calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees approval.

B. Requirements

- R1.** Each Reliability Coordinator shall have the authority to act or direct others to act (which could include issuing Reliability Directives) to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impacts. *[Violation Risk Factor: High][Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*
- R2.** Each Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider shall comply with its Reliability Coordinator's direction unless compliance with the direction cannot be physically implemented or unless such actions would violate safety, equipment, regulatory or statutory requirements. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*
- R3.** Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to perform as directed in accordance with Requirement R2. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

C. Measures

- M1.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it has the authority to take action or direct action, which could have included issuing Reliability Directive(s), to prevent identified events or mitigate the magnitude or duration of actual events that caused Adverse Reliability Impacts within its Reliability Coordinator Area. (R1)
- M2.** Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall have and provide evidence which may include, but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used

to determine that it complied with its Reliability Coordinator's direction(s) unless the direction could not be implemented or such actions would have violated safety, equipment, regulatory or statutory requirements. In such cases, the Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider shall have and provide copies of the safety, equipment, regulatory or statutory requirements as evidence for not complying with the Reliability Coordinator's direction. (R2)

- M3.** Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall have and provide evidence which may include, but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it informed the Reliability Coordinator of its inability to perform as directed in accordance with Requirement R3. (R3)

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

For entities that do not work for the Regional Entity, the Regional Entity shall serve as the Compliance Enforcement Authority.

For Reliability Coordinators that work for their Regional Entity, the ERO or a Regional Entity approved by the ERO and FERC or other applicable governmental authorities shall serve as the Compliance Enforcement Authority.

1.2. Compliance Monitoring and Enforcement Processes:

Compliance Audit

Self-Certification

Spot Checking

Compliance Violation Investigation

Self-Reporting

Complaint

1.3. Data Retention

The following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.

The Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- The Electric reliability Organization shall retain its evidence for 5 calendar years for Requirement R1, Measure M1.

- The Reliability Coordinator shall retain its evidence for the most recent 90 calendar days for voice recordings or 12 months for documentation for Requirement R2, Measure M2.
- The Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider shall retain its evidence for the most recent 90 calendar days for voice recordings or 12 calendar months for documentation for Requirements R3 and R4, Measures M3 and M4.
- If a Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider is found non-compliant, it shall keep information related to the non-compliance until notified by the Compliance Enforcement Authority that the evidence is no longer needed.
- The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

1.4. Additional Compliance Information

None.

2. Violation Severity Levels

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	N/A	N/A	N/A	The Reliability Coordinator failed to take action or direct actions, to prevent an identified event that resulted in an Adverse Reliability Impact. OR The Reliability Coordinator failed to take action or direct actions to mitigate the magnitude or duration of an event that resulted in an Adverse Reliability Impact.
R2	N/A	N/A	N/A The responsible entity initiated the action directed by the RC, but failed to fully comply with the RC's directive.	The responsible entity did not comply with the Reliability Coordinator's directive.
R3	N/A	N/A	N/A	The responsible entity failed to inform its Reliability Coordinator upon recognition of its inability to perform as directed.

E. Regional Variances

None identified.

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
1	April 4, 2007	Approved by FERC — Effective Date	New
1	May 19, 2011	Replaced Levels of Noncompliance with FERC-approved VSLs	VSL Order
2	To be determined	Retired Requirement R7 to eliminate redundancy with IRO-014-2, Requirement R1.	Project 2006-06
3	TBD	Revised in accordance with SAR for project 2006-6, Reliability Coordination; Revised the standard and retired six requirements (R2, R4, R5, R6, and R8).	Project 2006-06

Standard Development Roadmap

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed:

1. Draft SAR Version 1 posted January 15, 2007
2. Draft SAR Version 1 Comment Period ended February 14, 2007
3. Draft SAR Version 2 and comment responses on SAR version 1 posted March 19, 2007
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7. Draft Version 2 of standards and response to comments September 16, 2008–May 26, 2009.
8. Second posting of revised standards on July 10, 2009 with comment period closed on August 9, 2009.
9. ~~RCS~~~~DT~~~~RC~~ ~~SDT~~ coordinated with OPCP SDT and RTO SDT on definitions relating to directives and three part communication and Draft Version 3 of standards and response to comments August 9–November 20, 2009.
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11. Initial Ballot conducted February 25 through March 7, 2011.

Proposed Action Plan and Description of Current Draft:

The SDT began working on revisions to the standards in August 2007. Following the initial ballot the project was subdivided with some standards moving forward ahead of others. Proposed modifications to IRO-001 were subdivided into two phases – with the first phase the recommended retirement of Requirement R7 as a conforming change associated with approval of IRO-014-2. IRO-001-3 is the second phase and includes more extensive edits to the standard. The current posting contains revisions based on stakeholder comments on the ~~second draft~~initial ballot. The team is posting for a ~~30 day pre-successive~~ ballot ~~review~~.

Future Development Plan:

Anticipated Actions	Anticipated Date
1. ~~Respond to comments on third posting~~ <u>Post Standards for a successive ballot.</u>	~~March 2010~~ <u>January-February 2012</u>
2. ~~Post Standards for pre-Respond to comments on Successive ballot period.~~	~~January 2011~~ <u>March - April 2012</u>
3. Standards posted for ~~initial and~~ -recirculation ~~ballots~~ <u>ballot</u>	~~February 2011~~ <u>May 2012</u>

4. Standards ~~to be~~ sent to BOT for approval.	~~April 2011~~ <u>June 2012</u>
5. Standards filed with regulatory authorities.	~~June 2011~~ <u>August 2012</u>

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

The RC SDT proposes ~~modifying~~ the following ~~approved~~new definition:

~~**Adverse Reliability Impact:** The impact of an event that results in Bulk Electric System instability uncontrolled separation or Cascading.~~

Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an ~~actual or expected~~ Emergency or Adverse Reliability Impact.

This defined term is contained in draft COM-002-~~23~~ and IRO-001-~~23~~.

As a reference, we have included the existing definition of Emergency and the BOT approved definition of Adverse Reliability Impact¹:

Emergency: Any abnormal system condition that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System.

Adverse Reliability Impact: The impact of an event that results in Bulk Electric System instability or Cascading.

¹ This definition was approved by the NERC Board of Trustees on August 4, 2011. Filing with regulatory authorities is pending.

A. Introduction

1. **Title:** Reliability Coordination – Responsibilities and Authorities
2. **Number:** IRO-001-~~23~~
3. **Purpose:** To establish the ~~capability and~~ authority of Reliability Coordinators to direct other entities to prevent an Emergency or Adverse Reliability Impacts to the Bulk Electric System.
4. **Applicability**
 - 4.1. Reliability ~~Coordinators~~ Coordinator
 - 4.2. Transmission ~~Operators~~ Operator
 - 4.3. Balancing ~~Authorities~~ Authority
 - 4.4. Generator ~~Operators~~ Operator
 - ~~4.5. Interchange Coordinators.~~
 - ~~4.6.~~ 4.5. ~~_____~~ Distribution ~~Providers~~ Provider
 - ~~4.7. Electric Reliability Organization.~~
5. **Effective Date:** ~~_____~~ In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the ~~first~~ second calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees approval.

B. Requirements

- ~~R1. The Electric Reliability Organization Each Regional Reliability Organization, subregion, or interregional coordinating group shall establish certify at least one or more Reliability Coordinators to continuously assess transmission reliability and coordinate emergency operations among the operating entities within each region and across the regional boundaries. [Violation Risk Factor: High][Time Horizon: Operations Assessment]~~
- ~~R2.~~ R1. Each Reliability Coordinator shall ~~take actions~~ have the authority to act or direct ~~actions, others to act~~ (which could include issuing Reliability Directives, ~~of Transmission Operators, Balancing Authorities, Generator Operators, Interchange Coordinators and Distribution Providers within its Reliability Coordinator Area~~) to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impacts. [Violation Risk Factor: High][Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]
- ~~R3.~~ R2. Each Transmission Operator, Balancing Authority, Generator Operator, ~~Interchange Coordinator and~~ Distribution Provider shall comply with its Reliability Coordinator's direction ~~per Requirement R2~~ unless compliance with the direction ~~per Requirement R2 can not~~ cannot be physically implemented or unless such actions would violate safety, equipment, regulatory or statutory requirements. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]
- ~~R4.~~ R3. Each Transmission Operator, Balancing Authority, Generator Operator, ~~Interchange Coordinator and~~ and Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to perform as directed ~~per~~ in accordance with Requirement

~~R3R2.~~ [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]

- ~~R5.~~ Each Reliability Coordinator that identifies an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]
- ~~R6.~~ Each Reliability Coordinator that identifies an expected or actual condition with Adverse Reliability Impacts within its Reliability Coordinator Area shall notify all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when the problem has been mitigated. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]
- ~~R7.~~ [SC1] Each Reliability Coordinator shall provide its System Operators with the authority to approve, deny or cancel planned outages of its own analysis tools. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]
- ~~R8.~~ Each Reliability Coordinator shall have procedures in place to mitigate the effects of analysis tool outages. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] [SC2]

C. Measures

~~M1.~~ The Electric reliability Organization shall have and provide evidence which may include, but is not limited to, dated documentation indicating that it certified at least one or more Reliability Coordinators to continuously assess transmission reliability and coordinate emergency operations among the operating entities within the region and across the regional boundaries.

~~M2.~~M1. Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it has ~~taken~~the authority to take action or ~~directed~~direct action, which could have included issuing Reliability Directive(s), to prevent identified events or mitigate the magnitude or duration of actual events that caused Adverse Reliability Impacts within its Reliability Coordinator Area. (R1)

~~M3.~~M2. Each Transmission Operator, Balancing Authority, Generator Operator, ~~Interchange Coordinator~~ and Distribution Provider shall have and provide evidence which may include, but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it complied with its Reliability Coordinator's direction(s) ~~per Requirement R1~~ unless the direction ~~per Requirement R1~~ could not be implemented or such actions would have violated safety, equipment, regulatory or statutory requirements. In such cases, the Transmission Operator, Balancing Authority, Generator Operator, ~~Interchange Coordinator~~ or Distribution Provider shall have and provide copies of the safety, equipment, regulatory or statutory requirements as evidence for not complying with the Reliability Coordinator's direction. (R2)

~~M4.~~M3. Each Transmission Operator, Balancing Authority, Generator Operator, ~~Interchange Coordinator~~ and Distribution Provider shall have and provide evidence which may include, but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or

equivalent documentation, that will be used to determine that it informed the Reliability Coordinator of its inability to perform as directed perin accordance with Requirement ~~R4~~R3. (R3)

~~M5. Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it notified all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when it identified a real or potential condition with Adverse Reliability Impacts, within its Reliability Coordinator Area. (R4)~~

~~M6. Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it notified all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area when a real or potential condition with Adverse Reliability Impacts within its Reliability Coordinator Area had been mitigated. (R5)~~

~~M7. Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a documented procedure or equivalent evidence that will be used to confirm that the Reliability Coordinator has provided its System Operator with the authority to approve, deny or cancel planned outages of its own analysis tools. (R6)~~

~~M8. Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, a documented procedure or equivalent evidence that will be used to confirm that that the Reliability Coordinator has procedures in place to mitigate the effects of analysis tool outages. (R7)~~

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

~~Regional Entity~~

For entities that do not work for the Regional Entity, the Regional Entity shall serve as the Compliance Enforcement Authority.

For Reliability Coordinators that work for their Regional Entity, the ERO or a Regional Entity approved by the ERO and FERC or other applicable governmental authorities shall serve as the Compliance Enforcement Authority.

1.2. Compliance Monitoring and Enforcement Processes:

Compliance ~~Audits~~Audit

Self-~~Certifications~~Certification

Spot Checking

Compliance Violation ~~Investigations~~Investigation

Self-Reporting

~~Complaints~~

Complaint

1.3. Data Retention

The following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.

The Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider, ~~or Interchange Coordinator~~ shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- The Electric reliability Organization shall retain its evidence for 5 calendar years for Requirement R1 ~~and~~ Measure M1.
- The Reliability Coordinator shall retain its evidence for the most recent 90 calendar days for voice recordings or 12 months for documentation for Requirement R2 ~~and~~ Measure M2.
- The Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider ~~or Interchange Coordinator~~ shall retain its evidence for the most recent 90 calendar days for voice recordings or 12 calendar months for documentation for Requirements R3 and R4, Measures M3 and M4.
- ~~○ The Reliability Coordinator shall retain its current, in force document and any documents in force for the current year and previous calendar year for Requirements R6 and R7 and Measures M6 and M7.~~
- ○ If a Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider ~~or Interchange Coordinator~~ is found non-compliant, it shall keep information related to the non-compliance until ~~found compliant~~ notified by the Compliance Enforcement Authority that the evidence is no longer needed.
- ○ The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

1.4. Additional Compliance Information

None.

2. Violation Severity Levels

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
~~R1~~	N/A	N/A	N/A	The Regional Entity failed to ensure that at least one Reliability Coordinator was certified in its region.
~~R2~~ R1	N/A	N/A	N/A	The Reliability Coordinator failed to take action or direct actions, ~~which could have included issuing Reliability Directive(s), for actions to be taken~~ to prevent <u>an</u> identified ~~event~~<u>event</u> that resulted in <u>an</u> Adverse Reliability ~~Impacts~~<u>Impact</u>. OR The Reliability Coordinator failed to take action or direct actions, ~~which could have included issuing Reliability Directive(s), for actions to be taken~~ to mitigate the magnitude or duration of <u>actual events</u><u>an event</u> that resulted in <u>an</u> Adverse Reliability ~~Impacts~~<u>Impact</u>.
~~R3~~ R2	N/A	N/A	~~N/A~~ N/A The responsible entity initiated the action directed by the RC, but failed to fully comply with the RC's directive.	The responsible entity did not comply with the Reliability Coordinator's ~~direction per Requirement R1~~ <u>directive</u> .
~~R4~~ R3	N/A	N/A	N/A	The responsible entity failed to inform its Reliability Coordinator upon recognition of ~~the its~~ inability to perform as directed ~~per Requirement R1~~ .

E. Regional Variances

None identified.

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
1	April 4, 2007	Approved by FERC — Effective Date	New
<u>1</u>	<u>May 19, 2011</u>	<u>Replaced Levels of Noncompliance with FERC-approved VSLs</u>	<u>VSL Order</u>
<u>2</u>	<u>To be determined</u>	<u>Retired Requirement R7 to eliminate redundancy with IRO-014-2, Requirement R1.</u>	<u>Project 2006-06</u>
<u>23</u>	TBD	Revised ~~per~~ <u>in accordance with</u> SAR for project 2006-6, ~~reliability~~ <u>Reliability</u> Coordination; ~~added VRFs~~ <u>Revised the standard</u> and ~~VSLs as approved from VRF~~ <u>retired six requirements (R2, R4, R5, R6, and VSL projects R8).</u>	~~Revised~~ <u>Project 2006-06</u>

Standard Development Roadmap

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed:

1. Draft SAR Version 1 posted January 15, 2007
2. Draft SAR Version 1 Comment Period ended February 14, 2007
3. Draft SAR Version 2 and comment responses on SAR version 1 posted March 19, 2007
4. Draft Version 2 SAR comment period ended April 17, 2007
5. SAR version 2 and comment responses for SAR version 2 accepted by SC and SDT appointed in June 2007.
6. First posting of revised standards on August 5, 2008 with comment period closed on September 16, 2008.
7. Draft Version 2 of standards and response to comments September 16, 2008–May 26, 2009.
8. Second posting of revised standards on July 10, 2009 with comment period closed on August 9, 2009.
9. RC SDT coordinated with OCP SDT and RTO SDT on definitions relating to directives and three part communication and Draft Version 3 of standards and response to comments August 9–November 20, 2009.
10. Third posting of revised standards on January 4, 2010 with comment period closed on February 3, 2010.
11. Initial Ballot conducted February 25 through March 7, 2011.

Proposed Action Plan and Description of Current Draft:

The SDT began working on revisions to the standards in August 2007. Following the initial ballot the project was subdivided with some standards moving forward ahead of others. Proposed modifications to IRO-001 were subdivided into two phases – with the first phase the recommended retirement of Requirement R7 as a conforming change associated with approval of IRO-014-2. IRO-001-3 is the second phase and includes more extensive edits to the standard. The current posting contains revisions based on stakeholder comments on the initial ballot. The team is posting for a successive ballot.

Future Development Plan:

<u>Anticipated Actions</u>	<u>Anticipated Date</u>
<u>1. Post Standards for a successive ballot.</u>	<u>January-February 2012</u>
<u>2. Respond to comments on Successive ballot</u>	<u>March - April 2012</u>
<u>3. Standards posted for recirculation ballot</u>	<u>May 2012</u>
<u>4. Standards to be sent to BOT for approval.</u>	<u>June 2012</u>
<u>5. Standards filed with regulatory authorities.</u>	<u>August 2012</u>

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

The RC SDT proposes the following new definition:

Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact.

This defined term is contained in draft COM-002-3 and IRO-001-3.

As a reference, we have included the existing definition of Emergency and the BOT approved definition of Adverse Reliability Impact¹:

Emergency: Any abnormal system condition that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System.

Adverse Reliability Impact: The impact of an event that results in Bulk Electric System instability or Cascading.

¹ This definition was approved by the NERC Board of Trustees on August 4, 2011. Filing with regulatory authorities is pending.

A. Introduction

1. **Title:** Reliability Coordination — Responsibilities and Authorities
2. **Number:** IRO-001-~~23~~
- ~~3. **Purpose:** Reliability Coordinators must have the authority, plans, and agreements in place to immediately direct reliability entities within their Reliability Coordinator Areas to re-dispatch generation, reconfigure transmission, or reduce load to mitigate critical conditions to return the system to a reliable state. If a Reliability Coordinator delegates tasks to others, the Reliability Coordinator retains its responsibilities for complying with NERC and regional standards. Standards of conduct are necessary to ensure the Reliability Coordinator does not act in a manner that favors one market participant over another.~~
3. **Purpose:** To establish the authority of Reliability Coordinators to direct other entities to prevent an Emergency or Adverse Reliability Impacts to the Bulk Electric System.
4. **Applicability**
 - 4.1. Reliability ~~Coordinators.Coordinator~~
 - ~~4.2. Regional Reliability Organizations.~~
 - ~~4.3.4.2. Transmission Operator.~~
 - ~~4.4.4.3. Balancing Authorities.Authority~~
 - ~~4.5.4.4. Generator Operators.Operator~~
 - ~~4.6. Transmission Service Providers.~~
 - ~~4.7. Load Serving Entities.~~
 - ~~4.8. Purchasing Selling Entities.~~
5. **Effective Date:** ~~_____~~
 - ~~4.5. Distribution Provider~~
5. **Effective Date:** In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the second calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees approval.

B. Requirements

- ~~R1. Each Regional Reliability Organization, subregion, or interregional coordinating group shall establish one or more Reliability Coordinators to continuously assess transmission reliability and coordinate emergency operations among the operating entities within the region and across the regional boundaries.~~
- ~~R2. The Reliability Coordinator shall comply with a regional reliability plan approved by the NERC Operating Committee.~~
- ~~R3. The Reliability Coordinator shall have clear decision making the authority to act and to or direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load Serving Entities, and Purchasing Selling Entities within its Reliability Coordinator Area to preserve the integrity and reliability of the~~

~~Bulk Electric System. These actions shall be taken without delay, but no longer than 30 minutes.~~

~~**R4.R1.** Reliability Coordinators that delegate tasks to other entities shall have formal operating agreements with each entity to others to act (which tasks are delegated. The Reliability Coordinator shall verify that all delegated tasks are understood, communicated, and addressed within its Reliability Coordinator Area. All responsibilities for complying with NERC and regional standards applicable to Reliability Coordinators shall remain with the Reliability Coordinator, could include issuing Reliability Directives) to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impacts. *[Violation Risk Factor: High][Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*~~

~~**R5.** The Reliability Coordinator shall list within its reliability plan all entities to which the Reliability Coordinator has delegated required tasks.~~

~~**R6.** The Reliability Coordinator shall verify that all delegated tasks are carried out by NERC-certified Reliability Coordinator operating personnel.~~

~~**R7.R2.** Each Transmission Operators Operator, Balancing Authorities Authority, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities Operator, Distribution Provider shall comply with Reliability Coordinator directives its Reliability Coordinator's direction unless compliance with the direction cannot be physically implemented or unless such actions would violate safety, equipment, or regulatory or statutory requirements. Under these circumstances, the Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, or Purchasing-Selling Entity shall immediately inform the Reliability Coordinator of the inability to perform the directive so that the Reliability Coordinator may implement alternate remedial actions. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*~~

~~**R8.** The Reliability Coordinator shall act in the interests of reliability for the overall Reliability Coordinator Area and the Interconnection before the interests of any other entity.~~

~~C. Measures~~

~~**M1.** Each Regional Reliability Organization shall have, and provide upon request, evidence that could include, but is not limited to signed agreements or other equivalent evidence that will be used to confirm that it established one or more Reliability Coordinators to continuously assess transmission reliability and coordinate emergency operations among the operating entities within the region and across the regional boundaries as described in Requirement 1.~~

~~**M2.** Each Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, job descriptions, signed agreements, an authority letter signed by an officer of the company, or other equivalent evidence that will be used to confirm that the Reliability Coordinator has the authority to act as described in Requirement 3.~~

~~**M3.** The Reliability Coordinator shall have and provide upon request current formal operating agreements with entities that have been delegated any Reliability Coordinator tasks (Requirement 4 Part 1).~~

~~**M4.** The Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, job descriptions, signed agreements, records of training sessions, monitoring procedures or other equivalent evidence that will be used to confirm that all delegated tasks are understood, communicated, and addressed within its Reliability Coordinator Area (Requirement 4 Part 2 and Requirement 5).~~

~~M5.~~ The Reliability Coordinator shall have and provide upon request evidence that could include, but is not limited to, records that show each operating person assigned to perform a Reliability Coordinator delegated task has a NERC Reliability Coordinator certification credential, or equivalent evidence confirming that delegated tasks were carried out by NERC-certified Reliability Coordinator operating personnel, as specified in Requirement 6.

R3. Each Transmission Operator, Balancing Authority, Generator Operator, ~~Transmission Service and Distribution~~ Provider, Load-Serving Entity, or Purchasing-Selling Entity shall inform its Reliability Coordinator upon recognition of its inability to perform as directed in accordance with Requirement R2. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

C. Measures

M1. Each Reliability Coordinator shall have and provide ~~upon request~~ evidence ~~that could~~ which may include, but is not limited to, dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it has the authority to take action or direct action, which could have included issuing Reliability Directive(s), to prevent identified events or mitigate the magnitude or duration of actual events that caused Adverse Reliability Impacts within its Reliability Coordinator Area. (R1)

M2. Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall have and provide evidence which may include, but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or ~~other~~ equivalent evidence documentation, that will be used to ~~confirm~~ determine that it ~~did not comply~~ complied with ~~the~~ its Reliability Coordinator's ~~directives~~ direction(s) unless the direction could not be implemented or if ~~for such actions would have violated~~ safety, equipment, regulatory or statutory requirements it could not comply. In such cases, the Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider shall have and provide copies of the safety, equipment, regulatory or statutory requirements as evidence for not complying with the Reliability Coordinator's direction. (R2)

~~M6.~~**M3.** Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall have and provide evidence which may include, but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it informed the Reliability Coordinator ~~immediately~~ (of its inability to perform as directed in accordance with Requirement 7) ~~R3.~~ (R3)

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance ~~Monitoring Responsibility~~ Enforcement Authority

~~NERC shall be responsible~~ For entities that do not work for compliance monitoring of the Regional Reliability Organization.

~~Entity, the Regional Reliability Organizations Entity~~ shall be responsible for ~~compliance monitoring of~~ serve as the Compliance Enforcement Authority.

~~For Reliability Coordinators, Transmission Operators, Generator Operators, Distribution Providers, and Load Serving Entities.~~

1.2. Compliance Monitoring Period and Reset Time Frame

One or more of the following methods will be used to assess compliance:

- Self-certification (Conducted annually with submission according to schedule.)
- Spot Check Audits (Conducted anytime with up to 30 days notice given to prepare.)
- Periodic Audit (Conducted once every three years according to schedule.)
- Triggered Investigations (Notification of an investigation must be made within 60 days of an event or complaint of noncompliance. The entity will have up to 30 days to prepare for that work for their Regional Entity, the investigation. An entity may request an extension of the preparation period and the extension will be considered ERO or a Regional Entity approved by the ERO and FERC or other applicable governmental authorities shall serve as the Compliance Monitor on a case-by-case basis.) Enforcement Authority.

The Performance Reset Period shall be 12 months from the last finding of non-compliance.

1.2. Compliance Monitoring and Enforcement Processes:

Compliance Audit

Self-Certification

Spot Checking

Compliance Violation Investigation

Self-Reporting

Complaint

1.3. Data Retention

~~Each Regional Reliability~~ The following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.

The Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- o The Electric reliability Organization shall ~~have~~ retain its ~~current, in-force documents~~ evidence for 5 calendar years for Requirement R1, Measure 4M1.
- o ~~Each~~ The Reliability Coordinator shall ~~have its current, in-force documents or the latest copy of a record as evidence of compliance to Measures 2 through 6,~~ retain its evidence for the most recent 90 calendar days for voice recordings or 12 months for documentation for Requirement R2, Measure M2.

- ~~o Each~~The Transmission Operator, Balancing Authority, Generator Operator, Transmission Service or Distribution Provider, and Load Serving Entity shall keep ~~90 days of historical data (retain its evidence)~~ for Measure 6 ~~the most recent 90 calendar days for voice recordings or 12 calendar months for documentation for Requirements R3 and R4, Measures M3 and M4.~~

If ~~an entity is a Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider is~~ found non-compliant ~~the entity, it~~ shall keep information related to the ~~noncompliance~~ non-compliance until ~~found compliant~~ or for two years plus the current year, whichever is longer.

- ~~• Evidence used as part of a triggered investigation shall be retained by the entity being investigated for one year from the date that the investigation is closed, as determined~~ notified by the Compliance ~~Monitor~~, Enforcement Authority that the evidence is no longer needed.
- ~~• The Compliance~~ Monitor Enforcement Authority shall keep the last ~~periodic~~ audit ~~report~~ records and all requested and submitted subsequent ~~compliance~~ audit records.

1.4. Additional Compliance Information

None.

2. Violation Severity Levels:

R #	Lower VSL	Moderate VSL	High VSL	Severe VSL
~~R1-~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~
~~R2-~~	~~N/A~~	~~N/A~~	~~N/A~~	~~The Reliability Coordinator did not comply with the regional reliability plan approved by the NERC Operating Committee.~~
~~R3-~~	~~N/A~~	~~N/A~~	~~The Reliability Coordinator cannot demonstrate that it has clear authority to act or direct actions to preserve transmission security and reliability of the Bulk Electric System.~~	~~The Reliability Coordinator failed to take or direct action to preserve the reliability and security of the Bulk Electric System within 30 minutes of identifying those actions.~~
~~R4-~~		~~The Reliability Coordinator has delegated tasks to other entities and had formal operating agreements with each of these entities but could not verify that delegated tasks were understood, communicated, and addressed within its Reliability Coordinator Area.~~		~~The Reliability Coordinator has delegated tasks to other entities but failed to have a formal operating agreement delegating tasks to each of these entities.~~
~~R5-~~	~~5% or less of the delegate entities are not identified in the reliability plan.~~	~~More than 5% up to (and including) 10% of the delegate entities are not identified in the reliability plan.~~	~~More than 10% up to (and including) 15% of the delegate entities are not identified in the reliability plan.~~	~~There is no reliability plan OR More than 15% of the delegate entities are not identified in the reliability plan.~~
~~R6-R1~~	~~There is no reliability plan -OR More than 15% of the delegate entities are not identified in the~~	~~The Reliability Coordinator failed to demonstrate that more than 5% up to (and including) 10% of its delegated tasks were being performed by NERC certified~~	~~The Reliability Coordinator failed to demonstrate that more than 10% up to (and including) 15% of its delegated tasks were being performed by NERC certified~~	~~The Reliability Coordinator failed to demonstrate <u>take action or direct actions, to prevent an identified event</u> that more than 15% of its delegated tasks were being performed by NERC~~

R #	Lower VSL	Moderate VSL	High VSL	Severe VSL
	~~reliability plan. N/A~~	~~Reliability Coordinator operating personnel. N/A~~	~~Reliability Coordinator Operating personnel. N/A~~	~~certified~~ resulted in an Adverse Reliability Impact. ~~OR~~ The Reliability Coordinator ~~operating personnel~~ failed to take action or direct actions to mitigate the magnitude or duration of an event that resulted in an Adverse Reliability Impact.
~~R8-R2~~	N/A	~~The responsible entity could not comply with a directive due to qualified reasons (violation of safety, equipment or regulatory or statutory requirements) and did not immediately inform the Reliability Coordinator. N/A~~	~~N/A~~ N/A The responsible entity initiated the action directed by the RC, but failed to fully comply with the RC's directive.	The responsible entity did not ~~follow~~ comply with the Reliability Coordinator's directive.
~~R9-R3~~	N/A	N/A	N/A	The ~~responsible~~ entity failed to inform its Reliability Coordinator ~~did not act in the interests upon recognition of reliability for the overall Reliability Coordinator Area and the Interconnection before the interests of one or more other entities~~ its inability to perform as directed.

E. Regional ~~Differences~~Variances

None identified.

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
1	~~November 19, 2006~~ <u>April 4, 2007</u>	~~Changes “Distribution Provider” to “Transmission Service Provider”~~ <u>Approved by FERC — Effective Date</u>	~~Errata~~ <u>New</u>
1	May 19, 2011	Replaced Levels of Noncompliance with FERC-approved VSLs	VSL Order
2	To be determined	Retired Requirement R7 to eliminate redundancy with IRO-014-2, Requirement R1.	Project 2006-06
<u>3</u>	<u>TBD</u>	<u>Revised in accordance with SAR for project 2006-6, Reliability Coordination; Revised the standard and retired six requirements (R2, R4, R5, R6, and R8).</u>	<u>Project 2006-06</u>

Implementation Plan and Mapping Document for IRO-001-3 - Reliability Coordination — Responsibilities and Authorities

Approvals Requested

The RC SDT requests the approval of IRO-001-3 – Reliability Coordination – Responsibilities and Authorities.

Prerequisite Approvals

- None

Conforming Changes to Requirements in Already Approved Standards

- None

Revision Summary

- The RC SDT revised the standard and is proposing retiring six requirements (R2, R4, R5, R6, R7 and R9). Changes were made to eliminate redundancies between standards (existing and proposed), to align with NERCs Rules of Procedure and to address issues in FERC Order 693.

Effective Dates

In those jurisdictions where regulatory approval is required, IRO-001-3 shall become effective on the first day of the second calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees approval.

Retirements

IRO-001-2 should be retired at midnight of the day immediately prior to the Effective Date of IRO-001-3 in the particular jurisdiction in which the new standard is becoming effective.

Revisions or Retirements to Already Approved Standards

The following tables identify the sections of approved standards that shall be retired or revised when this standard is implemented. If the drafting team is recommending the retirement or revision of a requirement, that text is blue.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R1. Each Regional Reliability Organization, subregion, or interregional coordinating group shall establish one or more Reliability Coordinators to continuously assess transmission reliability and coordinate emergency operations among the operating entities within the region and across the regional boundaries. <i>[Violation Risk Factor: High]</i>	This requirement was retired as it is addressed in the NERC Rules of Procedure, Section 503, item 2.2: “Regional entities shall verify that all balancing authorities and transmission operators are under the responsibility of a reliability coordinator” R1.
Notes:	
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R2. The Reliability Coordinator shall comply with a regional reliability plan approved by the NERC Operating Committee. <i>[Violation Risk Factor: High]</i> R5. The Reliability Coordinator shall list within its reliability plan all entities to which the Reliability Coordinator has delegated required tasks. <i>[Violation Risk Factor: Lower]</i>	IRO-001-3 None – The RC SDT proposes retiring these requirements.
Notes: The RC SDT proposes retiring R2 and R5 as the regional reliability plan is a “how” document that shows how an RC will comply with all other NERC Standards, making this requirement redundant.	
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R3. The Reliability Coordinator shall have clear decision-making authority to act and direct actions to be taken by	IRO-001-3 R1. Each Reliability Coordinator shall take have the authority to actions or direct others to actions (which

Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities and Purchasing-Selling Entities within its Reliability Coordinator Area to preserve the integrity and reliability of the Bulk Electric System. These actions shall be taken without delay, but no longer than 30 minutes. <i>[Violation Risk Factor: High]</i>	could include issuing Reliability Directives) by Transmission Operators, Balancing Authorities, Generator Operators, and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impacts. [Violation Risk Factor: High][Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]
Notes: - The RC SDT is proposing that the last sentence of R3 be retired. The timing of RC response to events varies based on system conditions. The specific timing criteria for responses to IROLs are contained in other standards (e.g., TOP-007, R2). - The Distribution Provider was added as an applicable entity per FERC Order 693.	
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R4. Reliability Coordinators that delegate tasks to other entities shall have formal operating agreements with each entity to which tasks are delegated. The Reliability Coordinator shall verify that all delegated tasks are understood, communicated, and addressed within its Reliability Coordinator Area. All responsibilities for complying with NERC and regional standards applicable to Reliability Coordinators shall remain with the Reliability Coordinator. <i>[Violation Risk Factor: Medium]</i>	IRO-001-3 None – retire the requirement RC SDT proposes that original IRO-001-1, R4 is redundant with NERC Rules of Procedure, section 500 and should be retired from the standard. Section 501 states: “The purpose of the compliance registry will be to clearly identify those entities that are responsible for compliance with reliability standards. Organizations listed on the registry will be responsible for knowing the content of and for complying with the NERC reliability standards.” Also, section 507, item 2 addresses written agreements; Joint registration pursuant to written agreement.

“Where a JRO and any of its members or related entities agree, in writing, upon a division of compliance responsibility among them for one or more reliability standard(s) applicable to a particular function, and/or for one or more requirements within particular reliability standard(s), both the JRO and such member(s) or related entit(ies) shall register as an organization responsible for that function. The JRO and its member(s) or related entit(ies) must have a written agreement that clearly specifies their respective responsibilities, which shall be submitted as part of the joint registration. Neither NERC nor the regional entity shall be parties to any such agreement between a JRO and its member or related entity(ies), nor shall NERC or the regional entity have responsibility for reviewing or approving any such agreement, other than to verify that the agreement provides for an allocation or assignment of responsibilities consistent with the joint registration.”

Notes: The RC SDT recommends the retirement of IRO-001-1 R4.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R6. The Reliability Coordinator shall verify that all delegated tasks are carried out by NERC-certified Reliability Coordinator operating personnel. <i>[Violation Risk Factor: Medium]</i>	IRO-001-3 None – retire requirement because it is redundant with: PER-003-0 R1. Each Transmission Operator, Balancing Authority, and Reliability Coordinator shall staff all operating positions that meet both of the following criteria with personnel that are NERC certified for the applicable functions: R1.1. Positions that have the primary responsibility, either directly or through communications with others, for the real-time operation of the interconnected Bulk Electric System.

R1.2. Positions directly responsible for complying with NERC standards.

Notes: The RC SDT recommends retiring IRO-001-1 R6 as it is redundant with PER-003-0 R1.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R7. The Reliability Coordinator shall have clear, comprehensive coordination agreements with adjacent Reliability Coordinators to ensure that System Operating Limit (SOL) or Interconnection Reliability Operating Limit (IROL) violation mitigation requiring actions in adjacent Reliability Coordinator Areas are coordinated. <i>[Violation Risk Factor: High]</i>	IRO-001-3 None – requirement should be retired because it is redundant with: IRO-014-2 R1. Each Reliability Coordinator shall have Operating Procedures, Operating Processes, or Operating Plans for activities that require notification, exchange of information or coordination of actions that may impact other Reliability Coordinator Areas to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following: <i>[Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning]</i>

Notes: The RC SDT recommends the retirement of IRO-001-1 R7 as this is redundant with IRO-014-1 R1.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R8: Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities shall comply with Reliability Coordinator directives unless such actions would violate safety, equipment, or regulatory or statutory requirements. Under these circumstances, the Transmission Operator, Balancing	IRO-001-3 R2. Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall comply with its Reliability Coordinator's direction in accordance with Requirement R2 unless compliance with the direction in accordance with Requirement R2 the direction cannot be physically implemented or unless such actions would violate

Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, or Purchasing-Selling Entity shall immediately inform the Reliability Coordinator of the inability to perform the directive so that the Reliability Coordinator may implement alternate remedial actions. <i>[Violation Risk Factor: High]</i>	safety, equipment, regulatory or statutory requirements. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i> R4. Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to perform as directed in accordance with Requirement R2. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i>
Notes: The RC SDT added the Distribution Provider per FERC Order 693 and added the blue text shown in the requirements above. The RC SDT proposes the replacement of IRO-001-1, R8 with two requirements IRO-001-3, R3, and R4. This will add clarity and measurability to the standard. The last part of the second sentence should be removed as it is implicit in R1, which states that the Reliability Coordination will act or direct actions to mitigate issues. Stakeholders indicated issues with the ability to measure compliance with the phrase, “without intentional delay” and this was removed. Relating to First Energy’s comment in FERC Order 693, the requirements address both personnel safety and equipment. There is no reference to a chain of command in the requirements. The standard is written such that decision-making authority rests with the Reliability Coordinator. No further revisions to the standard are required.	
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R9. The Reliability Coordinator shall act in the interests of reliability for the overall Reliability Coordinator Area and the Interconnection before the interests of any other entity. <i>[Violation Risk Factor: High]</i>	IRO-001-3 None – retire the requirement as redundant.
Notes: The RC SDT proposes retiring this requirement. All Reliability Coordinator Standard Requirements are developed so that the Reliability Coordinator shall act in the interest of reliability for the RC Area and the Interconnection. Section 6 of the NERC Standard Development Procedure states that NERC develops and maintains Reliability Standards. Equity issues are covered under the Reliability Coordinator Standards of Conduct.	

Functions that Must Comply with the Requirements in the Standards

Standard	Functions that Must Comply With the Requirements							
	Reliability Coordinator	Balancing Authority	Distribution Provider	Transmission Operator	Transmission Service Provider	Purchasing Selling Entity	Generator Operator	Load Serving Entity
IRO-001-3	X	X	X	X			X	

Implementation Plan ~~and Mapping Document~~ for IRO-001-~~32~~ - Reliability Coordination — Responsibilities and Authorities

Approvals Requested

The RC SDT requests the approval of IRO-001-32 – Reliability Coordination – Responsibilities and Authorities. Also, the RC SDT requests the approval of one existing NERC Glossary term and the approval of one new term.

Prerequisite Approvals

- None

~~Revisions to Defined Terms in the NERC Glossary~~

~~The RC SDT proposes modifying the following approved definition:~~

~~**Adverse Reliability Impact**—The impact of an event that results in Bulk Electric System instability or Cascading.~~

~~This defined term is also contained in draft IRO-014-2~~

~~The RC SDT proposes the following new definition:~~

~~**Reliability Directive:** A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an Emergency.~~

~~This defined term is contained in draft COM-002-3 and IRO-001-2.~~

Conforming Changes to Requirements in Already Approved Standards

- None

Revision Summary

- The RC SDT revised the standard and is proposing retiring ~~several~~six requirements (R2, R4, R5, R6, R7 and ~~R10~~R9). Changes were made to eliminate redundancies between standards (existing and proposed), to align with NERCs Rules of Procedure and to address issues in FERC Order 693.

Effective Dates

In those jurisdictions where regulatory approval is required, ~~this standard~~IRO-001-3 shall become effective on the first day of the ~~first~~second calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees approval.

Retirements

IRO-001-2 should be retired at midnight of the day immediately prior to the Effective Date of IRO-001-3 in the particular jurisdiction in which the new standard is becoming effective.

Mapping Document for IRO-001-3

Revisions or Retirements to Already Approved Standards

The following tables identify the sections of approved standards that shall be retired or revised when this standard is implemented. If the drafting team is recommending the retirement or revision of a requirement, that text is blue.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R1. Each Regional Reliability Organization, subregion, or interregional coordinating group shall establish one or more Reliability Coordinators to continuously assess transmission reliability and coordinate emergency operations among the operating entities within the region and across the regional boundaries. <i>[Violation Risk Factor: High]</i>	<u>IRO-001-2</u> <u>This requirement was retired as it is addressed in the NERC Rules of Procedure, Section 503, item 2.2:</u> <u>“Regional entities shall verify that all balancing authorities and transmission operators are under the responsibility of a reliability coordinator”</u> R1. ~~The Electric Reliability Organization shall certify at least one or more Reliability Coordinators to continuously assess transmission reliability and coordinate emergency operations among the operating entities within each region and across the regional boundaries. [Violation Risk Factor: High][Time Horizon: Operations Assessment]~~
Notes: ~~After discussion with NERC legal staff, the above requirement was proposed as a revision to existing R1.~~	
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R2. The Reliability Coordinator shall comply with a regional reliability plan approved by the NERC Operating Committee. <i>[Violation Risk Factor: High]</i> R5. The Reliability Coordinator shall list within its reliability plan all entities to which the Reliability Coordinator has delegated required tasks. <i>[Violation Risk Factor: Lower]</i>	~~<u>IRO-001-2</u>~~ <u>IRO-001-3</u> None – The RC SDT proposes retiring these requirements.
Notes: The RC SDT proposes retiring R2 and R5 as the regional reliability plan is a “how” document that shows how an RC will comply with all other NERC Standards, making this requirement redundant.	

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R3. The Reliability Coordinator shall have clear decision-making authority to act and direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities and Purchasing-Selling Entities within its Reliability Coordinator Area to preserve the integrity and reliability of the Bulk Electric System. These actions shall be taken without delay, but no longer than 30 minutes. <i>[Violation Risk Factor: High]</i>	~~IRO-001-2~~ <u>IRO-001-3</u> ~~R2.~~ <u>R1.</u> <u>Each Reliability Coordinator shall take have the authority to actions or direct others to actions (which could include issuing Reliability Directives) by Transmission Operators, Balancing Authorities, Generator Operators, and Distribution Providers within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impacts. [Violation Risk Factor: High][Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</u> ~~Each Reliability Coordinator shall take actions or direct actions , which could include issuing Reliability Directives, of Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, Distribution Providers and Purchasing-Selling Entities within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in Adverse Reliability Impacts. [Violation Risk Factor: High][Time Horizon: Real-time Operations and Same Day Operations]~~
Notes: ~~• The RC SDT is proposing to remove the blue text in the first sentence.~~ • The RC SDT is proposing that the last sentence of R3 be retired. The timing of RC response to events varies based on system conditions. The specific timing criteria for responses to IROLs are contained in other standards (e.g., TOP-007, R2).	

▪ The Distribution Provider was added as an applicable entity per FERC Order 693.	
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R4. Reliability Coordinators that delegate tasks to other entities shall have formal operating agreements with each entity to which tasks are delegated. The Reliability Coordinator shall verify that all delegated tasks are understood, communicated, and addressed within its Reliability Coordinator Area. All responsibilities for complying with NERC and regional standards applicable to Reliability Coordinators shall remain with the Reliability Coordinator. <i>[Violation Risk Factor: Medium]</i>	~~IRO-001-2~~IRO-001-3 None – retire the requirement ▪ RC SDT proposes that original IRO-001-1, R4 is redundant with NERC Rules of Procedure, section 500 and should be retired from the standard. Section 501 states: ▪ “The purpose of the compliance registry will be to clearly identify those entities that are responsible for compliance with reliability standards. Organizations listed on the registry will be responsible for knowing the content of and for complying with the NERC reliability standards.” ▪ Also, section 507, item 2 addresses written agreements; ▪ Joint registration pursuant to written agreement. ▪ “Where a JRO and any of its members or related entities agree, in writing, upon a division of compliance responsibility among them for one or more reliability standard(s) applicable to a particular function, and/or for one or more requirements within particular reliability standard(s), both the JRO and such member(s) or related entit(ies) shall register as an organization responsible for that function. The JRO and its member(s) or related entit(ies) must have a written agreement that clearly specifies their respective responsibilities, which shall be submitted as part of the joint registration. Neither NERC nor the regional entity shall be parties to any such agreement between a JRO and its member or related entity(ies), nor shall NERC or the regional entity have responsibility for reviewing or approving any

	such agreement, other than to verify that the agreement provides for an allocation or assignment of responsibilities consistent with the joint registration.”
Notes: The RC SDT recommends the retirement of IRO-001-1 R4.	
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R6. The Reliability Coordinator shall verify that all delegated tasks are carried out by NERC-certified Reliability Coordinator operating personnel. <i>[Violation Risk Factor: Medium]</i>	<u>~~IRO-001-2~~IRO-001-3</u> None – retire requirement because it is redundant with: PER-003-0 R1. Each Transmission Operator, Balancing Authority, and Reliability Coordinator shall staff all operating positions that meet both of the following criteria with personnel that are NERC certified for the applicable functions: R1.1. Positions that have the primary responsibility, either directly or through communications with others, for the real-time operation of the interconnected Bulk Electric System. R1.2. Positions directly responsible for complying with NERC standards.
Notes: The RC SDT recommends retiring IRO-001-1 R6 as it is redundant with PER-003-0 R1.	
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R7. The Reliability Coordinator shall have clear, comprehensive coordination agreements with adjacent Reliability Coordinators to ensure that System Operating Limit (SOL) or Interconnection Reliability Operating Limit (IROL) violation mitigation requiring actions in adjacent Reliability Coordinator Areas are coordinated.	<u>~~IRO-001-2~~IRO-001-3</u> None – requirement should be retired because it is redundant with: • IRO-014-12 R1. <u>Each Reliability Coordinator shall have Operating Procedures, Operating Processes, or Operating Plans for activities that require notification, exchange of</u>

<i>[Violation Risk Factor: High]</i>	<u>information or coordination of actions that may impact other Reliability Coordinator Areas to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following: [Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning]</u> ~~For conditions or activities that impact other Reliability Coordinator Areas, each Reliability Coordinator shall have Operating Procedures, Processes, or Plans for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following:~~
Notes: The RC SDT recommends the retirement of IRO-001-1 R7 as this is redundant with IRO-014-1 R1.	
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R8: Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities shall comply with Reliability Coordinator directives unless such actions would violate safety, equipment, or regulatory or statutory requirements. Under these circumstances, the Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, or Purchasing-Selling Entity shall immediately inform the Reliability Coordinator of the inability to perform the directive so that the Reliability Coordinator may implement alternate remedial actions. <i>[Violation Risk Factor: High]</i>	~~IRO-001-2~~ <u>IRO-001-3</u> ~~▪~~ <u>R2. Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall comply with its Reliability Coordinator's direction in accordance with Requirement R2 unless compliance with the direction in accordance with Requirement R2 the direction cannot be physically implemented or unless such actions would violate safety, equipment, regulatory or statutory requirements. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</u> ~~R3. Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider, and Purchasing-Selling Entity shall comply with its Reliability Coordinator's direction per~~

	~~Requirement R2 unless the direction per Requirement R2 can not be implemented or such actions would violate safety, equipment, or regulatory or statutory requirements. [Violation Risk Factor: High] [Time Horizon: Real-time Operations]~~ R4. Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to perform as directed in accordance with Requirement R23. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] ~~• R4. Each Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, Distribution Provider and Purchasing-Selling Entity shall inform its Reliability Coordinator upon recognition of its inability to perform as directed per Requirement R2. [Violation Risk Factor: High] [Time Horizon: Real-time Operations]~~
Notes: The RC SDT added the Distribution Provider per FERC Order 693 and added the blue text shown in the requirements above. The RC SDT proposes the replacement of IRO-001-1, R8 with two requirements ~~IRO-001-2~~<u>IRO-001-3</u>, R3, and R4. This will add clarity and measurability to the standard. The last part of the second sentence should be removed as it is implicit in R1, which states that the Reliability Coordination will act or direct actions to mitigate issues. Stakeholders indicated issues with the ability to measure compliance with the phrase, “without intentional delay” and this was removed. Relating to First Energy’s comment in FERC Order 693, the requirements address both personnel safety and equipment. There is no reference to a chain of command in the requirements. The standard is written such that decision-making authority rests with the Reliability Coordinator. No further revisions to the standard are required.	
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R9. The Reliability Coordinator shall act in the interests of reliability for the overall Reliability Coordinator Area and the Interconnection before the interests of any other	~~IRO-001-2~~<u>IRO-001-3</u> None – retire the requirement as redundant.

entity. *[Violation Risk Factor: High]*

Notes: The RC SDT proposes retiring this requirement. All Reliability Coordinator Standard Requirements are developed so that the Reliability Coordinator shall act in the interest of reliability for the RC Area and the Interconnection. Section 6 of the NERC Standard Development Procedure states that NERC develops and maintains Reliability Standards. Equity issues are covered under the Reliability Coordinator Standards of Conduct.

Functions that Must Comply with the Requirements in the Standards

Standard	Functions that Must Comply With the Requirements							
	Reliability Coordinator	Balancing Authority	Distribution Provider	Transmission Operator	Transmission Service Provider	Purchasing Selling Entity	Generator Operator	Load Serving Entity
~~RO-001-2~~ <u>RO-001-3</u>	X	X	X	X	✗	✗	X	✗

Unofficial Comment Form

Reliability Coordination (Project 2006-06)

Please **DO NOT** use this form to submit comments. Please use the [electronic comment form](#) to submit comments on the first formal posting for Project 2006-06—Reliability Coordination. The electronic comment form must be completed by **February 8, 2011**.

[2006-06 Project Page](#)

If you have questions please contact Stephen Crutchfield at stephen.crutchfield@nerc.net or by telephone at 609-651-9455.

Background

The RCSDT has revised the COM-001-2, COM-002-3 and IRO-001-1 standards based on stakeholder comments received during the initial ballot and formal comment period and quality reviews of each standard.

The RCSDT has addressed comments on the applicability of all three standards and implementation plans by aligning COM-001-2, COM-002-3, and IRO-001-2 to apply to the same entities and by removing LSE, PSE and TSP as applicable entities from the COM standards. Additionally, the Interchange Coordinator has been removed as an applicable entity from the standards and implementation plans.

Several commenters had suggestions for improvements to the requirement language and applicability of COM-001-2. The RCSDT believes the standard correctly and adequately requires each applicable entity that would have capability to receive Interconnection and operating information to have Interpersonal Communications, and Alternative Interpersonal Communications to be used when the Interpersonal Communication is not available. The RCSDT made the following changes to COM-001-2 based on stakeholder suggestions:

1. The following Requirement parts were added to COM-001-2:
 - 3.5 Adjacent Transmission Operators synchronously connected within the same Interconnection
 - 4.3 Adjacent Transmission Operators synchronously connected within the same Interconnection
 - 5.5 Adjacent Balancing Authorities
 - 6.3 Adjacent Balancing Authorities
2. The phrase "to exchange Interconnection and operating information" was removed from requirements R1 through R8 to clarify that the intent of this capability is NOT for the exchange of data.
3. A new requirement was added for clarity regarding what is required of Distribution Providers and Generator Operators (i.e., collaboration between entities to restore a failed communications capability):
 - R11. Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to

restore the Interpersonal Communication capability. [Violation Risk Factor: Medium][Time Horizon: Real-time Operations]

The proposed definition of Reliability Directive shown in COM-002-3 was revised to include Adverse Reliability Impact as shown to more fully address emergencies or events that might lead to instability or Cascading:

Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact.

As a reference, we have included the existing definition of Emergency and the BOT approved definition of Adverse Reliability Impact¹:

Emergency: Any abnormal system condition that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System.

Adverse Reliability Impact: The impact of an event that results in Bulk Electric System instability or Cascading.

Based on stakeholder feedback regarding IRO-001, the RCSDT removed Requirement R1. Other requirements were removed from IRO-001 and placed in more appropriate standards. These requirements did not fit with the purpose statement of IRO-001. Requirements R5 and R6 were removed from IRO-001 and placed in IRO-005-4. Requirements R7 and R8 were removed from IRO-001 and placed in IRO-002-2. These requirements were balloted and approved by stakeholders in July of 2011 and subsequently approved by the NERC BOT on August 4, 2011.

In addition, minor clarifications were made to the language of requirements and measures in COM-002-3 and IRO-001-3 based on suggestions from quality reviews of those standards.

¹ This definition was approved by the NERC Board of Trustees on August 4, 2011. Filing with regulatory authorities is pending.

You do not have to answer all questions. Enter all comments in Simple Text Format.

1. The RCSDT has revised the applicability of the standards and implementation plans by aligning COM-001-2, COM-002-3, and IRO-001-2 to apply to the same entities and by removing LSE, PSE and TSP as applicable entities from the COM standards. Additionally, the Interchange Coordinator has been removed as an applicable entity from the standards. Do you agree with this change in applicability to the three standards? If not, please explain in the comment area below.

☐ Yes

☐ No

Comments:

2. Do you agree with the addition of "Adjacent" entities in COM-001-2, Parts 3.5, 4.3, 5.5 and 6.3 of COM-001-2? If not, please explain in the comment area below

☐ Yes

☐ No

Comments:

3. The RCSDT removed the phrase "to exchange Interconnection and operating information" in COM-001-2, Requirements R1 through R8 based on stakeholder comments. Do you agree with the revision? If not, please explain in the comment area below.

☐ Yes

☐ No

Comments:

4. A new requirement was added for clarity regarding what is required of Distribution Providers and the Generator Operators:

R11. Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability. [Violation Risk Factor: Medium][Time Horizon: Real-time Operations]

This requirement requires collaboration between entities to restore a failed communications capability. Do you agree with the new requirement? If not, please explain in the comment area below

☐ Yes

☐ No

Comments:

5. The proposed definition of Reliability Directive shown in COM-002-3 was revised to include Adverse Reliability Impact as shown to more fully address emergencies or events that might lead to instability or Cascading:

Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact.

Do you agree with the proposed definition? If not, please explain in the comment area below

☐ Yes

☐ No

Comments:

6. Do you have any other comment, not expressed in questions above, for the RC SDT?

Comments:

Violation Risk Factor and Violation Severity Level Assignments

This document provides the drafting team's justification for assignment of violation risk factors (VRFs) and violation severity levels (VSLs) for each requirement in IRO-001-3 — Reliability Coordination – Responsibilities and Authorities.

Each primary requirement is assigned a VRF and a set of one or more VSLs. These elements support the determination of an initial value range for the Base Penalty Amount regarding violations of requirements in FERC-approved Reliability Standards, as defined in the ERO Sanction Guidelines.

Justification for Assignment of Violation Risk Factors in IRO-001-3:

The SDT applied the following NERC criteria when proposing VRFs for the requirements in COM-001-2:

High Risk Requirement

A requirement that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.

Medium Risk Requirement

A requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.

Lower Risk Requirement

A requirement that is administrative in nature and a requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system; or, a requirement that is administrative in nature and a requirement in a planning time frame

that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. A planning requirement that is administrative in nature.

The SDT also considered consistency with the FERC Violation Risk Factor Guidelines for setting VRFs:¹

Guideline (1) — Consistency with the Conclusions of the Final Blackout Report

The Commission seeks to ensure that Violation Risk Factors assigned to Requirements of Reliability Standards in these identified areas appropriately reflect their historical critical impact on the reliability of the Bulk-Power System.

In the VSL Order, FERC listed critical areas (from the Final Blackout Report) where violations could severely affect the reliability of the Bulk-Power System:²

- Emergency operations
- Vegetation management
- Operator personnel training
- Protection systems and their coordination
- Operating tools and backup facilities
- Reactive power and voltage control
- System modeling and data exchange
- Communication protocol and facilities
- Requirements to determine equipment ratings
- Synchronized data recorders
- Clearer criteria for operationally critical facilities
- Appropriate use of transmission loading relief.

Guideline (2) — Consistency within a Reliability Standard

The Commission expects a rational connection between the sub-Requirement Violation Risk Factor assignments and the main Requirement Violation Risk Factor assignment.

Guideline (3) — Consistency among Reliability Standards

The Commission expects the assignment of Violation Risk Factors corresponding to Requirements that address similar reliability goals in different Reliability Standards would be treated comparably.

Guideline (4) — Consistency with NERC’s Definition of the Violation Risk Factor Level

¹ North American Electric Reliability Corp., 119 FERC ¶ 61,145, order on reh’g and compliance filing, 120 FERC ¶ 61,145 (2007) (“VRF Rehearing Order”).

² Id. at footnote 15.

Guideline (4) was developed to evaluate whether the assignment of a particular Violation Risk Factor level conforms to NERC's definition of that risk level.

Guideline (5) — Treatment of Requirements that Co-mingle More Than One Obligation

Where a single Requirement co-mingles a higher risk reliability objective and a lesser risk reliability objective, the VRF assignment for such Requirements must not be watered down to reflect the lower risk level associated with the less important objective of the Reliability Standard.

The following discussion addresses how the SDT considered FERC's VRF Guidelines 2 through 5. The team did not address Guideline 1 directly because of an apparent conflict between Guidelines 1 and 4. Whereas Guideline 1 identifies a list of topics that encompass nearly all topics within NERC's Reliability Standards and implies that these requirements should be assigned a "High" VRF, Guideline 4 directs assignment of VRFs based on the impact of a specific requirement to the reliability of the system. The SDT believes that Guideline 4 is reflective of the intent of VRFs in the first instance and therefore concentrated its approach on the reliability impact of the requirements.

There are three requirements in IRO-001-3 and all were assigned a "High" VRF.

VRF for IRO-001-2, Requirement R1:

- FERC's Guideline 2 — Consistency within a Reliability Standard. The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
- FERC's Guideline 3 — Consistency among Reliability Standards. There is a similar requirement (Requirement R1) in EOP-002-2.1 that is assigned a High VRF. The requirements are viewed as similar since they both refer to having responsibility to act to ensure reliability.
- FERC's Guideline 4 — Consistency with NERC's Definition of a VRF. Failure to act, direct actions or issue Reliability Directives may directly affect the electrical state or the capability of the bulk power system and may lead to bulk power system instability, separation, or cascading failures. Therefore, this requirement is assigned a High VRF.
- FERC's Guideline 5 — Treatment of Requirements that Co-mingle More Than One Objective. IRO-001-2, Requirement R2 contains only one objective, therefore only one VRF was assigned.

VRF for IRO-001-2, Requirement R2:

- FERC's Guideline 2 — Consistency within a Reliability Standard. The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.

- FERC’s Guideline 3 — Consistency among Reliability Standards. There is a similar requirement (Requirement R3) in TOP-001-1 that is assigned a High VRF. The requirements are viewed as similar since they both refer to the complying with directives unless the following the directive would violate safety, equipment, regulatory or statutory requirements.
- FERC’s Guideline 4 — Consistency with NERC’s Definition of a VRF. Failure to comply with a reliability directive could lead to bulk power system instability, separation, or cascading failures. Therefore, this requirement is assigned a High VRF.
- FERC’s Guideline 5 — Treatment of Requirements that Co-mingle More Than One Objective. IRO-001-2 Requirement R3 contains only one objective, therefore only one VRF was assigned.

VRF for IRO-001-2, Requirement R3:

- FERC’s Guideline 2 — Consistency within a Reliability Standard. The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
- FERC’s Guideline 3 — Consistency among Reliability Standards. . There is a similar requirement (Requirement R3) in TOP-001-1 that is assigned a High VRF. The requirements are viewed as similar since they both refer to informing the Reliability Coordinator when a directive can not be performed.
- FERC’s Guideline 4 — Consistency with NERC’s Definition of a VRF. Failure to inform the Reliability Coordinator of the inability to perform a reliability directive would prevent the Reliability Coordinator from developing an alternative solution to the reliability concern. This could lead to directly affect the electrical state or the capability of the bulk power system and will not lead to bulk power system instability, separation, or cascading failures.
- FERC’s Guideline 5 — Treatment of Requirements that Co-mingle More Than One Objective. TOP-003-2, Requirement R4 has only one objective, therefore only one VRF was assigned.

Justification for Assignment of Violation Severity Levels for IRO-001-3:

In developing the VSLs for the TOP standard, the SDT anticipated the evidence that would be reviewed during an audit, and developed its VSLs based on the noncompliance an auditor may find during a typical audit. The SDT based its assignment of VSLs on the following NERC criteria:

Lower	Moderate	High	Severe
Missing a minor element (or a small percentage) of the required performance The performance or product measured has significant value as it almost meets the full intent of the requirement.	Missing at least one significant element (or a moderate percentage) of the required performance. The performance or product measured still has significant value in meeting the intent of the requirement.	Missing more than one significant element (or is missing a high percentage) of the required performance or is missing a single vital component. The performance or product has limited value in meeting the intent of the requirement.	Missing most or all of the significant elements (or a significant percentage) of the required performance. The performance measured does not meet the intent of the requirement or the product delivered cannot be used in meeting the intent of the requirement.

FERC’s VSL guidelines are presented below, followed by an analysis of whether the VSLs proposed for each requirement in IRO-001-3 meet the FERC Guidelines for assessing VSLs:

Guideline 1: Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance

Compare the VSLs to any prior levels of non-compliance and avoid significant changes that may encourage a lower level of compliance than was required when levels of non-compliance were used.

Guideline 2: Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties

A violation of a “binary” type requirement must be a “Severe” VSL.

Do not use ambiguous terms such as “minor” and “significant” to describe noncompliant performance.

Guideline 3: Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement

VSLs should not expand on what is required in the requirement.

**Guideline 4: Violation Severity Level Assignment Should Be Based on A Single Violation,
Not on A Cumulative Number of Violations**

. . . unless otherwise stated in the requirement, each instance of non-compliance with a requirement is a separate violation. Section 4 of the Sanction Guidelines states that assessing penalties on a per violation per day basis is the “default” for penalty calculations.

VSLs for IRO-001-3 Requirement R1:

R#	Compliance with NERC's VSL Guidelines	Guideline 1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	Guideline 2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	Guideline 3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	Guideline 4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations
R1.	Meets NERC's VSL guidelines - Severe: The performance or product measured does not substantively meet the intent of the requirement.	The proposed requirement is comparable to approved EOP-002-2, Requirement. That is a binary requirement and thus, the VSL in the proposed standard is assigned a Severe VSL.	The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.	The VSL is based on a single violation and not cumulative violations.

VSLs for IRO-001-2 Requirement R2:

R#	Compliance with NERC's VSL Guidelines	Guideline 1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	Guideline 2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	Guideline 3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	Guideline 4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations
R2	Meets NERC's VSL guidelines - Severe: The performance or product measured does not substantively meet the intent of the requirement.	The proposed requirement is comparable to approved TOP-001-1, Requirement R3. That VSL is binary but the RCSDT notes that there are two possible levels of violation for this requirement. The two conditions are that 1) the responsible entity did not comply (severe) or 2) the responsible initiated action but did not fully comply (high).. Thus, the VSL in the proposed standard does not lower the level of compliance currently required by	The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.	The VSL is based on a single violation and not cumulative violations.

Justification for Assignment of Violation Risk Factors and Violation Severity Levels for Project 2006-06 – Reliability Coordination

		setting VSLs that are less punitive than those already proposed.			

VSLs for IRO-001-2 Requirement R3:

R#	Compliance with NERC's VSL Guidelines	Guideline 1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	Guideline 2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	Guideline 3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	Guideline 4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations
R3.	Meets NERC's VSL guidelines - Severe: The performance or product measured does not substantively meet the intent of the requirement.	The proposed requirement is comparable to approved TOP-001-1, Requirement R3. That VSL is binary and the proposed VSL is also binary. Thus, the VSL in the proposed standard does not lower the level of compliance currently required by setting VSLs that are less punitive than those already proposed.	The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.	The VSL is based on a single violation and not cumulative violations.

Standards Announcement

Project 2006-06 Reliability Coordination

Three Ballot Windows Extended, Three Non-binding poll Windows **Extended One Day**
Formal Comment Period **Extended One Day**
Through 8 p.m. Eastern TODAY (Thursday, February 9, 2012)

[Now Available](#)

Three non-binding polls of the VRFs and VSLs associated with the standards listed below failed to achieve a quorum and have been extended by one day. In addition, to accommodate ballot pool members and other stakeholders affected by a brief unavailability of NERC web services at the end of the ballot and comment period window, the formal comment period and three ballots of these standards and their associated implementation plans will also be extended one day. The non-binding polls, ballots, and formal comment period will close at **8 p.m. Eastern TODAY, Thursday, February 9, 2012.**

- COM-001-2 – Communications
- COM-002-3 – Communication and Coordination
- IRO-001-3 – Reliability Coordination – Responsibilities and Authorities

Please log in and cast your ballots for these standards, and opinions in the non-binding polls, if you have not already done so.

Standards Development Process

The [Standard Processes Manual](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate. For more information or assistance, please contact Monica Benson at monica.benson@nerc.net.

*For more information or assistance, please contact Monica Benson,
Standards Process Administrator, at monica.benson@nerc.net or at 404-446-2560.*

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Standards Announcement

Project 2006-06 Reliability Coordination

**Three Ballot Windows and Three Non-binding Poll Windows Now Open
January 30 - February 8, 2012**

Now Available

Ballot windows are open through **8 p.m. Eastern on Wednesday, February 8, 2012** for three successive ballots (one for each of the following standards and the associated implementation plans) and three non-binding polls of the VRFs and VSLs associated with each standard:

- COM-001-2 – Communications
- COM-002-3 – Communication and Coordination
- IRO-001-3 – Reliability Coordination – Responsibilities and Authorities

Clean and redline versions of each standard and the associated implementation plan and VRFs and VSLs are posted on the [project webpage](#). In addition, the following supporting materials have been posted on the project page:

- Mapping Document for each standard - Identifies each requirement in the approved version of the standard and how the requirement has been treated in the current draft.
- VRF and VSL Justification – Identifies how the proposed VRFs and VSLs for each standard meet NERC and FERC guidelines.
- Last approved versions of COM-001 and COM-002 – Because the changes from the last approved versions of these two standards are so extensive, a redline showing changes against that last approved version is not useful. The last approved versions are posted as a convenience to stakeholders.

Instructions for Balloting

Members of the ballot pools associated with this project may log in and submit their votes for the standards and opinions for the non-binding polls from the following page:

<https://standards.nerc.net/CurrentBallots.aspx>.

Instructions for Commenting

A formal comment period is open through **8 p.m. Eastern on Wednesday, February 8, 2012**. Please use this [electronic form](#) to submit comments. If you experience any difficulties in using the electronic form, please contact Monica Benson at monica.benson@nerc.net. An off-line, unofficial copy of the comment form is posted on the [project page](#).

Special Instructions for Submitting Comments With a Ballot or Non-binding Poll

Please note that comments submitted during the formal comment period, the ballots for the standards,

and the non-binding polls of VRFs and VSLs all use the same electronic form, and will be compiled into a single report with duplicate comments submitted by the same entity removed and duplicate comments submitted by multiple entities consolidated. **Therefore, it is NOT necessary for ballot pool members to submit more than one set of comments. The drafting team requests that all stakeholders (ballot pool members as well as other stakeholders) submit all comments through the electronic comment form.**

Next Steps

The drafting team will consider all comments submitted to determine whether to make additional revisions to the standards.

Background

The Reliability Coordination Standards Drafting Team was tasked with 1) ensuring that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique, and enforceable; 2) ensuring that this set of requirements is sufficient to maintain reliability of the Bulk Electric System; and 3) revising the group of standards based on FERC Order 693.

During the course of this project, the Reliability Coordination Standards Drafting Team incorporated changes due to the work of the IROL Standards Drafting Team. Two standards from the original Standards Authorization Request (PER-004 and PRC-001) were moved to other projects due to scope overlap. In addition, the scope of Project 2006-06 was expanded to incorporate directives from FERC Order 693 associated with standard IRO-003-2.

The following three standards that are part of this project were approved by the ballot pool and were adopted by the NERC Board of Trustees in August 2012: IRO-002-3 Reliability Coordination – Analysis Tools; IRO-005-4 - Reliability Coordination-Current Day Operations; and IRO-014-2 – Coordination Among Reliability Coordinators. Additional information is available on the [project webpage](#).

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Standards Announcement

Project 2006-06 Reliability Coordination

Formal Comment Period Open January 9 – February 8, 2012
Three Ballot Windows and Three Non-binding Poll Windows Open
January 30 - February 8, 2012

[Now Available](#)

The following standards, and the associated implementation plans and VRFs and VSLs, have been posted for a formal comment period through **8 p.m. Eastern on Wednesday, February 8, 2012**:

- COM-001-2 – Communications
- COM-002-3 – Communication and Coordination
- IRO-001-3 – Reliability Coordination – Responsibilities and Authorities

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Three successive ballots (one for each standard and its implementation plan) and three nonbinding polls of the VRFs and VSLs associated with each standard will be conducted beginning on Monday, January 30, 2012 through **8 p.m. Eastern on Wednesday, February 8, 2012**.

Instructions for Commenting

A formal comment period is open through **8 p.m. Eastern on Wednesday, February 8, 2012**. Please use this [electronic form](#) to submit comments. If you experience any difficulties in using the electronic form, please contact Monica Benson at monica.benson@nerc.net. An off-line, unofficial copy of the comment form is posted on the [project page](#).

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The drafting team will consider all comments submitted to determine whether to make additional revisions to the standards.

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Ballot Results	
Ballot Name:	Project 2006-06 IRO-001-3 Jan 2012_in
Ballot Period:	1/30/2012 - 2/9/2012
Ballot Type:	Initial
Total # Votes:	279
Total Ballot Pool:	341
Quorum:	81.82 % The Quorum has been reached
Weighted Segment Vote:	80.21 %
Ballot Results:	The drafting team is considering comments.

Summary of Ballot Results								
Segment	Ballot Pool	Segment Weight	Affirmative		Negative		Abstain	No Vote
			# Votes	Fraction	# Votes	Fraction	# Votes	
1 - Segment 1.	88	1	53	0.869	8	0.131	7	20
2 - Segment 2.	11	0.9	8	0.8	1	0.1	1	1
3 - Segment 3.	85	1	41	0.788	11	0.212	18	15
4 - Segment 4.	24	1	16	0.8	4	0.2	1	3
5 - Segment 5.	69	1	37	0.74	13	0.26	6	13
6 - Segment 6.	44	1	28	0.778	8	0.222	3	5
7 - Segment 7.	0	0	0	0	0	0	0	0
8 - Segment 8.	8	0.5	5	0.5	0	0	1	2
9 - Segment 9.	4	0.2	2	0.2	0	0	1	1
10 - Segment 10.	8	0.6	3	0.3	3	0.3	0	2
Totals	341	7.2	193	5.775	48	1.425	38	62

Individual Ballot Pool Results				
Segment	Organization	Member	Ballot	Comments
1	Allegheny Power	Rodney Phillips		
1	Ameren Services	Kirit Shah	Affirmative	
1	American Electric Power	Paul B. Johnson	Negative	View
1	American Transmission Company, LLC	Andrew Z Pusztai	Affirmative	
1	Arizona Public Service Co.	Robert Smith	Abstain	
1	Avista Corp.	Scott J Kinney	Affirmative	
1	Baltimore Gas & Electric Company	Gregory S Miller	Affirmative	View
1	BC Hydro and Power Authority	Patricia Robertson	Affirmative	

1	Beaches Energy Services	Joseph S Stonecipher	Affirmative	View
1	Bonneville Power Administration	Donald S. Watkins	Affirmative	
1	Central Maine Power Company	Kevin L Howes	Affirmative	
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G Choi	Affirmative	
1	City of Vero Beach	Randall McCamish		
1	City Water, Light & Power of Springfield	Shaun Anders		
1	Clark Public Utilities	Jack Stamper	Affirmative	
1	Cleco Power LLC	Danny McDaniel	Affirmative	
1	Colorado Springs Utilities	Paul Morland	Affirmative	
1	Consolidated Edison Co. of New York	Christopher L de Graffenried	Negative	View
1	Dayton Power & Light Co.	Hertzel Shamash		
1	Dominion Virginia Power	Michael S Crowley	Negative	View
1	Duke Energy Carolina	Douglas E. Hils	Negative	View
1	East Kentucky Power Coop.	George S. Carruba		
1	Empire District Electric Co.	Ralph F Meyer	Abstain	
1	Entergy Corporation	George R. Bartlett	Affirmative	
1	FirstEnergy Energy Delivery	Robert Martinko	Affirmative	
1	Florida Keys Electric Cooperative Assoc.	Dennis Minton	Affirmative	
1	Great River Energy	Gordon Pietsch	Affirmative	View
1	Hoosier Energy Rural Electric Cooperative, Inc.	Robert Solomon		
1	Hydro One Networks, Inc.	Ajay Garg	Affirmative	
1	Hydro-Quebec TransEnergie	Bernard Pelletier		
1	Idaho Power Company	Ronald D. Schellberg		
1	International Transmission Company Holdings Corp	Michael Moltane		
1	Kansas City Power & Light Co.	Michael Gammon	Affirmative	
1	Keys Energy Services	Stan T. Rza		
1	Lake Worth Utilities	Walt Gill		
1	Lakeland Electric	Larry E Watt	Affirmative	
1	Lee County Electric Cooperative	John W Delucca	Affirmative	
1	Long Island Power Authority	Robert Ganley	Abstain	
1	Manitoba Hydro	Joe D Petaski	Negative	View
1	MEAG Power	Danny Dees	Affirmative	
1	MidAmerican Energy Co.	Terry Harbour	Negative	View
1	Minnkota Power Coop. Inc.	Richard Burt	Abstain	
1	National Grid	Saurabh Saksena	Affirmative	View
1	Nebraska Public Power District	Richard L. Koch		
1	New Brunswick Power Transmission Corporation	Randy MacDonald	Affirmative	
1	New York Power Authority	Arnold J. Schuff	Affirmative	
1	Northeast Utilities	David Boguslawski	Affirmative	View
1	Northern Indiana Public Service Co.	Kevin M Largura	Affirmative	
1	NorthWestern Energy	John Canavan	Abstain	
1	Oklahoma Gas and Electric Co.	Marvin E VanBebber	Affirmative	
1	Omaha Public Power District	Doug Peterchuck	Affirmative	
1	Oncor Electric Delivery	Michael T. Quinn	Affirmative	
1	Orlando Utilities Commission	Brad Chase	Affirmative	
1	Otter Tail Power Company	Daryl Hanson		
1	PacifiCorp	Colt Norrish		
1	PECO Energy	Ronald Schloendorn	Affirmative	
1	Platte River Power Authority	John C. Collins	Affirmative	View
1	Portland General Electric Co.	Frank F Afranji	Affirmative	View
1	Potomac Electric Power Co.	David Thorne	Affirmative	
1	PowerSouth Energy Cooperative	Larry D Avery	Affirmative	
1	PPL Electric Utilities Corp.	Brenda L Truhe	Affirmative	
1	Public Service Company of New Mexico	Laurie Williams		
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Affirmative	
1	Public Utility District No. 1 of Okanogan County	Dale Dunckel	Affirmative	View
1	Puget Sound Energy, Inc.	Catherine Koch		
1	Rochester Gas and Electric Corp.	John C. Allen	Affirmative	
1	Sacramento Municipal Utility District	Tim Kelley	Affirmative	
1	Salt River Project	Robert Kondziolka	Affirmative	
1	Santee Cooper	Terry L Blackwell	Affirmative	
1	SCE&G	Henry Delk, Jr.	Affirmative	
1	Seattle City Light	Pawel Krupa	Affirmative	

1	Sierra Pacific Power Co.	Rich Salgo	Affirmative	View
1	South Texas Electric Cooperative	Richard McLeon		
1	Southern California Edison Co.	Dana Cabbell		
1	Southern Company Services, Inc.	Robert Schaffeld	Affirmative	View
1	Southern Illinois Power Coop.	William G. Hutchison		
1	Southwest Transmission Cooperative, Inc.	James Jones	Negative	View
1	Southwestern Power Administration	Gary W Cox	Abstain	
1	Sunflower Electric Power Corporation	Noman Lee Williams	Affirmative	
1	Tampa Electric Co.	Beth Young	Affirmative	
1	Tennessee Valley Authority	Larry Akens	Negative	View
1	Tri-State G & T Association, Inc.	Tracy Sliman	Affirmative	
1	Tucson Electric Power Co.	John Tolo		
1	United Illuminating Co.	Jonathan Appelbaum	Affirmative	
1	Westar Energy	Allen Klassen	Affirmative	
1	Western Area Power Administration	Brandy A Dunn	Affirmative	
1	Western Farmers Electric Coop.	Forrest Brock	Abstain	
1	Xcel Energy, Inc.	Gregory L Pieper	Affirmative	
2	Alberta Electric System Operator	Mark B Thompson	Abstain	View
2	BC Hydro	Venkataramakrishnan Vinnakota	Affirmative	
2	California ISO	Gregory Van Pelt	Affirmative	
2	Electric Reliability Council of Texas, Inc.	Charles B Manning	Affirmative	
2	Independent Electricity System Operator	Kim Warren	Negative	View
2	ISO New England, Inc.	Kathleen Goodman	Affirmative	
2	Midwest ISO, Inc.	Jason L Marshall	Affirmative	View
2	New Brunswick System Operator	Alden Briggs	Affirmative	View
2	New York Independent System Operator	Gregory Campoli	Affirmative	
2	PJM Interconnection, L.L.C.	Tom Bowe	Affirmative	
2	Southwest Power Pool	Charles H Yeung		
3	Alabama Power Company	Richard J. Mandes	Affirmative	View
3	Allegheny Power	Bob Reeping		
3	Anaheim Public Utilities Dept.	Kelly Nguyen		
3	APS	Steven Norris	Abstain	
3	Atlantic City Electric Company	James V. Petrella	Affirmative	
3	BC Hydro and Power Authority	Pat G. Harrington	Affirmative	
3	Blachly-Lane Electric Co-op	Bud Tracy	Abstain	View
3	Bonneville Power Administration	Rebecca Berdahl	Affirmative	
3	Central Electric Cooperative, Inc. (Redmond, Oregon)	Dave Markham	Abstain	View
3	Central Lincoln PUD	Steve Alexanderson	Negative	View
3	City of Bartow, Florida	Matt Culverhouse		
3	City of Clewiston	Lynne Mila	Affirmative	
3	City of Farmington	Linda R Jacobson	Affirmative	
3	City of Garland	Ronnie C Hoeinghaus	Affirmative	
3	City of Green Cove Springs	Gregg R Griffin	Affirmative	View
3	City of Leesburg	Phil Janik		
3	City of Redding	Bill Hughes	Affirmative	
3	Clearwater Power Co.	Dave Hagen	Abstain	View
3	Cleco Corporation	Michelle A Corley	Affirmative	
3	ComEd	Bruce Krawczyk	Affirmative	
3	Consolidated Edison Co. of New York	Peter T Yost	Negative	View
3	Constellation Energy	Carolyn Ingersoll		
3	Consumers Energy	David A. Lapinski	Abstain	
3	Consumers Power Inc.	Roman Gillen	Abstain	View
3	Coos-Curry Electric Cooperative, Inc	Roger Meader	Abstain	View
3	Cowlitz County PUD	Russell A Noble		
3	Delmarva Power & Light Co.	Michael R. Mayer		
3	Detroit Edison Company	Kent Kujala	Affirmative	
3	Dominion Resources Services	Michael F. Gildea	Negative	View
3	Douglas Electric Cooperative	Dave Sabala	Abstain	View
3	Duke Energy Carolina	Henry Ernst-Jr	Negative	View
3	East Kentucky Power Coop.	Sally Witt		
3	Entergy	Joel T Plessinger	Affirmative	
3	Fall River Rural Electric Cooperative	Bryan Case	Abstain	View
3	FirstEnergy Solutions	Kevin Querry	Affirmative	
3	Georgia Power Company	Anthony L Wilson	Affirmative	View
3	Georgia System Operations Corporation	Scott S. Barfield-McGinnis	Negative	View

3	Great River Energy	Sam Kokkinen	Affirmative	View
3	Hydro One Networks, Inc.	David Kiguel	Affirmative	
3	Idaho Power Company	Shaun Jensen		
3	JEA	Garry Baker		
3	Kansas City Power & Light Co.	Charles Locke	Affirmative	
3	Kissimmee Utility Authority	Gregory D Woessner	Affirmative	
3	Lakeland Electric	Mace D Hunter	Affirmative	
3	Lane Electric Cooperative, Inc.	Rick Crinklaw	Abstain	View
3	Lincoln Electric Cooperative, Inc.	Michael Henry	Abstain	View
3	Lincoln Electric System	Bruce Merrill		
3	Los Angeles Department of Water & Power	Daniel D Kurowski	Affirmative	
3	Lost River Electric Cooperative	Richard Reynolds	Abstain	View
3	Louisville Gas and Electric Co.	Charles A. Freibert	Affirmative	
3	Manitoba Hydro	Greg C. Parent	Negative	View
3	MidAmerican Energy Co.	Thomas C. Mielnik	Negative	View
3	Mississippi Power	Don Horsley	Affirmative	View
3	Municipal Electric Authority of Georgia	Steven M. Jackson	Affirmative	
3	Muscatine Power & Water	John S Bos	Affirmative	
3	Nebraska Public Power District	Tony Eddleman	Affirmative	
3	New York Power Authority	Marilyn Brown	Affirmative	
3	Niagara Mohawk (National Grid Company)	Michael Schiavone	Affirmative	
3	Northern Indiana Public Service Co.	William SeDoris	Affirmative	
3	Northern Lights Inc.	Jon Shelby	Abstain	View
3	Okanogan County Electric Cooperative, Inc.	Ray Ellis	Abstain	View
3	Orange and Rockland Utilities, Inc.	David Burke	Negative	
3	Orlando Utilities Commission	Ballard K Mutters	Affirmative	
3	PacifiCorp	John Apperson		
3	Platte River Power Authority	Terry L Baker	Affirmative	
3	Potomac Electric Power Co.	Robert Reuter	Affirmative	
3	Public Service Electric and Gas Co.	Jeffrey Mueller	Affirmative	
3	Public Utility District No. 2 of Grant County	Greg Lange		
3	Raft River Rural Electric Cooperative	Heber Carpenter	Abstain	View
3	Sacramento Municipal Utility District	James Leigh-Kendall	Affirmative	
3	Salmon River Electric Cooperative	Ken Dizes	Abstain	View
3	Salt River Project	John T. Underhill	Affirmative	
3	San Diego Gas & Electric	Scott Peterson		
3	Santee Cooper	Zack Dusenbury	Affirmative	
3	Seattle City Light	Dana Wheelock	Affirmative	
3	Seminole Electric Cooperative, Inc.	James R Frauen	Affirmative	
3	Southern California Edison Co.	David Schiada		
3	Tacoma Public Utilities	Travis Metcalfe	Affirmative	
3	Tampa Electric Co.	Ronald L Donahey	Affirmative	
3	Tennessee Valley Authority	Ian S Grant	Negative	View
3	Umatilla Electric Cooperative	Steve Eldrige	Abstain	View
3	West Oregon Electric Cooperative, Inc.	Marc M Farmer	Abstain	View
3	Wisconsin Electric Power Marketing	James R Keller	Negative	View
3	Wisconsin Public Service Corp.	Gregory J Le Grave	Negative	View
3	Xcel Energy, Inc.	Michael Ibold	Affirmative	
4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Affirmative	
4	American Municipal Power - Ohio	Kevin Koloini	Negative	
4	Blue Ridge Power Agency	Duane S Dahlquist	Affirmative	
4	Central Lincoln PUD	Shamus J Gamache	Negative	View
4	City of Clewiston	Kevin McCarthy	Affirmative	
4	City of New Smyrna Beach Utilities Commission	Tim Beyrle	Affirmative	
4	City Utilities of Springfield, Missouri	John Allen	Affirmative	
4	Consumers Energy	David Frank Ronk		
4	Cowlitz County PUD	Rick Syring		
4	Florida Municipal Power Agency	Frank Gaffney	Affirmative	
4	Fort Pierce Utilities Authority	Thomas W. Richards		
4	Georgia System Operations Corporation	Guy Andrews	Negative	View
4	Illinois Municipal Electric Agency	Bob C. Thomas	Affirmative	View
4	Madison Gas and Electric Co.	Joseph DePoorter	Affirmative	
4	Ohio Edison Company	Douglas Hohlbaugh	Affirmative	
4	Pacific Northwest Generating Cooperative	Aleka K Scott	Abstain	View
4	Public Utility District No. 1 of Douglas County	Henry E. LuBean	Affirmative	
4	Public Utility District No. 1 of Snohomish	John D Martinsen	Affirmative	

	County			
4	Sacramento Municipal Utility District	Mike Ramirez	Affirmative	
4	Seattle City Light	Hao Li	Affirmative	
4	Seminole Electric Cooperative, Inc.	Steven R Wallace	Affirmative	
4	Tacoma Public Utilities	Keith Morissette	Affirmative	
4	Tallahassee Electric	Allan Morales	Affirmative	
4	Wisconsin Energy Corp.	Anthony Jankowski	Negative	
5	AEP Service Corp.	Brock Ondayko	Negative	View
5	AES Corporation	Leo Bernier	Abstain	
5	Amerenue	Sam Dwyer	Affirmative	
5	Arizona Public Service Co.	Edward Cambridge	Abstain	
5	Avista Corp.	Edward F. Groce	Affirmative	
5	BC Hydro and Power Authority	Clement Ma	Affirmative	
5	Bonneville Power Administration	Francis J. Halpin	Affirmative	
5	City of Grand Island	Jeff Mead	Abstain	
5	City of Redding	Paul Cummings	Affirmative	
5	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Max Emrick	Affirmative	
5	City of Tallahassee	Alan Gale		
5	Cleco Power	Stephanie Huffman	Affirmative	
5	Cogentrix Energy, Inc.	Mike D Hirst	Abstain	
5	Consolidated Edison Co. of New York	Willet (Jack) Ng	Negative	View
5	Constellation Power Source Generation, Inc.	Amir Y Hammad	Negative	View
5	Consumers Energy	James B Lewis	Abstain	
5	Cowlitz County PUD	Bob Essex		
5	CPS Energy	Robert B Stevens		
5	Detroit Edison Company	Christy Wicke	Affirmative	
5	Dominion Resources, Inc.	Mike Garton	Negative	View
5	Duke Energy	Dale Q Goodwine	Negative	View
5	Dynegy Inc.	Dan Roethemeyer	Negative	View
5	Electric Power Supply Association	John R Cashin		
5	Entergy Corporation	Stanley M Jaskot	Affirmative	
5	Exelon Nuclear	Michael Korchynsky	Affirmative	
5	ExxonMobil Research and Engineering	Martin Kaufman	Negative	
5	FirstEnergy Solutions	Kenneth Dresner	Affirmative	
5	Florida Municipal Power Agency	David Schumann	Affirmative	
5	Great River Energy	Preston L Walsh	Affirmative	View
5	Green Country Energy	Greg Froehling	Affirmative	
5	Indeck Energy Services, Inc.	Rex A Roehl		
5	Kansas City Power & Light Co.	Scott Heidtbrink		
5	Kissimmee Utility Authority	Mike Blough	Affirmative	
5	Lakeland Electric	James M Howard	Affirmative	
5	Liberty Electric Power LLC	Daniel Duff	Affirmative	
5	Lincoln Electric System	Dennis Florom	Affirmative	
5	Los Angeles Department of Water & Power	Kenneth Silver		
5	Luminant Generation Company LLC	Mike Laney	Negative	View
5	Manitoba Hydro	S N Fernando	Negative	View
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Abstain	
5	MEAG Power	Steven Grego	Affirmative	
5	MidAmerican Energy Co.	Christopher Schneider	Negative	View
5	Muscatine Power & Water	Mike Avesing	Affirmative	
5	Nebraska Public Power District	Don Schmit	Affirmative	View
5	New York Power Authority	Gerald Mannarino	Affirmative	
5	Occidental Chemical	Michelle R DAntuono	Affirmative	View
5	Omaha Public Power District	Mahmood Z. Safi	Affirmative	
5	Orlando Utilities Commission	Richard Kinass		
5	PacifiCorp	Sandra L. Shaffer	Affirmative	
5	Platte River Power Authority	Pete Ungerman		
5	Portland General Electric Co.	Gary L Tingley		
5	PPL Generation LLC	Annette M Bannon	Affirmative	
5	Public Service Enterprise Group Incorporated	Dominick Grasso	Affirmative	
5	Public Utility District No. 1 of Lewis County	Steven Grega	Affirmative	
5	Sacramento Municipal Utility District	Bethany Hunter	Affirmative	
5	Salt River Project	Glen Reeves		
5	Santee Cooper	Lewis P Pierce	Affirmative	
5	Seattle City Light	Michael J. Haynes	Affirmative	

5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins	Affirmative	
5	Snohomish County PUD No. 1	Sam Nietfeld	Affirmative	
5	Southern Company Generation	William D Shultz	Affirmative	View
5	Tampa Electric Co.	RJames Rocha	Affirmative	
5	Tenaska, Inc.	Scott M. Helyer		
5	Tennessee Valley Authority	David Thompson	Negative	View
5	Tri-State G & T Association, Inc.	Barry Ingold	Affirmative	
5	U.S. Army Corps of Engineers	Melissa Kurtz	Affirmative	View
5	US Power Generating Company	Bohdan M Dackow		
5	Wisconsin Electric Power Co.	Linda Horn	Negative	View
5	Wisconsin Public Service Corp.	Leonard Rentmeester	Negative	
6	AEP Marketing	Edward P. Cox	Negative	View
6	Ameren Energy Marketing Co.	Jennifer Richardson	Affirmative	
6	Arizona Public Service Co.	Justin Thompson	Abstain	
6	Black Hills Power	andrew heinle		
6	Bonneville Power Administration	Brenda S. Anderson	Affirmative	
6	City of Austin dba Austin Energy	Lisa L Martin	Affirmative	
6	Cleco Power LLC	Robert Hirschak	Affirmative	
6	Consolidated Edison Co. of New York	Nickesha P Carrol	Negative	View
6	Constellation Energy Commodities Group	Brenda Powell	Negative	View
6	Dominion Resources, Inc.	Louis S. Slade	Negative	View
6	Duke Energy Carolina	Walter Yeager	Negative	View
6	Entergy Services, Inc.	Terri F Benoit	Affirmative	
6	Exelon Power Team	Pulin Shah	Affirmative	
6	FirstEnergy Solutions	Mark S Travaglianti	Affirmative	
6	Florida Municipal Power Agency	Richard L. Montgomery	Affirmative	
6	Florida Municipal Power Pool	Thomas Washburn	Affirmative	View
6	Florida Power & Light Co.	Silvia P. Mitchell	Negative	View
6	Great River Energy	Donna Stephenson		
6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Affirmative	
6	Lakeland Electric	Paul Shipps	Affirmative	
6	Lincoln Electric System	Eric Ruskamp	Affirmative	
6	Manitoba Hydro	Daniel Prowse	Negative	View
6	MidAmerican Energy Co.	Dennis Kimm	Abstain	
6	Muscatine Power & Water	Brandy D Olson		
6	New York Power Authority	William Palazzo	Affirmative	
6	Northern Indiana Public Service Co.	Joseph O'Brien	Affirmative	
6	Omaha Public Power District	David Ried	Affirmative	
6	PacifiCorp	Scott L Smith	Affirmative	
6	Platte River Power Authority	Carol Ballantine	Affirmative	
6	PPL EnergyPlus LLC	Mark A Heimbach	Affirmative	
6	Progress Energy	John T Sturgeon	Abstain	
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Affirmative	
6	Sacramento Municipal Utility District	Claire Warshaw	Affirmative	
6	Salt River Project	Steven J Hulet	Affirmative	
6	Santee Cooper	Suzanne Ritter	Affirmative	
6	Seattle City Light	Dennis Sismaet	Affirmative	
6	Seminole Electric Cooperative, Inc.	Trudy S. Novak	Affirmative	
6	Shell Energy North America (US), L.P.	Paul Kerr	Affirmative	
6	South California Edison Company	Lujuanna Medina		
6	Tacoma Public Utilities	Michael C Hill	Affirmative	
6	Tampa Electric Co.	Benjamin F Smith II	Affirmative	
6	Tennessee Valley Authority	Marjorie S. Parsons	Negative	View
6	Western Area Power Administration - UGP Marketing	Peter H Kinney	Affirmative	
6	Xcel Energy, Inc.	David F. Lemmons		
8		Edward C Stein	Affirmative	
8		James A Maenner	Affirmative	
8		Roger C Zaklukiewicz	Affirmative	
8	JDRJC Associates	Jim Cyrulewski	Affirmative	
8	Pacific Northwest Generating Cooperative	Margaret Ryan	Abstain	View
8	Power Energy Group LLC	Peggy Abbadini		
8	Utility Services, Inc.	Brian Evans-Mongeon		
8	Volkman Consulting, Inc.	Terry Volkman	Affirmative	
9	Commonwealth of Massachusetts Department of Public Utilities	Donald Nelson	Affirmative	
9	National Association of Regulatory Utility Commissioners	Diane J Barney	Affirmative	



9	Oregon Public Utility Commission	Jerome Murray	Abstain	
9	Snohomish County PUD No. 1	William Moojen		
10	Florida Reliability Coordinating Council	Linda Campbell		
10	Midwest Reliability Organization	James D Burley		
10	New York State Reliability Council	Alan Adamson	Affirmative	
10	Northeast Power Coordinating Council, Inc.	Guy V. Zito	Affirmative	
10	ReliabilityFirst Corporation	Anthony E Jablonski	Negative	View
10	SERC Reliability Corporation	Carter B. Edge	Negative	View
10	Texas Reliability Entity	Larry D. Grimm	Negative	
10	Western Electricity Coordinating Council	Louise McCarren	Affirmative	

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Project 2006-06 Non-binding Poll IRO-001-2

Ballot Results	
Non-binding Poll Name:	Project 2006-06 Non-binding IRO-001-2
Poll Period:	1/30/2012 - 2/9/2012
Total # Opinions:	272
Total Ballot Pool:	341
Summary Results:	79.77% of those who registered to participate provided an opinion or an abstention; 84.69% of those who provided an opinion or abstention indicated support for the VRFs and VSLs.

Individual Ballot Pool Results				
Segment	Organization	Member	Opinion	Comments
1	Allegheny Power	Rodney Phillips		
1	Ameren Services	Kirit Shah	Abstain	
1	American Electric Power	Paul B. Johnson	Negative	View
1	American Transmission Company, LLC	Andrew Z Pusztai	Abstain	
1	Arizona Public Service Co.	Robert Smith	Abstain	
1	Avista Corp.	Scott J Kinney	Affirmative	
1	Baltimore Gas & Electric Company	Gregory S Miller	Negative	
1	BC Hydro and Power Authority	Patricia Robertson	Abstain	
1	Beaches Energy Services	Joseph S Stonecipher	Affirmative	
1	Bonneville Power Administration	Donald S. Watkins	Affirmative	
1	Central Maine Power Company	Kevin L Howes	Affirmative	
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G Choi	Affirmative	
1	City of Vero Beach	Randall McCamish		
1	City Water, Light & Power of Springfield	Shaun Anders		
1	Clark Public Utilities	Jack Stamper	Affirmative	
1	Cleco Power LLC	Danny McDaniel	Abstain	
1	Colorado Springs Utilities	Paul Morland	Affirmative	
1	Consolidated Edison Co. of New York	Christopher L de Graffenried	Abstain	
1	Dayton Power & Light Co.	Hertzel Shamash		
1	Dominion Virginia Power	Michael S Crowley	Abstain	
1	Duke Energy Carolina	Douglas E. Hils	Negative	View
1	East Kentucky Power Coop.	George S. Carruba		
1	Empire District Electric Co.	Ralph F Meyer	Abstain	

1	Entergy Corporation	George R. Bartlett	Affirmative	
1	FirstEnergy Energy Delivery	Robert Martinko	Affirmative	
1	Florida Keys Electric Cooperative Assoc.	Dennis Minton	Affirmative	
1	Great River Energy	Gordon Pietsch	Affirmative	View
1	Hoosier Energy Rural Electric Cooperative, Inc.	Robert Solomon		
1	Hydro One Networks, Inc.	Ajay Garg	Abstain	
1	Hydro-Quebec TransEnergie	Bernard Pelletier		
1	Idaho Power Company	Ronald D. Schellberg		
1	International Transmission Company Holdings Corp	Michael Moltane		
1	Kansas City Power & Light Co.	Michael Gammon	Affirmative	
1	Keys Energy Services	Stan T. Rzaad		
1	Lake Worth Utilities	Walt Gill		
1	Lakeland Electric	Larry E Watt	Affirmative	
1	Lee County Electric Cooperative	John W Delucca	Affirmative	
1	Long Island Power Authority	Robert Ganley	Abstain	
1	Manitoba Hydro	Joe D Petaski	Negative	View
1	MEAG Power	Danny Dees	Affirmative	
1	MidAmerican Energy Co.	Terry Harbour	Abstain	
1	Minnkota Power Coop. Inc.	Richard Burt	Abstain	
1	National Grid	Saurabh Saksena		
1	Nebraska Public Power District	Richard L. Koch		
1	New Brunswick Power Transmission Corporation	Randy MacDonald	Abstain	
1	New York Power Authority	Arnold J. Schuff	Affirmative	
1	Northeast Utilities	David Boguslawski	Abstain	
1	Northern Indiana Public Service Co.	Kevin M Largura	Affirmative	
1	NorthWestern Energy	John Canavan	Abstain	
1	Oklahoma Gas and Electric Co.	Marvin E VanBebber	Affirmative	
1	Omaha Public Power District	Doug Peterchuck	Affirmative	
1	Oncor Electric Delivery	Michael T. Quinn		
1	Orlando Utilities Commission	Brad Chase	Affirmative	
1	Otter Tail Power Company	Daryl Hanson		
1	PacifiCorp	Colt Norrish		
1	PECO Energy	Ronald Schloendorn	Affirmative	
1	Platte River Power Authority	John C. Collins	Affirmative	
1	Portland General Electric Co.	Frank F Afranji	Affirmative	View
1	Potomac Electric Power Co.	David Thorne	Abstain	
1	PowerSouth Energy Cooperative	Larry D Avery	Abstain	
1	PPL Electric Utilities Corp.	Brenda L Truhe	Abstain	
1	Public Service Company of New Mexico	Laurie Williams		
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Abstain	
1	Public Utility District No. 1 of Okanogan County	Dale Dunckel	Abstain	
1	Puget Sound Energy, Inc.	Catherine Koch		

1	Rochester Gas and Electric Corp.	John C. Allen	Affirmative	
1	Sacramento Municipal Utility District	Tim Kelley	Abstain	
1	Salt River Project	Robert Kondziolka	Affirmative	
1	Santee Cooper	Terry L Blackwell	Affirmative	
1	SCE&G	Henry Delk, Jr.	Affirmative	
1	Seattle City Light	Pawel Krupa	Affirmative	
1	Sierra Pacific Power Co.	Rich Salgo	Abstain	
1	South Texas Electric Cooperative	Richard McLeon		
1	Southern California Edison Co.	Dana Cabbell		
1	Southern Company Services, Inc.	Robert Schaffeld	Affirmative	View
1	Southern Illinois Power Coop.	William G. Hutchison		
1	Southwest Transmission Cooperative, Inc.	James Jones	Negative	View
1	Southwestern Power Administration	Gary W Cox	Abstain	
1	Sunflower Electric Power Corporation	Noman Lee Williams	Negative	
1	Tampa Electric Co.	Beth Young	Negative	
1	Tennessee Valley Authority	Larry Akens	Abstain	
1	Tri-State G & T Association, Inc.	Tracy Sliman	Affirmative	
1	Tucson Electric Power Co.	John Tolo		
1	United Illuminating Co.	Jonathan Appelbaum	Affirmative	
1	Westar Energy	Allen Klassen	Abstain	
1	Western Area Power Administration	Brandy A Dunn	Affirmative	
1	Western Farmers Electric Coop.	Forrest Brock	Abstain	
1	Xcel Energy, Inc.	Gregory L Pieper		
2	Alberta Electric System Operator	Mark B Thompson	Abstain	
2	BC Hydro	Venkataramakrishnan Vinnakota	Abstain	
2	California ISO	Gregory Van Pelt	Affirmative	
2	Electric Reliability Council of Texas, Inc.	Charles B Manning	Affirmative	
2	Independent Electricity System Operator	Kim Warren	Affirmative	
2	ISO New England, Inc.	Kathleen Goodman		
2	Midwest ISO, Inc.	Jason L Marshall	Affirmative	View
2	New Brunswick System Operator	Alden Briggs	Abstain	
2	New York Independent System Operator	Gregory Campoli	Abstain	
2	PJM Interconnection, L.L.C.	Tom Bowe	Affirmative	
2	Southwest Power Pool	Charles H Yeung		
3	Alabama Power Company	Richard J. Mandes	Affirmative	View
3	Allegheny Power	Bob Reeping		
3	Anaheim Public Utilities Dept.	Kelly Nguyen		
3	APS	Steven Norris	Abstain	
3	Atlantic City Electric Company	James V. Petrella	Abstain	
3	BC Hydro and Power Authority	Pat G. Harrington	Abstain	
3	Blachly-Lane Electric Co-op	Bud Tracy	Affirmative	
3	Bonneville Power Administration	Rebecca Berdahl	Affirmative	
3	Central Electric Cooperative, Inc.	Dave Markham	Affirmative	

	(Redmond, Oregon)			
3	Central Lincoln PUD	Steve Alexanderson	Abstain	
3	City of Bartow, Florida	Matt Culverhouse		
3	City of Clewiston	Lynne Mila	Affirmative	
3	City of Farmington	Linda R Jacobson	Affirmative	
3	City of Garland	Ronnie C Hoeinghaus	Abstain	
3	City of Green Cove Springs	Gregg R Griffin	Affirmative	View
3	City of Leesburg	Phil Janik		
3	City of Redding	Bill Hughes	Affirmative	
3	Clearwater Power Co.	Dave Hagen	Affirmative	
3	Cleco Corporation	Michelle A Corley	Abstain	
3	ComEd	Bruce Krawczyk	Affirmative	
3	Consolidated Edison Co. of New York	Peter T Yost	Abstain	
3	Constellation Energy	Carolyn Ingersoll		
3	Consumers Energy	David A. Lapinski	Abstain	
3	Consumers Power Inc.	Roman Gillen	Affirmative	
3	Coos-Curry Electric Cooperative, Inc	Roger Meader	Affirmative	
3	Cowlitz County PUD	Russell A Noble		
3	Delmarva Power & Light Co.	Michael R. Mayer		
3	Detroit Edison Company	Kent Kujala	Affirmative	
3	Dominion Resources Services	Michael F. Gildea	Abstain	
3	Douglas Electric Cooperative	Dave Sabala	Affirmative	
3	Duke Energy Carolina	Henry Ernst-Jr	Negative	View
3	East Kentucky Power Coop.	Sally Witt		
3	Entergy	Joel T Plessinger	Affirmative	
3	Fall River Rural Electric Cooperative	Bryan Case	Affirmative	
3	FirstEnergy Solutions	Kevin Querry	Affirmative	
3	Georgia Power Company	Anthony L Wilson	Affirmative	View
3	Georgia System Operations Corporation	Scott S. Barfield-McGinnis	Negative	View
3	Great River Energy	Sam Kokkinen	Affirmative	View
3	Hydro One Networks, Inc.	David Kiguel	Abstain	
3	Idaho Power Company	Shaun Jensen		
3	JEA	Garry Baker		
3	Kansas City Power & Light Co.	Charles Locke	Affirmative	
3	Kissimmee Utility Authority	Gregory D Woessner	Affirmative	
3	Lakeland Electric	Mace D Hunter	Affirmative	
3	Lane Electric Cooperative, Inc.	Rick Crinklaw	Affirmative	
3	Lincoln Electric Cooperative, Inc.	Michael Henry	Affirmative	
3	Lincoln Electric System	Bruce Merrill		
3	Los Angeles Department of Water & Power	Daniel D Kurowski	Affirmative	
3	Lost River Electric Cooperative	Richard Reynolds	Affirmative	
3	Louisville Gas and Electric Co.	Charles A. Freibert		
3	Manitoba Hydro	Greg C. Parent	Negative	View
3	MidAmerican Energy Co.	Thomas C. Mielnik	Abstain	
3	Mississippi Power	Don Horsley	Affirmative	View
3	Municipal Electric Authority of	Steven M. Jackson	Affirmative	

	Georgia			
3	Muscatine Power & Water	John S Bos	Abstain	
3	Nebraska Public Power District	Tony Eddleman	Abstain	
3	New York Power Authority	Marilyn Brown	Affirmative	
3	Niagara Mohawk (National Grid Company)	Michael Schiavone	Affirmative	
3	Northern Indiana Public Service Co.	William SeDoris	Affirmative	
3	Northern Lights Inc.	Jon Shelby	Affirmative	
3	Okanogan County Electric Cooperative, Inc.	Ray Ellis	Affirmative	
3	Orange and Rockland Utilities, Inc.	David Burke	Abstain	
3	Orlando Utilities Commission	Ballard K Mutters	Abstain	
3	PacifiCorp	John Apperson		
3	Platte River Power Authority	Terry L Baker	Affirmative	
3	Potomac Electric Power Co.	Robert Reuter	Abstain	
3	Public Service Electric and Gas Co.	Jeffrey Mueller	Abstain	
3	Public Utility District No. 2 of Grant County	Greg Lange		
3	Raft River Rural Electric Cooperative	Heber Carpenter	Affirmative	
3	Sacramento Municipal Utility District	James Leigh-Kendall	Abstain	
3	Salmon River Electric Cooperative	Ken Dizes	Affirmative	
3	Salt River Project	John T. Underhill	Affirmative	
3	San Diego Gas & Electric	Scott Peterson		
3	Santee Cooper	Zack Dusenbury	Affirmative	
3	Seattle City Light	Dana Wheelock	Affirmative	
3	Seminole Electric Cooperative, Inc.	James R Frauen	Affirmative	
3	Southern California Edison Co.	David Schiada		
3	Tacoma Public Utilities	Travis Metcalfe	Affirmative	
3	Tampa Electric Co.	Ronald L Donahey	Negative	View
3	Tennessee Valley Authority	Ian S Grant	Abstain	
3	Umatilla Electric Cooperative	Steve Eldrige	Affirmative	
3	West Oregon Electric Cooperative, Inc.	Marc M Farmer	Affirmative	
3	Wisconsin Electric Power Marketing	James R Keller	Abstain	
3	Wisconsin Public Service Corp.	Gregory J Le Grave		
3	Xcel Energy, Inc.	Michael Ibold	Abstain	
4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Affirmative	
4	American Municipal Power - Ohio	Kevin Koloini	Negative	
4	Blue Ridge Power Agency	Duane S Dahlquist	Affirmative	
4	Central Lincoln PUD	Shamus J Gamache	Abstain	
4	City of Clewiston	Kevin McCarthy	Affirmative	
4	City of New Smyrna Beach Utilities Commission	Timothy Beyrle		
4	City Utilities of Springfield, Missouri	John Allen	Affirmative	
4	Consumers Energy	David Frank Ronk		
4	Cowlitz County PUD	Rick Syring		
4	Florida Municipal Power Agency	Frank Gaffney	Affirmative	
4	Fort Pierce Utilities Authority	Thomas W. Richards		

4	Georgia System Operations Corporation	Guy Andrews	Negative	View
4	Illinois Municipal Electric Agency	Bob C. Thomas	Abstain	
4	Madison Gas and Electric Co.	Joseph DePoorter	Abstain	
4	Ohio Edison Company	Douglas Hohlbaugh	Affirmative	
4	Pacific Northwest Generating Cooperative	Aleka K Scott	Affirmative	
4	Public Utility District No. 1 of Douglas County	Henry E. LuBean	Affirmative	
4	Public Utility District No. 1 of Snohomish County	John D Martinsen	Abstain	
4	Sacramento Municipal Utility District	Mike Ramirez	Abstain	
4	Seattle City Light	Hao Li	Affirmative	
4	Seminole Electric Cooperative, Inc.	Steven R Wallace	Affirmative	
4	Tacoma Public Utilities	Keith Morissette	Affirmative	
4	Tallahassee Electric	Allan Morales	Affirmative	
4	Wisconsin Energy Corp.	Anthony Jankowski	Negative	
5	AEP Service Corp.	Brock Ondayko	Negative	View
5	AES Corporation	Leo Bernier	Abstain	
5	Amerenue	Sam Dwyer	Abstain	
5	Arizona Public Service Co.	Edward Cambridge	Abstain	
5	Avista Corp.	Edward F. Groce	Affirmative	
5	BC Hydro and Power Authority	Clement Ma	Abstain	
5	Bonneville Power Administration	Francis J. Halpin	Affirmative	
5	City of Grand Island	Jeff Mead	Abstain	
5	City of Redding	Paul Cummings	Affirmative	
5	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Max Emrick	Affirmative	
5	City of Tallahassee	Alan Gale		
5	Cleco Power	Stephanie Huffman	Abstain	
5	Cogentrix Energy, Inc.	Mike D Hirst	Abstain	
5	Consolidated Edison Co. of New York	Wilket (Jack) Ng	Abstain	
5	Constellation Power Source Generation, Inc.	Amir Y Hammad	Negative	
5	Consumers Energy	James B Lewis	Abstain	
5	Cowlitz County PUD	Bob Essex		
5	CPS Energy	Robert B Stevens		
5	Detroit Edison Company	Christy Wicke	Affirmative	
5	Dominion Resources, Inc.	Mike Garton	Abstain	
5	Duke Energy	Dale Q Goodwine	Negative	View
5	Dynegy Inc.	Dan Roethemeyer	Affirmative	
5	Electric Power Supply Association	John R Cashin		
5	Entergy Corporation	Stanley M Jaskot	Affirmative	
5	Exelon Nuclear	Michael Korchynsky	Affirmative	
5	ExxonMobil Research and Engineering	Martin Kaufman	Abstain	
5	FirstEnergy Solutions	Kenneth Dresner	Affirmative	
5	Florida Municipal Power Agency	David Schumann	Affirmative	

5	Great River Energy	Preston L Walsh	Affirmative	View
5	Green Country Energy	Greg Froehling	Affirmative	
5	Indeck Energy Services, Inc.	Rex A Roehl		
5	Kansas City Power & Light Co.	Scott Heidtbrink		
5	Kissimmee Utility Authority	Mike Blough	Affirmative	
5	Lakeland Electric	James M Howard	Affirmative	
5	Liberty Electric Power LLC	Daniel Duff	Affirmative	
5	Lincoln Electric System	Dennis Florom	Affirmative	
5	Los Angeles Department of Water & Power	Kenneth Silver		
5	Luminant Generation Company LLC	Mike Laney	Negative	View
5	Manitoba Hydro	S N Fernando	Negative	View
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Abstain	
5	MEAG Power	Steven Grego	Affirmative	
5	MidAmerican Energy Co.	Christopher Schneider		
5	Muscatine Power & Water	Mike Avesing	Affirmative	
5	Nebraska Public Power District	Don Schmit	Abstain	
5	New York Power Authority	Gerald Mannarino	Affirmative	
5	Occidental Chemical	Michelle R DAntuono	Affirmative	
5	Omaha Public Power District	Mahmood Z. Safi	Affirmative	
5	Orlando Utilities Commission	Richard Kinas		
5	PacifiCorp	Sandra L. Shaffer	Abstain	
5	Platte River Power Authority	Pete Ungerman		
5	Portland General Electric Co.	Gary L Tingley		
5	PPL Generation LLC	Annette M Bannon	Affirmative	
5	Public Service Enterprise Group Incorporated	Dominick Grasso	Abstain	
5	Public Utility District No. 1 of Lewis County	Steven Grega	Affirmative	
5	Sacramento Municipal Utility District	Bethany Hunter	Abstain	
5	Salt River Project	Glen Reeves		
5	Santee Cooper	Lewis P Pierce	Affirmative	
5	Seattle City Light	Michael J. Haynes	Affirmative	
5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins	Affirmative	
5	Snohomish County PUD No. 1	Sam Nietfeld	Abstain	
5	Southern Company Generation	William D Shultz	Affirmative	View
5	Tampa Electric Co.	RJames Rocha	Negative	
5	Tenaska, Inc.	Scott M. Helyer		
5	Tennessee Valley Authority	David Thompson	Abstain	
5	Tri-State G & T Association, Inc.	Barry Ingold	Affirmative	
5	U.S. Army Corps of Engineers	Melissa Kurtz	Affirmative	
5	US Power Generating Company	Bohdan M Dackow		
5	Wisconsin Electric Power Co.	Linda Horn	Abstain	
5	Wisconsin Public Service Corp.	Leonard Rentmeester	Abstain	
6	AEP Marketing	Edward P. Cox	Negative	View
6	Ameren Energy Marketing Co.	Jennifer Richardson	Abstain	
6	Arizona Public Service Co.	Justin Thompson	Abstain	

6	Black Hills Power	andrew heinle	Affirmative	
6	Bonneville Power Administration	Brenda S. Anderson	Affirmative	
6	City of Austin dba Austin Energy	Lisa L Martin	Affirmative	
6	Cleco Power LLC	Robert Hirschak	Abstain	
6	Consolidated Edison Co. of New York	Nickesha P Carrol	Abstain	View
6	Constellation Energy Commodities Group	Brenda Powell	Abstain	
6	Dominion Resources, Inc.	Louis S. Slade	Abstain	
6	Duke Energy Carolina	Walter Yeager	Negative	
6	Entergy Services, Inc.	Terri F Benoit	Affirmative	
6	Exelon Power Team	Pulin Shah	Affirmative	
6	FirstEnergy Solutions	Mark S Travagianti	Affirmative	
6	Florida Municipal Power Agency	Richard L. Montgomery	Affirmative	
6	Florida Municipal Power Pool	Thomas Washburn	Affirmative	
6	Florida Power & Light Co.	Silvia P. Mitchell	Negative	
6	Great River Energy	Donna Stephenson		
6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Affirmative	
6	Lakeland Electric	Paul Shipps	Affirmative	
6	Lincoln Electric System	Eric Ruskamp	Affirmative	
6	Manitoba Hydro	Daniel Prowse	Negative	View
6	MidAmerican Energy Co.	Dennis Kimm	Negative	View
6	Muscatine Power & Water	Brandy D Olson		
6	New York Power Authority	William Palazzo	Affirmative	
6	Northern Indiana Public Service Co.	Joseph O'Brien	Affirmative	
6	Omaha Public Power District	David Ried	Affirmative	
6	PacifiCorp	Scott L Smith	Affirmative	
6	Platte River Power Authority	Carol Ballantine	Affirmative	
6	PPL EnergyPlus LLC	Mark A Heimbach	Affirmative	
6	Progress Energy	John T Sturgeon	Abstain	
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Abstain	
6	Sacramento Municipal Utility District	Claire Warshaw	Abstain	
6	Salt River Project	Steven J Hulet	Affirmative	
6	Santee Cooper	Suzanne Ritter	Affirmative	
6	Seattle City Light	Dennis Sismaet	Affirmative	
6	Seminole Electric Cooperative, Inc.	Trudy S. Novak	Affirmative	
6	Shell Energy North America (US), L.P.	Paul Kerr	Affirmative	
6	South California Edison Company	Lujuanna Medina		
6	Tacoma Public Utilities	Michael C Hill	Affirmative	
6	Tampa Electric Co.	Benjamin F Smith II	Negative	
6	Tennessee Valley Authority	Marjorie S. Parsons	Abstain	
6	Western Area Power Administration - UGP Marketing	Peter H Kinney	Affirmative	
6	Xcel Energy, Inc.	David F. Lemmons		
8		Roger C Zaklukiewicz	Affirmative	
8		Edward C Stein	Affirmative	
8		James A Maenner	Affirmative	

8	JDRJC Associates	Jim Cyrulewski	Affirmative	
8	Pacific Northwest Generating Cooperative	Margaret Ryan	Affirmative	
8	Power Energy Group LLC	Peggy Abbadini		
8	Utility Services, Inc.	Brian Evans-Mongeon		
8	Volkman Consulting, Inc.	Terry Volkman	Affirmative	
9	Commonwealth of Massachusetts Department of Public Utilities	Donald Nelson	Affirmative	
9	National Association of Regulatory Utility Commissioners	Diane J Barney	Abstain	
9	Oregon Public Utility Commission	Jerome Murray	Abstain	
9	Snohomish County PUD No. 1	William Moojen		
10	Florida Reliability Coordinating Council	Linda Campbell		
10	Midwest Reliability Organization	James D Burley		
10	New York State Reliability Council	Alan Adamson	Affirmative	
10	Northeast Power Coordinating Council, Inc.	Guy V. Zito	Affirmative	
10	ReliabilityFirst Corporation	Anthony E Jablonski	Negative	View
10	SERC Reliability Corporation	Carter B. Edge	Abstain	
10	Texas Reliability Entity	Larry D. Grimm	Negative	
10	Western Electricity Coordinating Council	Louise McCarren	Affirmative	

Name (40 Responses)
Organization (40 Responses)
Group Name (22 Responses)
Lead Contact (22 Responses)
Question 1 (55 Responses)
Question 1 Comments (62 Responses)
Question 2 (50 Responses)
Question 2 Comments (62 Responses)
Question 3 (52 Responses)
Question 3 Comments (62 Responses)
Question 4 (53 Responses)
Question 4 Comments (62 Responses)
Question 5 (55 Responses)
Question 5 Comments (62 Responses)
Question 6 (0 Responses)
Question 6 Comments (62 Responses)

Individual
Jennifer Wright
San Diego Gas & Electric
Yes
Yes
Yes
Yes
Individual
Steve Alexanderson
Central Lincoln
Yes
Yes
No
The new requirement presents us with a paradoxical situation. The communication has failed, so we must consult; yet consultation requires communication. We note that the SDT used the word "any", implying that multiple communication paths are required. The reality of the situation at Central Lincoln, due to our remote location, is that a single back hoe incident at the right location can take out all of our of our communication capability (including the terrestrial portion of the cellular networks) with our BA/TO, making this requirement impossible to meet for this circumstance using our present capabilities. We also note that no time limit was indicated. Most interruptions are brief, and fixed before consultation could reasonably take place. CEAs will be finding entities non-compliant for quickly fixing problems at their end without first consulting to ensure the restoration time was agreeable. To avoid non-compliance, entities will be forced delay repairs while they investigate alternative communication paths for consultation purposes. We fail to see how such an outcome improves reliability. The new requirement is one sided, requiring the DP and GOP to consult with no corresponding requirement for the TO or BA to have personnel available for such a consultation. Consultation failure or failure to mutually agree due to actions or inactions on the part of the TO or BA should not result in an enforcement action against the DP or GOP, yet that is how the requirement is written. The new requirement fails to add any "clarity" to the other requirements, and we don't see that the stakeholders thought there was a problem with DP/GOP obligation clarity. Instead, it adds new obligations with no justification for how they enhance reliability. We suggest removing the requirement.
Yes
As stated in our prior comments, we continue to have problems with COM-002 R2 and R3 as written. The SDT's answer ("It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive") addresses our concern perfectly, and we would agree with such an expectation. Unfortunately, the expressed expectation is not in the proposed standard or even in a proposed guideline for the standard.
Group
SERC OC Standards Review Group
Gerald Beckerle
Yes
No
We are concerned regarding communications between Transmission Operators on opposite ends of DC ties which may or may not be in the same interconnection. Similarly, COM-001, R1.2 limits the requirement of adjacent Reliability Coordinators to the same interconnection and this should not be limited to the same interconnection whether it is synchronous or non-synchronous. The measures should also be verified to ensure that they align properly with the final requirements.
Yes
We suggest that this phrase should also be removed from the "Purpose" statement.
No
We suggest Requirement 11 should be deleted as the generic nature of the term "...any of its Interpersonal Communications capabilities...." could be interpreted to include communications capabilities used for internal DP/GO purposes. Such DP/GO internal communications capability would not be critical to BES reliability. Also, no BES reliability benefit is realized by the parties simply agreeing to a time for the restoration of the failed Interpersonal Communication capability.
No
We suggest adding the words "and identified as a reliability directive to the recipient" at the end of the definition of Reliability Directive. As written, this definition could lead to a dispute of what communications are Reliability Directives; leading to further dispute as to what Requirements are applicable. By adding this clarity in the definition of this term, clarity will not be needed in the application of this definition as is proposed in COM-002-3, Req 1. This would allow the removal of R1 from COM-002-3
COM-001-2 Comments Definition of Alternative Interpersonal Communication: The proposed definition uses the term "medium". What is the scope of that? Telephony is a "medium" but there is wired, wireless, satellite, etc. Was "medium" intended to differentiate voice, paper, text, email, teletype, or something else? Does the qualifying term "same" when modifying infrastructure mean something like voice versus written? What about situations where the primary telephone system is Voice Over Internet Protocol (VOIP) and it is using the same computer network infrastructure as an email or messaging system. That is the "same infrastructure" but a different "medium" R1 and R2 - We suggest the drafting team look at Standard EOP-008, Requirements R3 and R8 and add appropriate language in Standard COM-001-2, to avoid instantaneous non-compliance for loss of Interpersonal Communications and/or alternate Interpersonal communications. R1 - In later requirements it is proposed that the entity "...shall designate an...". It is suggested that for consistently and audit ability, this concept be used for R1, R3, R5, R7 and R8. In addition, the qualifier of "primary" should be used such that the requirements read "... shall have designated, primary Interpersonal Communications capability with the following entities:-" Although it is appropriate that "Alternative" be capitalized since it is used in a defined term (i.e. Alternative Interpersonal Communication") that bounds acceptable alternative methods, we do not see the need to capital "primary". R9 - The requirement is unclear if the required monthly test is a general functionality test or if there is the expectation of testing the designated Alternative Interpersonal Communications with all of the entities defined in the sub-requirements of R2, R4, and R6. There is no expectation of testing the primary Interpersonal Communications - is this intentional or an oversight? Although functional testing of this should be done as a normal course of business, should an explicit test be required with each entity in the sub-requirements of R1, R3, R5, R7 and R8 to insure, for example, that all the phone numbers are correct? R10 - The following scenario seems plausible: The Interpersonal Communications fails and is detected at 14:00 and gets fixed at 14:35. It lasted more than 30 minutes but is fixed. As written the requirement would require the responsible entity to notify entities identified in R1 through R6 by 15:00 (i.e. 60 minutes from detection) even though the problem no longer exists. Is that the expectation? Does COM-001 apply only to primary control centers or back-ups, per EOP-008, as well? M9 reads "at least on a monthly basis". We suggest that this be changed to "at least once per calendar month" as written in R9. This change should also be corrected in the VSLs. M8 - We suggest removing the second "that" in the first sentence of the measure. M10 - We suggest this be revised to coincide with changes made in R10 (deleting impacted and adding as identified in Requirements R1 through R6), therefore M10 should read: "Each Reliability Coordinator, Transmission Operator, and Balancing Authority, shall have and provide upon request evidence that it notified entities as identified in Requirements R1 through R6 within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasted 30 minutes or longer. Evidence could include, but is not limited to dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent evidence. (R10.) " M12 needs to be removed. We question why the first paragraph of Section 1.3 - Data Retention has been included in each of these three standards. We suggest that it should be removed from each standard. COM-002-3 Comments R2 - We recommend that the following phrase (in quotes) be added to R2: Each Balancing Authority, Transmission Operator and Distribution Provider that is the recipient of a Reliability Directive shall repeat, restate, rephrase or recapitulate the Reliability Directive "immediately upon receiving it." As written, there is no limit as to when the entity must repeat it (i.e. they could wait 2 hours) The Standard is not clear as to what each entity is to do when more than one entity receives a Reliability Directive at the same time (e.g. during a RC area teleconference call). For example, is a roll call of receiving entities expected to be held so that they individually can repeat, restate, rephrase or recapitulate the Reliability Directive followed by individual confirmation required in R3? IRO-001-3 Comments We recommend that where the verb "direct/directed" or noun "direction" is used in Purpose, R1, R2 and R3, that it be replaced with the verb "instruct/instructed" or noun "instruction", as appropriate. This would help the industry avoid confusion often referred to as "big D" or "little d" directives. It is noted that the term "Reliability Directive" does that to a great degree but avoiding the

verb/noun "direct/direction" would augment the difference. R1 - At what point in time is "identified" referring to in "...to prevent identified events or..."? Is it referring to current or future events? One might assume both since the "Time Horizon" is defined as Real-time Operations, Same Day Operations and Operations Planning, but the requirement may be enhanced if explicitly stated ("...to prevent events identified in real-time or in the future or to mitigate the magnitude..."). For clarity, the scope of the authority should be limited to the Reliability Coordinator Area ("...that result in an Emergency or Adverse Reliability Impacts within its Reliability Coordinator Area"). As written, it implies the authority should extend outside its RC Area. R2 – We question the phrase "physically implemented" and recommend that the intent be clarified in the language. We note the following comment and response posted under Consideration of Comments on Initial Ballot — Reliability Coordination (Project 2006-06) Date of Initial Ballot: February 25 – March 7, 2011: "IRO-001 R2, R3, and R4 have replaced "Directives" with the word direction in lower case (while it appears that "Directives" is a subset of "directions"). We believe that this muddies the waters and could bring numerous conversations and dialog into scope unnecessarily. The end result is that the RC has the right to issue and use "Directives" and anything short of this could just be communications. For example, a number of entities that are Reliability Coordinators also facilitate energy markets. There are many communications related to markets that probably should be out of scope with respect to the standards. Furthermore, it might not be clear what role (eg Reliability Coordinator, market operator, etc) the staff at these entities is fulfilling. Response: IRO-001 is written to cover both typical daily operating scenarios and also emergency scenarios. The required performance encompasses issuing and responding to Reliability Directives as well as other directions. The requirement language specifically ties back to Requirement R2 which states that the RC "shall take actions or direct actions, which could include issuing Reliability Directives, ". This is the "direction in accordance with Requirement R2" stated in R3 and the "direction in accordance with Requirement R3" stated in R4." We believe the entity's comments remain valid and the response provided by the SDT does not address all aspects of the concern. We suggest that the language be changed to "Reliability Directive" consistent with COM-002. R3 – The requirement states the responsible entities shall "inform" its RC when unable to perform as directed but it is unclear when the notification needs to take place. Although the term "as soon as practical" may seem be unmeasurable, as written now there is no time deadline to perform the notification – i.e. it could be 4 hours later after recognition. M2 – need to add the following words "compliance with, physically, unless" which were included in R2, therefore M2 should read "Each Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator and Distribution Provider shall have and provide evidence which may include, but is not limited to dated operator logs, dated records, dated and time -stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it complied with its Reliability Coordinator's direction(s) per Requirement R1 unless compliance with the direction per Requirement R1 could not be physically implemented or unless such actions would have violated safety, equipment, regulatory or statutory requirements. In such cases, the Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator or Distribution Provider shall have and provide copies of the safety, equipment, regulatory or statutory requirements as evidence for not complying with the Reliability Coordinator's direction. (R2) " Section 1.3, the second bullet; need to add calendar to 12 calendar months "The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Standards Review group only and should not be construed as the position of SERC Reliability Corporation, its board or its officers."
Group
Salt River Project
Chris Chavez
Yes
Yes
Yes
Yes
Yes
Yes
Group
Pacific Northwest Generating Cooperative
Ron Sporseen
Yes
Yes
Yes
No
As per COM-001-2, R7, "Each Distribution Provider shall have Interpersonal Communications capability with the following entities..." R11 states that the DP or GO that experiences a failure of its Interpersonal Communications ability shall consult with TOPs and BAs and agree on how to restore Interpersonal Communications. We believe better language might be, "Restore Interpersonal Communications with your TOP/BA as soon as operationally feasible."
Yes
The PNGC Comment Group believes COM-002-3, R2, lacks justification for applicability to a Distribution Provider (DP). RCs in the WECC region do not communicate reliability directives to DP only entities. Having this requirement apply to DPs seems to indicate that we will need 24/7 communications capability to record and respond to calls that will never come in order to satisfy the requirement with no improvement to reliability. The SDT's response from the last round of comments: "It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive". Nowhere is this expectation provided for in the written standard. If the issuer of a reliability directive has already called the DP, are they going to then re-issue the reliability directive after the DP calls them back?
Individual
Paul Kerr
Shell Energy North America
Yes
Yes
Individual
Keira Kazmerski
Xcel Energy
Yes
No
In COM-001-2, R4.3. Adjacent Transmission Operators synchronously connected within the same Interconnection. This new requirement has a term that is not defined Adjacent Transmission Operators.
Yes
Yes
Yes
Group
Northeast Power Coordinating Council
Guy Zito
No
NERC uses the terms "adjacent" and "neighboring" in various standards. It is generally believed that those terms have the same meanings, but there are those who believe those terms, as used, are intended to have different meanings. To ensure a consistent usage and understanding, the definition of the term adjacent must be made known before its addition to the standard. Consideration should be given to using only one term in all standards if adjacent and neighboring are intended to mean the same thing. Both terms are used in NERC Standards, sometimes both in the same standard. For example, EOP-001-2b uses "neighboring" in R5, and "adjacent" in R3.3.

For COM-001: 1. R1.2 and R2.2: The phrase "within the same Interconnection" is improper; it needs to be removed. RCs between two Interconnections still need to communicate with each other for reliability coordination (e.g. between Quebec and the other RCs in the NPCC region to coordinate reliability issues including curtailing interchange transactions crossing an Interconnection boundary). The SDT's response to industry comments on the previous posting that the phrase was added to address the ERCOT situation (that ERCOT does not need to communicate with other RCs and that such coordination takes place between TOPs) leaves a reliability gap. 2. R3.5 and R4.3: The phrase "synchronously connected within the same Interconnection" is also improper; it needs to be removed. TOPs do communicate with other TOPs including those asynchronously connected and in another Interconnection (e.g. between Quebec and all of its asynchronously interconnected neighbors). The reason that was used in response to the above comments (coordination among TOPs for DC tie operation) contradicts with the inclusion of this phrase in R3.5 and R4.3. 3. R4 and R6: Not requiring an Alternative Interpersonal Communication capability between the BAs and the DP and GOP can result in a reliability gap. If Interpersonal Communication capability between the BAs and these entities is required to begin with to enable BAs to communicate with these entities (such as operating instructions or Reliability Directives) to ensure reliable operations, then an alternative capability is also needed to ensure this objective is achieved when the primary capability fails. 4. To preclude the possibility of problems arising from having different languages spoken between entities, COM-001-1.1 R4 should remain as it was or those ideas kept in the revised requirement. R4 read: "R4. Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations." 5. Measure M3 does not cover the added R3.5 condition (having Interpersonal Communications capability with each adjacent TOP). M3 needs to be revised. For IRO-001: The Data Retention Section does not reflect the revised requirements. As examples: the Electric Reliability Organization is no longer a responsible entity; the Reliability Coordinator should replace the ERO for keeping data for R1. Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider should replace the Reliability Coordinator for keeping data for R2. And, in the Data Retention Section, R4 and M4 are mentioned. However, there are only three requirements with their corresponding measures in the standard.
Group
Arizona Public Service Company
Janet Smith, Regulatory Affairs Supervisor
No
There is a risk of not properly identifying an abnormal condition (Emergency or Adverse Reliability Impact) in time to require specific use of the statement 'this is a Reliability Directive' when issuing switching on the system in the event of an emergency. This is a deviation from consistently using 3-way communication when an emergency occurs. It may not be apparent that an emergency exists and breaking from consistent use of expected 3-way communication could cause confusion.
Individual
Edward J Davis
Entergy Services, Inc
No
R3 adds additional responsibilities for the TOP to have Interpersonal Communications capability with EACH DP and GOP in its footprint. Similarly, R4 gives the TOP responsibility to have alternative communications capability with each of these entities. This is a significant additional responsibility for the TOP to document and perhaps arrange for additional means of communication with these entities. The short time frame provided for implementation of these requirements is not consistent with the additional effort and compliance documentation that is necessary to implement these requirements. Entergy recommends that the implementation time frame for these new requirements that apply to new entities, or expand the application of COM-001 for existing entities have an effective date 12 months beyond the applicable regulatory approval. Additionally, the implementation of the requirements that apply to the DP and GOP will represent an increase in the amount of documentation that must be retain to demonstrate compliance, and in some cases may also result in their having to purchase equipment or install new alternate means of communication. What is the improvement in reliability expected as a result of these new requirements?
Yes
Entergy agrees with the inclusion of the term "Adjacent" in these requirements to limit the entities that the BA or TOP must have communications capability with to those that they border.
Yes
Yes, the requirements of this standard pertain to having communications capability. The specific content of that communication should not be the subject of the standard.
No
The DP or GOP should have to notify the TOP and BA of its communications failure, similar to the requirement in R10 for TOP and BA. The DP or GOP should restore the communications capability as soon as possible. Entergy does not agree that the TOP or BA should have to negotiate the restoration time with the DP or GOP. This is an unreasonable burden on the BA and TOP.
No
An Adverse Reliability Impact is a type of Emergency. Including a new term for Adverse Reliability Impact and including both terms in the definition for Reliability Directive doesn't add clarity. I suggest changing the definition for Reliability Directive to remove phrase "or Adverse Reliability Impact."
Entergy does not agree with including the DP and GOP in this standard. However, if they are to be included and are required to have the communications capability indicated, they should be included in R10. Why would it be important for the TOP to notify the DP that their communications method has failed, but it is not important for the DP to notify the TOP when their communications method has failed. The distinction doesn't seem reasonable or meaningful. Additionally, in the draft of COM-002-3 requirement 2 contains the language that the recipient of the directive shall "repeat, restate, rephrase or recapitulate" the directive. Why are so many synonyms of repeat necessary. Repeat or restate should be sufficient to get the point across.
Individual
Michael Falvo
Independent Electricity System Operator
No
In COM-001, we commented earlier that the entities in R4 and R6 (now R5 and R6) should be the same, i.e. the BA needs to have the Interpersonal Communication capability as well as the Alternative Interpersonal Communication capability with the same entities. The SDT's response indicates that the suggested change is not needed since additionally requiring DP and GOP entities to have Alternative Interpersonal Communication capability would impose more cost on smaller DP and GOP entities that have little or no risk impact to the bulk electric system. We disagree with this assessment since the need to have Alternative Interpersonal Communication capability should be assessed from the viewpoint that whether or not the absence of such capability can adversely affect reliability. If Interpersonal Communication capability is needed between a BA and a DP/GOP to communicate reliability instructions or directives, then it is deemed necessary that such communication be provided at all times, which indicates the need for an alternative capability. We once again urge the SDT to make the list of entities in R5 and R6 to be the same.
No
(1) We agree with the addition of "Adjacent" entities in the quoted parts except the qualifier "synchronously connected within the same Interconnection" need to be removed from Parts 3.5 and 4.3 since TOPs do communicate with other TOPs even in another Interconnection (e.g. between Quebec and all of its asynchronously interconnected neighbors). Even in the case of ERCOT, TOPs on the two sides of a DC tie do communicate with each other for daily operations. (2) Measure M3 does not cover the added R3.5 condition (having Interpersonal Communications capability with each adjacent TOP). M3 needs to be revised.
No
In the last posting, we suggest removing the phrase "within the same Interconnection" from R1 (now R2.2) since there are RCs between two Interconnections that need to communication with each other for reliability coordination (e.g. between Quebec and the RCs the Northeast such as IESO, NYISO, NBSO and ISO-NE, and between the RCs in WECC with the RCs in the Eastern Interconnection). Such coordination may include but not limited to curtailing interchange transactions crossing Interconnection/RC boundary, as stipulated in IRO-006. The SDT's response to our comments citing that the phrase was added to address the ERCOT situation leaves a reliability gap to the other situations. We again urge the SDT to remove the phrase. If necessary, the ERCOT situation can be addressed by a regional variance.
Yes
Yes
(1) The proposed implementation plan conflicts with Ontario regulatory practice respecting the effective date of the standard. It is suggested that this conflict be removed by appending to the implementation plan wording, after "applicable regulatory approval" in the Effective Dates Section A5 on P. 4 of the draft standard COM-001, COM-002 and IRO-001, and on P. 2 of COM-001's Implementation Plan and P. 1 of COM-002's and IRO-001's Implementation Plans, to the following effect: ", or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities." (2) COM-001: Measure M9: - "monthly basis". Suggest changing "monthly basis" to "at least once per calendar month" to be consistent the wording in R9. (3) IRO-001: Measures M1, M2, M3 - The types of evidence are listed in paragraph form. This is not consistent with presentation style in COM-001-2 Measures, where evidence is listed in bullet format. Suggest using bullet form for consistency. (4) IRO-001, Data Retention Section: i. The retention requirements do not reflect the revised requirements. For example: the Electric Reliability Organization is no longer a responsible entity; the Reliability Coordinator should replace the ERO for keeping data for R1; Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider should replace the Reliability Coordinator for keeping data for R2; and there is no R4/M4. ii. Section 1.3, second paragraph: "The Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider... shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:" The word "or" between Generator Operator and Distribution Provider should be changed to "and".
Group
MRO NSRF
Will Smith
Yes
No
NERC has formally defined "Adjacent Balancing Authority" in the NERC Glossary of Terms, but not "Adjacent Transmission Operator". The MRO NSRF recommends that "Adjacent Transmission Operator" be defined similar to the "Adjacent Balancing Authority" definition in the NERC Glossary of Terms.

Yes
No
Please note that the use of the word "any" as in "Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities..." will be viewed as meaning every Interpersonal Communication medium that an Entity has or uses. The NSRF recommends that the word "any" be removed from this Requirement. The NSRF recommends that R11 be revised to read: "Each Distribution Provider and Generator Operator that experiences a failure of any of its primary (or defined) Interpersonal Communication capabilities with its Transmission Operator or Balancing Authority..." In that way it focuses it down to the communications issues with the TOP or BA. In lieu of "primary" the SDT could state "defined" as long as it is not meant to be "any". The latter part of R11 states: "...shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability." This ambiguous statement does not support reliability. Consulting with a TOP or BA does not solve the problem of the lack of Interpersonal Communication capabilities. The NSRF recommends this be rewritten as: "...shall consult with inform their Transmission Operator or Balancing Authority as applicable as to the status of the Interpersonal Communication capability". So the new R11 would read: "Each Distribution Provider and Generator Operator that experiences a failure of its primary (or designated) Interpersonal Communication with their Transmission Operator or Balancing Authority shall inform them, as applicable, as to the status of the Interpersonal Communication capability."
Yes
Has the SDT looked at combining COM-002-3 and IRO-001-3 into a single Standard? It would allow Entities a one stop shopping place to refer to issuing and receiving a Reliability Directive. The definition of Interpersonal Communication is: "Any medium that allows two or more individuals to interact, consult, or exchange information". As stated in Question 4, the use of the word any will bring in mediums that are outside the scope of this Standard. The NSRF recommends the following: Interpersonal Communication: The primary (or designated) medium that allows two or more individuals to interact, consult, or exchange information. In Standard COM-002-3 the MRO NSRF recommends that the Effective Date be the first day of the second calendar quarter after applicable regulatory approval, to be the same as COM-001-2 and IRO-001-3. In that way all 3 standards would be effective at the same time, making implementation much smoother. The below section will lead to entities hold evidence past the 12 month retention period. This ambiguous wording will force entities to hold data past the 12 month period as stated in the following paragraph, after the below sighting. Recommend that the first paragraph within 1.3 be deleted in its entirety. 1.3. Data Retention The following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.
Individual
Si Truc PHAN
Hydro-Quebec TransEnergie
For COM-001: R1.2 and R2.2: The phrase "within the same Interconnection" is improper; it needs to be removed. RCs between two Interconnections still need to communicate with each other for reliability coordination (e.g. between Quebec and the other RCs in the NPCC region to coordinate reliability issues including curtailing interchange transactions crossing an Interconnection boundary). The SDT's response to industry comments on the previous posting that the phrase was added to address the ERCOT situation (that ERCOT does not need to communicate with other RCs and that such coordination takes place between TOPs) leaves a reliability gap. 2. R3.5 and R4.3: The phrase "synchronously connected within the same Interconnection" is also improper; it needs to be removed. TOPs do communicate with other TOPs including those asynchronously connected and in another Interconnection (e.g. between Quebec and all of its asynchronously interconnected neighbors). The reason that was used in response to the above comments (coordination among TOPs for DC tie operation) contradicts with the inclusion of this phrase in R3.5 and R4.3. 3. R4 and R6: Not requiring an Alternative Interpersonal Communication capability between the BAs and the DP and GOP can result in a reliability gap. If Interpersonal Communication capability between the BAs and these entities is required to begin with to enable BAs to communicate with these entities (such as operating instructions or Reliability Directives) to ensure reliable operations, then an alternative capability is also needed to ensure this objective is achieved when the primary capability fails. 4. To preclude the possibility of problems arising from having different languages spoken between entities, COM-001-1.1 R4 should remain as it was or those ideas kept in the revised requirement. R4 read: "R4. Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations." 5. Measure M3 does not cover the added R3.5 condition (having Interpersonal Communications capability with each adjacent TOP). M3 needs to be revised. For IRO-001: The Data Retention Section does not reflect the revised requirements. As examples: the Electric Reliability Organization is no longer a responsible entity; the Reliability Coordinator should replace the ERO for keeping data for R1. Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider should replace the Reliability Coordinator for keeping data for R2. And, in the Data Retention Section, R4 and M4 are mentioned. However, there are only three requirements with their corresponding measures in the standard.
Individual
Daniel Duff
Liberty Electric Power LLC
Yes
Yes
Yes
No
The phrase "mutually agreeable time" needs to be replaced in order to make this standard acceptable. This phrasing creates a potential violation if equipment functionality cannot be restored in the time frame preferred by another entity, even if the time of repair is beyond the control of the RE. This phrase should be replaced with "inform their TO or BA as applicable of the failure, and provide estimates as to the time the Interpersonal Communication capabilities will be restored".
Yes
Individual
Joe O'Brien
NIPSCO
Yes
Yes
Yes
If the Interpersonal Communication is down, and no backup is required for the DP and GOP, how are they to consult and collaborate?
The question of whether one is in a state of Emergency or Instability, or in an Abnormal Condition can be still be subjective; it may be difficult to provide evidence for an audit.
In IRO-001 R2 an "and" is missing after Generator Operator, and the comma should be removed. Why are there 3 different Effective Dates for this project, each standard being different? To simplify, can't they all be made identical?
Group
City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power
Claire Lloyd
Yes
Yes
Yes
Yes
Yes
Individual
Darryl Curtis
Oncor Electric Delivery Company LLC

Yes
Yes
Yes
Yes
Yes
for COM-001-2 Oncor takes the position that contacting all impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer as prescribed in R1 through R6 is not doable within the ERCOT interconnect for a Transmission Operator. Oncor takes the position that notification only to the RC and BA is sufficient and that those two entities have the operational functionality to contact within the prescribed time all affected Distribution Providers, Generator Operators, and other Transmission Operators. R10 - Oncor takes the position that the word "impacted" added to R10 will clarify that notification only needs to be made to the entities that are effected by the failure of a communication path. This will also more align with the language in M10 For COM-002-3 Oncor request clarity about what constitutes a "recipient". For example, if a Transmission Grid Operator performing the functions of a Transmission Operator issues a Reliability Directive to its own field operations personnel to perform an action on behalf of the same entity, does the field operations personnel as the recipient become in affect a "Transmission Operator" subject to R2.
Individual
Chris de Graffenried
Consolidated Edison Co. of NY, Inc.
Yes
Yes
Yes
Regarding COM-002 Requirement R1, we recommend that this requirement be reworded as follows: "When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall require that the Reliability Directive be communicated using three-part communications as described in Requirements R2 and R3 of this standard". The reason for this recommended rewording are threefold: 1. Good operating practice calls for use of three-part communications at all times. The recommended re-write encourages the use of the good operating practice of three-part communications at all times, but does not require it. 2. It is not good operating practice to require that an additional (unnecessary) phrase be used during emergency situations. During emergency situations, it is best to use standard operating protocols so as to limit unnecessary burdens on operating personnel during critical and stressful times. 3. By implementing the proposed new R1 requirement, it would effectively weaken the need for rigorous compliance with any and all directives issued by the RC's, TO's or BA's. Regarding IRO-001 Requirement R1, we recommend that the current requirement R3 be reinstated as the new requirement R1. That is, the new requirement R1 should read as follows: R1. The Reliability Coordinator shall have clear decision-making authority to act and to direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities within its Reliability Coordinator Area to preserve the integrity and reliability of the Bulk Electric System. These actions shall be taken without delay, but no longer than 30 minutes. We do not support any further dilution of Reliability Coordinator authority to enforce Reliability Directives through deletion of the 30 minute maximum response time period. The timely actions in response to any Reliability Coordinator issued Reliability Directives is an essential part of the process.
Individual
Anthony Jankowski
We Energies
Yes
Yes
Yes
Please add "does not include telemetered or derived data"
No
R11 Implies that R8 and R9 are independent and redundant to R5.3, R5.4 and R3.3 and R3.4. R11 is not clear on the purpose of the statement " determine a mutually agreeable time for restoration" this could be driven by forces outside the control any of the entities. I think" provide estimated restoration and actual restoration time and determine mutually agreeable alternative during outage" would be better. Update M9 accordingly
Yes
The definition is acceptable, but as used may imply that all Emergency communications must be Reliability Directives.
COM-001, Although a great improvement over existing COM-001, and eliminates the data component see comments: •For R5.1 Can the solutions included to meet R1 be included, same R3.2 and R5.2, same R5.3 and R7.2, same R5.4 and R8.1 •For R5.2 Can the solutions included to meet R2 be included, same R4.2 and R6.2 •R9 a 2 hour response for a once a month test seems extreme, as would require a secondary Alternate Interpersonal Communications capability •M9 is reasonable, but should include something about communication actual repair and or time estimates •R10 The use of R1 through R6 implies notification of both Interpersonal Communications and Alternate Interpersonal Communications failures. Do you notify if you become aware after the link is back up if it was down for GT 30 minutes, and Doesn't address notifying when restored •R11 Implies that R8 and R9 are independent and redundant to R5.3, R5.4 and R3.3 and R3.4. R11 is not clear on the purpose of the statement " determine a mutually agreeable time for restoration" this could be driven by forces outside the control any of the entities. I think" provide estimated restoration and actual restoration time and determine mutually agreeable alternative during outage" would be better. Update M9 accordingly COM-002 •Since all the Requirements are related to Reliability Directives, is it implied that all "Emergency Communications" are Reliability Directives even if not designated as such per R1. •The M2 measure could be difficult for a recipient such as a Distribution Provider or Generator Operator. A recipient's phone may not be recorded but an initiator's always should. If a receiver refused to meet the R2 requirement, an initiator should have an alternative. I.e. repeat the directive and provide potential penalties if recipient refuses to comply. Should the initiator have responsibility for providing the entire 3-way evidence as M3 implies? IRO-001, Although a great improvement over existing IRO-001, see comments: •R2 needs to be clear that it is the Reliability Coordinator's Reliability Directive that must be complied with not just any Reliability Coordinator's direction as stated. •The M2 measure could be difficult, as the operator would have to have access to documents proving the safety, equipment, regulatory or statutory requirements, which may be the assessment of an individual applying the safety rule. Is the measure requiring a deposition of the individual to be performed for each instance? With an assumed data retention of 90 day (voice) 12 month document retention the deposition would be unlikely to be acquired prior to the retention period ending. •R3 needs to be clear that it is the inability to perform the Reliability Coordinator's Reliability Directive that must be communicated not just any "Reliability Coordinator's as directed". •The Data Retention section does not align with the standard: The Reliability Coordinator shall retain its evidence for the most recent 90 calendar days for voice recordings or 12 months for documentation for Requirement R2, Measure M2. R2 and M2 apply to the Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider. There is no R4 and M4.
Individual
J. S. Stonecipher, PE
City of Jacksonville Beach dba/ Beaches Energy Services
In R5.3, should a BA have communications with a DP or LSE? For the TOP, it is the DP because the load influence is very local; however, for a BA the supply/demand balance is not local and in markets that allow retail competition, I'm thinking LSE is the right functional entity. For Florida, it doesn't really matter. If the LSE is the "correct" entity, then R7 would need to be changed and a new requirement specific to LSE's would need to be added
Yes
Yes
Yes
Yes
COM-001-2, R9 - "Each ... shall test its Alternative Interpersonal Communications capability". I would suggest adding the phrase "...to each entity for which Alternative Interpersonal Communications is required." to add clarity.
Individual
Scott Berry
Indiana Municipal Power Agency
No comment.
No comment.
No comment.
No

IMPA does not believe that this requirement is necessary in order to ensure communication lines are restored by Distribution Providers and Generator Operators. If this requirement is kept, IMPA does not think the use of the words "a failure of any of its Interpersonal Communication capabilities" is acceptable. The wording is too inclusive and should apply to only primary Interpersonal Communication capabilities. IMPA is also concerned about how entities are supposed to know when the telephone companies may have equipment repaired in order to determine a mutually agreeable time to restore Interpersonal Communication capability. The entity may have no control over the restoration and hence would not be able to set a time other than whenever the capabilities are restored by for instance the telephone company. In addition, entities will have to keep evidence to show that a "mutually" agreeable time was reached by two or more entities. The most workable solution would be to require notification if primary Interpersonal Communication is lost and a follow-up notification when that capability is restored.
No comment.
For R2 in IRO-001-3, the requirement needs to have the entities comply with their Reliability Coordinator's direction received in R1. Currently, requirement 2 directions are not linked back to R1 which means entities would have to comply with all Reliability Coordinator's directions regardless if they are associated with R1. For R7 in COM-001-2, IMPA does not believe that every Distribution Provider needs to be included in requirement 7. IMPA recommends stating that requirement 7 only applies to Distribution Providers who own an UFLS or UFLS system.
Individual
Jeff Longshore
Luminant Energy Company LLC
Yes
Yes
Yes
Yes
Yes
Yes
IRO-001-3 R1 is not consistent with the direction taken in COM-002-3 which requires the Reliability Coordinator to identify Reliability Directive as such. The same approach should be taken with IRO-001-3 R1 so that the Reliability Coordinator is required to identify directions that are made to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impacts as such prior to or when issuing the directions. This extra specification is needed to eliminate any possible confusion in areas where the market operator and Reliability Coordinator are the same entity. In these areas, the Reliability Coordinator/market operator routinely gives directions to other entities that are not to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impacts. Without the added clarification the receiving entity may not know the urgency of the situation and may not know to inform the Reliability Coordinator if they are unable to perform as required by R3.
Group
CCG, CPG, CECD
Brenda Powell
No
As we commented on Project 2007-03 TOP-001-2, the definition of Reliability Directive is an improvement but the definition must capture the identification concept that is reflected in the Requirement (R1). As a result, when Reliability Directive is used elsewhere, it would be clear that the communication must be identified as a Reliability Directive. We suggest the following revision to the definition and it should follow through to Project 2006-06 IRO-001-3 and Project 2007-03 TOP-001-2, eventually being added to the Reliability Standards Glossary of Terms. A communication identified as a Reliability Directive by a Reliability Coordinator, Transmission Operator, or Balancing Authority to initiate action by the recipient to address an Emergency or Adverse Reliability Impact.
Comments: IRO-001-3 uses the term 'direct' in its purpose statement, R1, R2 and R3. To avoid confusion with a Reliability Directive (both for auditors and entities), we suggest the following: To establish the authority of Reliability Coordinators to make requests of other entities to prevent an Emergency or Adverse Reliability Impacts to the Bulk Electric System, R1: Each Reliability Coordinator shall have the authority to act or request others to act (which could include issuing Reliability Directives) to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impacts. R2: Each Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider shall comply with its Reliability Coordinator's request unless compliance with the request cannot be physically implemented, or unless such actions would violate safety, equipment, regulatory or statutory requirements, or unless the TOP, BA, GOP or DP convey a business reason not to comply with the request but express that they will comply if a Reliability Directive is given. R3: Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to perform as requested in accordance with Requirement R2.
Individual
Brian J. Murphy
NextEra Energy, Inc.
Yes
Yes
Yes
No
NextEra Energy, Inc. (NextEra), which includes Florida Power & Light Company, believes that Requirement 11 of COM-001-2, as drafted, is too vague to be adopted as a mandatory Reliability Standard. For example, it is unclear what is meant by "shall consult." The North American Electric Reliability Corporation's (NERC) Rules of Procedure state that a foundation of any Reliability Standard is that: "... [the] reliability standard shall be stated using clear and unambiguous language. Responsible entities, using reasonable judgment and in keeping with good utility practices, are able to arrive at a consistent interpretation of the required performance." The term "shall consult" is not a term generally understood or used in the electric utility industry, and, therefore, does not enable a consistent interpretation of the performance required. Accordingly, NextEra requests that Requirement 11 either: (i) be deleted; or (ii) be redrafted to read more like Requirement 10.
No
NextEra objects to the use of "Adverse Reliability Impact" in Reliability Standards COM-002-3 and IRO-001-3. NextEra requests that the use of Adverse Reliability Impact be revised as suggested below or it be deleted from the definition of Reliability Directive. NextEra does not agree with the use of Adverse Reliability Impact in the definition of "Reliability Directive" for the following reasons: 1. This term Adverse Reliability Impact is ambiguous. In part, the term is ambiguous because it includes in its definition the term "instability," which has lead to considerable misunderstanding and confusion in the industry. There are also differing views on what is (and is not) Cascading, because the definition is not sufficiently clear. For example, some believe instability and Cascading occur when an event affects multiple substations of one Transmission Operator, while others believe instability or Cascading only occur when the event affects more than one Transmission Operator's system. As mentioned in response to item 4, above, Reliability Standards must be clear and consistently interpreted. It is not appropriate to issue a Standard that perpetuates the use of terms that lack consistent interpretation. 2. While not perfect, the term Emergency is better understood in the industry, and it may include many or all of the instances of instability or Cascading intended to be captured by Adverse Reliability Impact. Consequently, it is not advisable to introduce Adverse Reliability Impact as a new term, when it is not clearly distinguishable from Emergency. NextEra is concerned that an unclear and imprecise term, such as Adverse Reliability Impact, does not promote reliability, and, such a term is particularly troublesome in the context of real time system operations. Therefore, for the reasons stated above, NextEra believes that the term Adverse Reliability Impact should be deleted from the definition of Reliability Directive. In the alternative, if Adverse Reliability Impact is not deleted from the definition of Reliability Directive in Reliability Standards COM-002-3 and IRO-001-3, NextEra requests that Adverse Reliability Impact be revised to read: "an event or condition on the Bulk Electric System that may, or is leading to, Cascading over more than one Bulk Electric System transmission system."
NextEra has the following additional comments. COM-002-3 The purpose of COM-002-3 is: "To ensure Emergency communications between operating personnel are effective." This stated purpose is not the same as the specific requirement that three-way communication is used for a Reliability Directive. Thus, NextEra requests that the purpose be revised to read as follows: "To ensure that when a Reliability Directive is given that the Reliability Directive is explicitly stated and three-way communication is used." Consolidation of COM-002-3 and IRO-001-3 NextEra notes a continuing area of concern with the somewhat unsynchronized approach taken in the drafting process. Reliability Standards COM-002 and IRO-001 are now on version three, and still there is a somewhat unsynchronized approach being proposed. A clear and consolidated approach seems easily achievable with minimal effort. Thus, as proposed below, NextEra requests that COM-002-3 and IRO-001-3 be combined, which also would appear to allow for the retirement of certain requirements, such as TOP-001-1 R1-4. NextEra also is concerned that the current approach may have contributed to several significant misstatements in IRO-001-3, R1-3, which use the terms "direct," "direction" and "directed," instead of the term Reliability Directive as used in COM-002-3. COM-002-3 and IRO-001-3 indicate that three-way communication only is required when a Reliability Directive is issued. This begs the question of what are the potentially other, lower classes of directives in IRO-001-3 R1-3? And why do they need to be followed with or without three-way communication? Thus, at a minimum, NextEra requests that the terms direct, direction and directed be deleted from IRO-001-3 R1-3, respectively, and that Reliability Directive be inserted. This change, and other proposed changes, are reflected in NextEra's overall proposal to combine COM-002-3 and IRO-001-3 into one COM-002-3 standard: {Note: If the term Adverse Reliability Impact is revised as proposed by NextEra, then the term would not need to be stricken} R1. Each Reliability Coordinator shall have the authority to act and to issue a Reliability Directive to a Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider within its operating region to prevent identified events that may lead to, or to mitigate the magnitude or duration of, an Emergency. [Violation Risk Factor: High][Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] R1.1 Each Transmission Operator shall have the authority to act or issue a Reliability Directive to a Balancing Authority, Generator Operator and Distribution Provider within its operating region to prevent identified events that may lead to, or to mitigate the magnitude or duration of, an Emergency. [Violation Risk Factor: High][Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] R1.2 Each Balancing Authority shall have the authority to act or issue a Reliability Directive to a Generator Operator and Distribution Provider within its balancing region to prevent identified events that may lead to, or to mitigate the magnitude or duration of, an Emergency. [Violation Risk Factor: High][Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] R2. When a Reliability Coordinator, Transmission Operator or Balancing Authority issues a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time] R2. Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of a Reliability Directive shall repeat, restate, rephrase or recapitulate the Reliability Directive. [Violation Risk Factor: High][Time Horizon: Real-Time] R3. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a Reliability Directive shall either [Violation Risk Factor: High][Time Horizon: Real-Time]: • Confirm that the response from the recipient of the Reliability Directive (in accordance with Requirement R2) was accurate, or • Reissue the Reliability Directive to resolve any misunderstandings. R4. Each Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider shall comply with its Reliability Coordinator's Reliability Directive, unless compliance with the Reliability Directive cannot be physically implemented or unless such actions would violate safety, equipment, regulatory or statutory requirements. [Violation Risk Factor: High][Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] R4.1 Each Transmission Operator, Balancing Authority, Generator Operator, and

Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to perform a Reliability Directive in accordance with Requirement R4. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] R5. Each Balancing Authority, Generator Operator, and Distribution Provider shall comply with its Transmission Operator's Reliability Directive, unless compliance with the Reliability Directive cannot be physically implemented or unless such actions would violate safety, equipment, regulatory or statutory requirements. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] R5.1. Each Balancing Authority, Generator Operator, and Distribution Provider shall inform its Transmission Operator upon recognition of its inability to perform a Reliability Directive in accordance with Requirement R5. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] R6. Each Generator Operator or Distribution Provider shall comply with its Balancing Authority's Reliability Directive, unless compliance with the Reliability Directive cannot be physically implemented or unless such actions would violate safety, equipment, regulatory or statutory requirements. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] R6.1. Each Generator Operator or Distribution Provider shall inform its Balancing Authority upon recognition of its inability to perform a Reliability Directive in accordance with Requirement R6. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning] Conclusion Given the importance of having clear and concise Reliability Standards on the issue of directives and three-way communication, until the above concerns raised by NextEra in items 4 through 6 are addressed, NextEra intends to continue to vote "no" on COM-001-2, COM-002-3 and IRO-001-3.
Individual
David Thorne
Pepco Holdings Inc.
Yes
Yes
Yes
Yes
Yes
Individual
John Bee
Exelon
Yes
No
May have an unintended effect on registrations as some GOPs use a intermediately dispatch organization that perform actions on behalf of the generating units.
Yes
Yes
Yes
Group
LG&E and KU Services Company
Brent Ingebrigtsen
Yes
Yes
Yes
No
Regarding R11, as written it is unclear when the DP and GOP are required to consult with their TOP or BA. "[A] failure of any of its Interpersonal Communication capabilities" could be construed to mean any internal phone line of either the DP or GOP failing. Internal phone lines do not affect either the DP's or GOP's ability to communicate with the TOP or BA. It is also unclear whether a failure of an interpersonal communication capability would require consultation if there were multiple other interpersonal communication capabilities that were still fully functional. Furthermore, what exactly is required in "consultation" and who would be responsible if the "consulting" entities did not come to a "mutually agreeable time" are questions that are left unanswered. LG&E and KU Services Company suggest the following language: R11. Each Distribution Provider and Generator Operator that experiences a failure of more than one of its Means for Interpersonal Communications or failure of its Alternative Means for Interpersonal Communication with their Transmission Operator or Balancing Authority shall notify their Transmission Operator or Balancing Authority regarding the time to restore the impacted Means for Interpersonal Communication or Alternative Means for Interpersonal Communication.
Yes
COM-001-2 Regarding COM-001-2 and proposed definitions, LG&E and KU Services recommends changing the terms being defined from "Interpersonal Communications" and "Alternative Interpersonal Communication" to "Means for Interpersonal Communication" and "Alternative Means for Interpersonal Communication." A communication is an exchange of information, not a medium. The medium is simply the means. LG&E and KU Services Company further recommend that each requirement be rewritten with these new defined terms as appropriate and that the word "capabilities" currently following the defined terms be removed from each of the requirements. We suggest the definition for "Means for Interpersonal Communication" be "A medium utilizing electromagnetic energy that allows two or more individuals to interact, consult or exchange information." We suggest the definition for "Alternative Means for Interpersonal Communication" be "Any Means for Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Means for Interpersonal Communications used for day-to-day operation." Finally, LG&E and KU Services Company request clarification that the requirements to have in place Interpersonal Communications and Alternative Interpersonal Communications do no establish noncompliance for the unavailability of either medium provided the reporting requirements set forth in the standard are otherwise met. All Proposed Standards LG&E and KU Services Company suggest that the first paragraph in section 1.3 Data Retention be removed from all proposed standards. It states: "...For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit. While LG&E and KU Services Company is confident that the SDT intended to clarify entities' data retention responsibilities, this paragraph could be clarified to indicate that it does not require that any additional evidence be retained and provided beyond that written in the standard's requirements
Group
Bonneville Power Administration
Chris Higgins
Yes
Yes
Yes
Yes
Yes
BPA supports COM-001-2, COM-002-3 and IRO-001-3 as written and has no comments or concerns at this time.
Individual
Joe Petaski
Manitoba Hydro
Yes
Yes

Yes
No
COM-001-2 R11 does not specify a timeline in which entities have to come up with a 'mutually agreeable' time to restore Interpersonal Communication capability. Manitoba Hydro believes this omission creates a reliability gap and suggests that wording be revised as follows: '... shall consult with their Transmission Operator or Balancing Authority as applicable and determine a mutually agreeable time to restore the Interpersonal Communication capability within 24 hours of experiencing the failure.'
Yes
COM-001-2 -Definition 'Interpersonal Communication' - for clarity, the definition should explicitly state that data exchange is not included. -R9 - for clarity, the wording '... within 2 hours' should be replaced with '... within 2 hours of the unsuccessful test'. Conforming change required to M9 as well. -R10 - for clarity, the wording '... as identified in R1 through R6...' should be replaced with '... with which it is required to have Interpersonal Communications capability or Alternative Interpersonal Communication capability...'. -M6 - the term 'Adjacent' needs to be capitalized in the last sentence of the paragraph as 'Adjacent Balancing Authority' is a NERC defined term. -M7 - 'that' in the first line is repeated -M9 - the wording 'on a monthly basis' should be replaced with 'once per calendar month' to be consistent with the wording of the R9. -M11 - the words 'that experiences a failure of any of its Interpersonal Communications capabilities' should be added after Operator to be consistent with the wording of the Requirement -Compliance - 1.3 bulleted sentences - the term 'historical data' should be removed. The term 'evidence' is sufficiently descriptive and is consistently used in other requirements -Data Retention (1.3) - The data retention requirements are too uncertain for two reasons. First, the requirement to "provide other evidence" if the evidence retention period specified is shorter than the time since the last audit introduces uncertainty because a responsible entity has no means of knowing if or when an audit may occur of the relevant standard. Secondly, it is unclear what 'other evidence' besides the specified logs, recordings and emails, an entity may be asked to provide to demonstrate it was compliant for the full time period since their last audit. This comment also applies to COM-002-3 and IRO-001-3. -Data Retention (1.3) - COM-002-3 requires that voice recordings are kept for the most recent 3 calendar months but COM-001-2 requires that they be kept for the most recent 12 calendar months. Manitoba Hydro does not see the reliability benefit of storing voice recordings for longer than 3 months and suggests that voice recordings be removed as evidence for COM-001-2. Evidence of the availability of Interpersonal Communications and Alternative Interpersonal Communications can be demonstrated using the other forms of evidence listed. -VSLs (general comment) - for clarity, use for example R1.1 and R1.2 to refer to requirements instead of Part 1.1 and Part 1.2. -VSLs R4 - a reference to R4.3 is missing COM-002-3 -Title - to capture the purpose and intent of the standard, the title should be changed to 'Emergency Communications'. -R2 - for clarity, the words 'back to the sender' should be added to the end of the sentence -R3 - for clarity, the words 'to the recipient' should be added to both of the bulleted sentences after 'confirm' and 'reissue'. The words 'evident from the response' should be added to the end of the second bullet. -A question for the drafting team: has it been discussed whether there should be an additional requirement which indicates that the Reliability Coordinator, Transmission Operator and Balancing Authority shouldn't take any action in a Reliability Directive until such time as it has been confirmed accurate by the sender? If so, does the team feel that its a worthwhile requirement to consider? -M2 - the words 'repeated, rephrased or recapitulated' should be added after 'repeated' to be consistent with wording of the requirement. -M3 - the words 'to show' should be deleted from the end of this paragraph. IRO 001-3 -Purpose - the words 'to the Bulk Electric System' already appear in the definitions of Emergency and Adverse Reliability Impact and do not need to be repeated here. -Effective Date - the effective date should be changed to the 2nd calendar quarter following BOT approval in jurisdictions not requiring regulatory approval to be consistent with jurisdictions requiring regulatory approval. -General comment - There are repeated references to 'identified events' - it is not clear what this is referring to. M1 - M1 refers to Adverse Reliability Impacts "within its Reliability Coordinator Area". The requirement does not refer to 'within its Reliability Coordinator Area' - the wording in the measure and in the requirement should be consistent. -M2 - missing the word 'physically' when describing that a direction could not be implemented, should be consistent with the wording in the requirement. -Compliance - the entire section needs to be updated as it refers to requirements and measures that don't exist. -VSLs R2 - the reference to 'fully comply' is very vague. It is only a violation if the entity does not fall within the exception. - R2 VSL - For clarity, change "RC's directive" to "Reliability Coordinator's Reliability Directive".
Group
Southern Company
Antonio Grayson
Yes
No
We are concerned regarding communications between Transmission Operators on opposite ends of DC ties which may or may not be in the same interconnection. Similarly, COM-001, R1.2 limits the requirement of adjacent Reliability Coordinators to the same interconnection and this should not be limited to the same interconnection whether it is synchronous or non-synchronous. The measures should also be verified to ensure that they align properly with the final requirements.
Yes
We suggest that this phrase should also be removed from the "Purpose" statement.
No
We suggest the following changes: 1. Requirement 10 should include Distribution Providers and Generator Operators, 2. Entities to be notified should be "as identified in requirements R1 through R8", 3. Requirement 11 should be deleted, and, 4. Measures (M10) and VSLs should be adjusted accordingly.
No
This definition would encompass more communication than is now included. The definition now requires that a directive be declared as a part of the three part communication. For example, sending out the voltage schedule each morning would be included as a directive using the new definition. We suggest adding the words "and identified as a reliability directive to the recipient" at the end of the definition of Reliability Directive. This would allow the removal of R1 from COM-002-3
We question why the first paragraph of Section 1.3 – Data Retention has been included in each of these three standards. We suggest that it should be removed from each standard. We suggest the drafting team look at Standard EOP-008, Requirements R3 and R8 and add appropriate language in Standard COM-001-2, to avoid instantaneous non-compliance for loss of interpersonal Communications and/or alternate interpersonal communications (R1 and R2). COM-001-2 Dominion VP: COM-001-2, M9 reads "at least on a monthly basis". Dominion suggests that this be changed to "at least once per calendar month" as written in R9. This change should also be corrected in the VSLs. M8 - We suggest removing the second "that" in the first sentence of the measure. M10 - Dominion suggests this be revised to coincide with changes made in R10 (deleting impacted and adding as identified in Requirements R1 through R6), therefore M10 should read: "Each Reliability Coordinator, Transmission Operator, and Balancing Authority, shall have and provide upon request evidence that it notified entities as identified in Requirements R1 through R6 within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasted 30 minutes or longer. Evidence could include, but is not limited to dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent evidence. (R10.) " M12 needs to be removed. Southern: Definition of Alternative Interpersonal Communication: Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communications used for day-to-day operation. Comments: • The proposed definition uses the term "medium". What is the scope of that? Telephony is a "medium" but there is wired, wireless, satellite, etc. Was "medium" intended to differentiate voice, paper, text, email, teletype, or something else? • Similar to that last question – does the qualifying term "same" when modifying infrastructure mean something like voice versus written? What about situations where the primary telephone system is Voice Over Internet Protocol (VOIP) and it is using the same computer network infrastructure as an email or messaging system. That is the "same infrastructure" but a different "medium" R1 Each Reliability Coordinator shall have Interpersonal Communications capability with the following entities: Comments • In later requirements it is proposed that the entity "...shall designate an...". It is suggested that for consistency and auditability, this concept be used for R1, R3, R5, R7 and R8. In addition, the qualifier of "primary" should be used such that the requirements read "... shall have designated, primary Interpersonal Communications capability with the following entities." Although it is appropriate that "Alternative" be capitalized since it is used in a defined term (i.e. Alternative Interpersonal Communication") that bounds acceptable alternative methods, we do not see the need to capital "primary". R9 Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall test its Alternative Interpersonal Communications capability at least once per calendar month. Comments • The requirement is unclear if the required monthly test is a general functionality test or if there is the expectation of testing the designated Alternative Interpersonal Communications with all of the entities defined in the subrequirements of R2, R4, and R6. • There is no expectation of testing the primary Interpersonal Communications is this intentional or an oversight? Although functional testing of this should be done as a normal course of business, should an explicit test be required with each entity in the subrequirements of R1, R3, R5, R7 and R8 to insure, for example, that all the phone numbers are correct? R10 Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall notify entities as identified in Requirements R1 through R6 within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer. Comments • The following scenario seems plausible: The Interpersonal Communications fails and is detected at 14:00 and gets fixed at 14:35. It lasted more than 30 minutes but is fixed. As written the requirement would require the responsible entity to notify entities identified in R1 through R6 by 15:00 (i.e. 60 minutes from detection) even though the problem no longer exists. Is that the expectation? General Question • Does COM-001 apply only to primary control centers or back-ups, per EOP-008, as well? COM-002-3 Southern R1 When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. Comment • It is recommended that the requirement be clarified that the Reliability Directive be identified as such during its delivery. (e.g. "... shall identify the action as a Reliability Directive to the recipient during its delivery.") R2 Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of a Reliability Directive shall repeat, restate, rephrase or recapitulate the Reliability Directive. Comment • It is recommended that the requirement be clarified that an entity receiving a Reliability Directive repeat, restate, rephrase or recapitulate it immediately upon receiving it. (e.g. "...shall shall repeat, restate, rephrase or recapitulate the Reliability Directive immediately upon receiving it."). As written, there is not limit as to when the entity must repeat it (i.e. they could wait 2 hours) General Question • The Standard is not clear as to what each entity is to do when more than one entity receives a Reliability Directive at the same time (e.g. during a RC area teleconference call) . Is, for example, a roll call of receiving entities expected to be held so that they individually can repeat, restate, rephrase or recapitulate the Reliability Directive followed by individual confirmation required in R3? IRO-001-3 Dominion VP R2 – Dominion questions the phrase "physically implemented" and recommends that the intent be clarified in the language. Dominion notes the following comment and response posted under Consideration of Comments on Initial Ballot – Reliability Coordination (Project 2006-06) Date of Initial Ballot: February 25 – March 7, 2011: "IRO-001 R2, R3, and R4 have replaced "Directives" with the word direction in lower case (while it appears that "Directives" is a subset of "directions"). We believe that this muddies the waters and could bring numerous conversations and dialog into scope unnecessarily. The end result is that the RC has the right to issue and use "Directives" and anything short of this could just be communications. For example, a number of entities that are Reliability Coordinators also facilitate energy markets. There are many communications related to markets that probably should be out of scope with respect to the standards. Furthermore, it might not be clear what role (eg Reliability Coordinator, market operator, etc) the staff at these entities are fulfilling. Response: IRO-001 is written to cover both typical daily operating scenarios and also emergency scenarios. The required performance encompasses issuing and responding to Reliability Directives as well as other directions. The requirement language specifically ties back to Requirement R2 which states that the RC "shall take actions or direct actions, which could include issuing Reliability Directives, ". This is the "direction in accordance with Requirement R2" stated in R3 and the "direction in accordance with Requirement R3" stated in R4." Dominion believes the entity's comments remain valid and the response provided by the SDT does not address all aspects of the concern. Dominion suggests that the language be changed to "Reliability Directive" consistent with COM-002. M2 – need to add the following words "compliance with, physically, unless" which were included in R2, therefore M2 should read "Each Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator and Distribution Provider shall have and provide evidence which may include, but is not limited to dated operator logs, dated records, dated and time -stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it complied with its Reliability Coordinator's direction(s) per Requirement R1 unless compliance with the direction per Requirement R1 could not be physically implemented or unless such actions would have violated safety, equipment, regulatory or statutory requirements. In such cases, the Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator or Distribution Provider shall have and provide copies of the safety, equipment, regulatory or statutory requirements as evidence for not complying with the Reliability Coordinator's direction. (R2) " Section 1.3, the second bullet, need to add calendar to 12 calendar months Southern General recommendation • It is recommended that where the verb "direct/directed" or noun "direction" is used in Purpose, R1, R2 and R3, that it be replaced with the verb "instruct/instructed" or noun "instruction", as appropriate. This would help the industry avoid confusion often referred to as "big D" or "little d" directives. It is noted that the term "Reliability Directive" does that to a great degree but avoiding the verb/noun "direct/direction" would augment the difference. R1 Each Reliability Coordinator shall have the authority to act or direct others to act (which could include issuing Reliability Directives) to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impacts. Comment • At what point in time is "identified" referring to in "...to prevent identified events or...". Is it referring to current or future events? One might assume both since the "Time Horizon" is defined as Real-time Operations, Same Day Operations and Operations Planning but the requirement may be enhanced if explicitly stated ("...to prevent events identified in real-time or in the future or to mitigate the magnitude..."). • For clarity, the scope of the authority should be limited to the Reliability Coordinator Area ("...that result in an Emergency or Adverse Reliability Impacts within its Reliability Coordinator Area"). As written, it implies the authority should extend outside its RC Area. R2 Editorial comment – The words "compliance with" are in a different font in the posted version. R3 Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to perform as directed in accordance with Requirement R2. Comment The requirement states the responsible entities shall "inform" its RC when unable to perform as directed but it is unclear when the notification needs to take place. Although the term "as soon as practical" may seem be unmeasurable, as written now there is no time deadline to perform the notification – i.e. it could be 4 hours later after recognition.

Group
PPL Electric Utilities and PPL Supply NERC Registered Organizations
Annette M. Bannon
No
PPL has concerns with the use of the word "any" in this requirement. PPL recommends striking the words "any of" and instead using "its primary" as follows: Each Distribution Provider and Generator Operator that experiences a failure of its primary Interpersonal Communication capabilities with its Transmission Operator or Balancing Authority... ". In the current version, it is unclear when the DP and GOP are required to consult with their TOP or BA. "[A] failure of any of its Interpersonal Communication capabilities" could be construed to mean an internal phone line of either the DP or GOP failing. Internal phone lines do not affect either the DP's or the GOP's ability to communicate with the TOP or BA. It is also unclear whether a failure of an interpersonal communication capability would require consultation if there were multiple other interpersonal communication capabilities that were still fully functional.
Individual
Michael Brytowski
Great River Energy
Yes
No
"to exchange interconnection and operation information" was removed from the requirements in COM-001-2 but remains in the purpose. For consistency it needs to be removed. It could read "To establish Interpersonal Communication capabilities for the exchange of information necessary to maintain reliability."
No
Capability is not used consistently in R7 and R11. It changes from singular to plural.
In IRO-001-3 "authority" should be removed and the verbage returned to "shall act." In COM-002-3 R2 and in Applicability we suggest removing the Distribution Provider as the RC would not likely give a Reliability Directive to a Distribution Provider. The Reliability Directive would more likely come from the Transmission Operator to the Distribution Provider. In COM-002-3 R3 we suggest replacing "Reissue" with "Restate." You are not technically reissuing the Reliability Directive.
Individual
David Burke
Orange and Rockland Utilities, Inc.
Yes
Yes
Yes
Regarding COM-002 Requirement R1, we recommend that this requirement be reworded as follows: "When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall require that the Reliability Directive be communicated using three-part communications as described in Requirements R2 and R3 of this standard". The reason for this recommended rewording are threefold: 1. Good operating practice calls for use of three-part communications at all times. The recommended re-write encourages the use of the good operating practice of three-part communications at all times, but does not require it. 2. It is not good operating practice to require that an additional (unnecessary) phrase be used during emergency situations. During emergency situations, it is best to use standard operating protocols so as to limit unnecessary burdens on operating personnel during critical and stressful times. 3. By implementing the proposed new R1 requirement, it would effectively weaken the need for rigorous compliance with any and all directives issued by the RC's, TO's or BA's. Regarding IRO-001 Requirement R1, we recommend that the current requirement R3 be reinstated as the new requirement R1. That is, the new requirement R1 should read as follows: R1. The Reliability Coordinator shall have clear decision-making authority to act and to direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities within its Reliability Coordinator Area to preserve the integrity and reliability of the Bulk Electric System. These actions shall be taken without delay, but no longer than 30 minutes. We do not support any further dilution of Reliability Coordinator authority to enforce Reliability Directives through deletion of the 30 minute maximum response time period. The timely actions in response to any Reliability Coordinator issued Reliability Directives is an essential part of the process.
Group
SPP Standards Review Group
Robert Rhodes
Yes
Yes
We concur with the addition of "Adjacent" but ask that the SDT give some consideration to allowing an exemption in R6.3 for relatively small loads, less than 20 MW, that are pseudo tied into a Balancing Authority. Loss of these facilities would not place a burden on the BES and should not require Alternative Interpersonal Communications capabilities.
Yes
No
We would suggest deleting the phrase 'any of' in the Requirement. It would then read 'Each DP and GOP that experiences a failure of its Interpersonal Communication...' Also, how does the DP or GOP consult with its TOP or BA when it loses its Interpersonal Communications capability? To do this wouldn't they have to have an Alternative Interpersonal Communications capability?
Yes
COM-001-2: Requirement 10 is too open ended as written. The measure, M10, indicates that only impacted entities need to be notified. The requirement should be changed to make it consistent with the measure. The requirement would then read 'Each RC, TOP And BA shall notify impacted entities as identified...' Requirements 3 and 5 places the responsibility for establishing Interpersonal Communication capability on the TOP and BA. It is quite conceivable that a TOP or BA may not know all, or newly, registered DPs and GOPs in its respective area. In Requirements 7 and 8, the DP and GOP, respectively, are in turn responsible for establishing Interpersonal Communication capability. The TOPs/BAs and the DPs/GOPs should not be responsible for this. The DPs and GOPs should be held accountable for requesting that capability of their TOP and BA. Therefore, we suggest adding the following phrase at the end of Requirements 3.3, 3.4, 5.3 and 5.4 – 'that has requested Interpersonal Communications capability.' Then R3.3 would read 'Each Distribution Provider within its Transmission Operator Area that has requested Interpersonal Communications capability.' COM-002-3: Requirement 2/Measure 2: There is an inconsistency between the requirement and the measure. The requirement allows the recipient to repeat, restate, rephrase or recapitulate the directive. Measure 1 only mentions repeating the directive.
Group
Dominion
Mike Garton
Yes
Yes
Yes
Yes
Dominion agrees with the intent of R11; however, suggest language changes for consistency with R10 as follows: R11. Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability. [Violation Risk Factor: Medium][Time Horizon: Real-time Operations]
Yes
: COM-001-2; M9 reads "at least on a monthly basis", Dominion suggests that this be changed to "at least once per calendar month" as written in R2. M8 Dominion suggests removing the second "that" in the first sentence of the measure. M10 Dominion suggests this be revised to coincide with changes made in R10 (deleting impacted and adding as identified in Requirements R1 through R6). therefore M10

should read: "Each Reliability Coordinator, Transmission Operator, and Balancing Authority, shall have and provide upon request evidence that it notified entities as identified in Requirements R1 through R6 within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasted 30 minutes or longer. Evidence could include, but is not limited to dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent evidence. (R10.) " M12 needs to be removed. IRO-001-3; R2 – Dominion questions the phrase "physically implemented" and recommends that the intent be clarified in the language. Dominion notes the following comment and response posted under Consideration of Comments on Initial Ballot – Reliability Coordination (Project 2006-06) Date of Initial Ballot: February 25 – March 7, 2011: "IRO-001 R2, R3, and R4 have replaced "Directives" with the word direction in lower case (while it appears that "Directives" is a subset of "directions"). We believe that this muddies the waters and could bring numerous conversations and dialog into scope unnecessarily. The end result is that the RC has the right to issue and use "Directives" and anything short of this could just be communications. For example, a number of entities that are Reliability Coordinators also facilitate energy markets. There are many communications related to markets that probably should be out of scope with respect to the standards. Furthermore, it might not be clear what role (eg Reliability Coordinator, market operator, etc) the staff at these entities are fulfilling. Response: IRO-001 is written to cover both typical daily operating scenarios and also emergency scenarios. The required performance encompasses issuing and responding to Reliability Directives as well as other directions. The requirement language specifically ties back to Requirement R2 which states that the RC "shall take actions or direct actions, which could include issuing Reliability Directives, ". This is the "direction in accordance with Requirement R2" stated in R3 and the "direction in accordance with Requirement R3" stated in R4." Dominion believes the entity's comments remain valid and the response provided by the SDT does not address all aspects of the concern. Dominion suggests that the language be changed to "Reliability Directive" consistent with COM-002, M2 – need to add the following words "compliance with, physically, unless" which were included in R2, therefore M2 should read "Each Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator and Distribution Provider shall have and provide evidence which may include, but is not limited to dated operator logs, dated records, dated and time - stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it complied with its Reliability Coordinator's direction(s) per Requirement R1 unless compliance with the direction per Requirement R1 could not be physically implemented or unless such actions would have violated safety, equipment, regulatory or statutory requirements. In such cases, the Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator or Distribution Provider shall have and provide copies of the safety, equipment, regulatory or statutory requirements as evidence for not complying with the Reliability Coordinator's direction. (R2) " Section 1.3, the second bullet; need to add calendar to 12 calendar months
Individual
Michael Schiavone
Niagara Mohawk (dba National Grid)
Yes
Yes
Yes
Yes
No
The "adverse reliability impact" definition is not clear, is this an actual event or contingency? The words imply it is an actual event which is already covered in the "Directive" definition. If the intent is to apply directives to potential stability or cascading contingencies it should say so. COM-001-3 - Some requirements are overly prescriptive and not results based. R7 & R8 are not necessary. Every entity at a minimum has a contact with a phone as a thier "Interpersonal Communications capability". Just need to require that every entity has a plan if they loose thier primary communication channel ("Interpersonal Communications capability"). COM-002-3 - Requiring RCs, TOPs and BAs to state an action as a "reliability directive" complicates communications during a time when response time and clarity are important. If those issuing a directive don't get a repeat back they just need to ask for one. The requirement just needs to define "what" is required not "how". This can be handled by procedures and training. - Delete reference to "adverse reliability impact" from the "Directive" definition. The "adverse reliability impact" definition is not clear, is this an actual event or contingency? The words imply it is an actual event which is already covered in the "Directive" definition. If the intent is to apply directives to potential stability or cascading contingencies it should say so.
Group
Western Electricity Coordinating Council
Steve Rueckert
Yes
Yes
Yes
No
We have two concerns with R11 as worded First the term "as applicable" is undefined. Who decides what is applicable. We suggest that words clarifying which entity, TOP or BA, the DP and GO expeincing a failure of any of its Interpersonal Communication capabilities must consult with. Second, the inclusion of the "mutually agreeable" time to restore the Interpersonal Communication Capability is problematic. Although unlikely, two entities could "mutually agree" to an exceptionally long time frame for restoration (two years) and that unreasonable timeframe would meet the requirement as long as they both agreed. Suggest some finite time limit be included.
Yes
Individual
Thad Ness
American Electric Power
Yes
Yes
Yes
No
Regarding COM-001-02 R10 and R11, some of the entity pairs (for example, BA to a GO) are not required to have alternative inter-personnel communication. How can the notification occur with 60 minutes for example, when primary communication is not available for a role that doesn't require an alternate means of communication? In addition, requiring notification within 60 minutes in Requirement 10 would not be feasible for larger entities that might have hundreds of contacts to make.
COM-001-02 R9: A two hour limit to repair or designate a replacement Alternative Interpersonal Communications capability is overly aggressive. COM-002-03 R1: Should this requirement also include references to a manual action? COM-002-03 R3: The text "to resolve any misunderstandings" is unnecessary and should be removed. COM-002-3 VSL's: As we have stated on previous projects, all severity levels need to be commensurate with both a) the degree by which the requirement was violated, and b) by the impact of the violation to the BES. In this case, a single VSL of "Severe" violates both principles. There needs to be more gradients across the severity levels, and the single VSL of "Severe" incorrectly makes the assumption that the impact to the BES was severe. IRO-001-3 R1, R2, R3: Having this requirement apply to actions and/or directions (which may be different than Reliability Directives) may put the recipient in a position that they are judged on whether or not they acted on communication that was not a Reliability Directive. The draft states that the purpose of this standard is "To establish the capability and authority of Reliability Coordinators to direct other entities to prevent an Emergency or Adverse Reliability Impacts to the Bulk Electric System". The key word used is "direct", so communications that need to be acted upon should be Reliability Directives only. The addition of any non-defined term is in conflict with the definition and intent of the term Reliability Directive. This could potentially cause confusion, especially at critical times when communication is key.
Individual
RoLynda Shumpert
South Carolina Electric and Gas
Yes
Yes
Yes
Yes
Individual

Jason Snodgrass
Georgia Transmission Corporation
Yes
While we agree with removing LSE, PSE, and TSP, we do not agree with the need to include Distribution Provider in all the standards. For example, in IRO-001-3, the Distribution Provider will likely never receive a Reliability Directive directly from its Reliability Coordinator. Reliability Directives received by Distribution Providers will be issued by the Transmission Operator or Balancing Authority depending on if the issue is security or adequacy related. Accordingly, NERC's Reliability Functional Model V5 describes and identifies the DP's relationships with other Functional Entities to the TOP and BA with respect to Real Time. Real Time 7. Implements voltage reduction and sheds load as directed by the Transmission Operator or Balancing Authority. 8. Implements system restoration plans as coordinated by the Transmission Operator. 9. Directs Load-Serving Entities to communicate requests for voluntary load curtailment. Lastly, we believe that Distribution Providers requirements with respect to complying with Reliability Directives received by TOPs and BAs are adequately covered by Reliability Standards TOP-001 and COM-002
Yes
No
The intent of this requirement is not yet clear. Technically, the air we breathe, as well as other mediums like "any" cell phone, fax lines, and/or email accounts would qualify under this proposed definition of Interpersonal Communication. The burden for compliance evidence to demonstrate failure of "any of its Interpersonal Communication capability" would seem unobtainable and could prove to be a daily occurrence (dropped phone calls, etc.). The following is suggested to utilize the singular form of capability rather than plural form of capabilities: R11. Each Distribution Provider and Generator Operator that experiences a failure of its Interpersonal Communication capability shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability.
Yes
The following comments are regarding IRO-001-3. Requirement R1 should require the use of Reliability Directives. The requirement compels the Reliability Coordinator "to direct others to act to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impact". Reliability Directives are necessary to address Adverse Reliability Impacts or Emergencies and trigger the use of three-part communications identified in COM-002-3. COM-002-3 R1 really compels the Reliability Coordinator to use a Reliability Directive for Emergencies and Adverse Reliability Impacts with the opening clause: "When a Reliability Coordinator, Transmission Operator, or Balancing Authority determines actions need to be executed as a Reliability Directive". What else could be more important for a Reliability Coordinator to issue a Reliability Directive than for an Emergency or Adverse Reliability Impact? Thus, not requiring the use of Reliability Directives for Adverse Reliability Impacts and Emergencies makes IRO-001-3 R1 and COM-002-3 R1 inconsistent. It is recommended that the treatment of Reliability Directives shall be consistent with those being developed for TOP-001-2 as proposed by the Real-Time Operations drafting team (Project 2007-03). As such, consider using the following language for R2: "Each TOP, BA, and GOP shall comply with each identified Reliability Directive issued and identified as such by its RC, unless such actions would violate safety, equipment, regulatory, or statutory requirements." Accordingly, please consider using the following language for R3: "Each TOP, BA, and GOP shall inform its RC of its inability to perform an identified Reliability Directive issued by that RC." Again, we do not believe the DP would receive an identified Reliability Directive directly from the RC and the DP applicability should be removed from this standard. The DP is appropriately captured under COM-002 and TOP-001 with respect to Reliability Directives. Accordingly, NERC's Reliability Functional Model V5 describes and identifies the DP's relationships with other functional entities to TOP and BA with respect to Real Time. Real Time 7. Implements voltage reduction and sheds load as directed by the Transmission Operator or Balancing Authority. 8. Implements system restoration plans as coordinated by the Transmission Operator. 9. Directs Load-Serving Entities to communicate requests for voluntary load curtailment. The following comments are regarding COM-001-2. The SDT should include an additional qualifier to Interpersonal Communications within the context of these requirements, for example (operational or dispatch center communications???). Technically, the air we breathe, as well as other mediums like "any" cell phone, fax lines, and/or email accounts would qualify under this proposed definition of Interpersonal Communication. Assuming at least one employed individual can speak, all entities could demonstrate compliance of this capability at all times, therefore, it is not clear the intent of these requirements are accurately being presented. It is recommended to include the use of "signed attestation letters" as examples of evidence under M4 and M11 and other measures as appropriate.
Individual
Bill Keagle
BGE
Yes
Yes
Yes
Yes
No
BGE would prefer that the definition of Reliability Directive include the requirement to identify the fact that a Reliability Directive is being issued. See the following proposed definition: Reliability Directive: A communication initiated and identified as a Reliability Directive, by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact.
No comment.
Individual
Don Schmit
Nebraska Public Power District
Yes
Yes
Yes
No
We would suggest deleting the phrase 'any of' in the Requirement. It would then read 'Each DP and GOP that experiences a failure of its Interpersonal Communication...'. Also, how does the DP or GOP consult with its TOP or BA when it loses its Interpersonal Communications capability? To do this wouldn't they have to have an Alternative Interpersonal Communications capability?
Yes
Comments: COM-001-2: Requirement 10 is too open ended as written. The measure, M10, indicates that only impacted entities need to be notified. The requirement should be changed to make it consistent with the measure. The requirement would then read 'Each RC, TOP And BA shall notify impacted entities as identified..'. Requirements 3 and 5 place the responsibility for establishing Interpersonal Communication capability on the TOP and BA. It is quite conceivable that a TOP or BA may not know all, or newly, registered DPs and GOPs in its respective area. In Requirements 7 and 8, DP and GOP, respectively, are in turn responsible for establishing Interpersonal Communication capability. The TOPs/BAs and the DPs/GOPs should not be responsible for this. The DPs and GOPs should be held accountable for requesting that capability of their TOP and BA. Therefore, we suggest adding the following phrase at the end of Requirements 3.3, 3.4, 5.3 and 5.4 - 'that has requested Interpersonal Communications capability.' Then R3.3 would read 'Each Distribution Provider within its Transmission Operator Area that has requested Interpersonal Communications capability.' Requirement 9: could be construed to mean that the repair or replacement due to an unsuccessful test should be completed within 2 hours. In any case a rewording of the second sentence of Requirement 9 would make it clear and we would suggest the following: " The responsible entity shall, within 2 hours of the unsuccessful test, provide notification to the proper authority in order to initiate repair or designate a replacement Alternative Interpersonal Communications capability. " COM-002-3: Requirement 2/Measure 2: There is an inconsistency between the requirement and the measure. The requirement allows the recipient to repeat, restate, rephrase or recapitulate the directive. Measure 1 only mentions repeating the directive. Requirement 3: The second bullet in Requirement 3 appears to require the reissuance of an entire Reliability Directive if only a single point in the directive is not correctly repeated, restated, rephrased or recapitulated. Is this what the SDT intended? Shouldn't consideration be given for that portion of the directive that was communicated properly? Then only a new, revised directive containing the portion of the original directive that was misunderstood would need to be reissued.
Group
Southwest Power Pool Regional Entity
Emily Pennel
Yes
Yes
Yes
Yes
Yes

Individual
Neil Phinney
Georgia System Operations
No
While we agree with removing LSE, PSE, and TSP, we do not agree with the need to include Distribution Provider in all the standards. For example, in IRO-001-3, the Distribution Provider will likely never receive a Reliability Directive directly from its Reliability Coordinator. More likely, the Reliability Directive will be issued by the Transmission Operator or Balancing Authority depending on if the issue is security or adequacy related. Accordingly, NERC's Reliability Functional Model V5 describes and identifies the DP's relationships with other Functional Entities to the TOP and BA with respect to Real Time. Real Time 7. Implements voltage reduction and sheds load as directed by the Transmission Operator or Balancing Authority. 8. Implements system restoration plans as coordinated by the Transmission Operator. 9. Directs Load-Serving Entities to communicate requests for voluntary load curtailment.
Yes
No
: The intent of this requirement is not yet clear. Technically, the air we breathe, as well as other mediums like "any" cell phone, fax lines, and/or email accounts would qualify under this proposed definition of Interpersonal Communication. The burden for compliance evidence to demonstrate failure of "any of its Interpersonal Communication capability" would seem unobtainable and could prove to be a daily occurrence (dropped phone calls, etc.). The following is suggested: R11. Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capability shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability.
Yes
Requirement R1 should require the use of Reliability Directives. The requirement compels the Reliability Coordinator "to direct others to act to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impact". Reliability Directives are necessary to address Adverse Reliability Impacts or Emergencies and trigger the use of three-part communications identified in COM-002-3. COM-002-3 R1 really compels the Reliability Coordinator to use a Reliability Directive for Emergencies and Adverse Reliability Impacts with the opening clause: "When a Reliability Coordinator, Transmission Operator, or Balancing Authority determines actions need to be executed as a Reliability Directive". What else could be more important for a Reliability Coordinator to issue a Reliability Directive than for an Emergency or Adverse Reliability Impact? Thus, not requiring the use of Reliability Directives for Adverse Reliability Impacts and Emergencies makes IRO-001-3 R1 and COM-002-3 R1 inconsistent. It is recommended that the treatment of Reliability Directives shall be consistent with those being developed for TOP-001-2 as proposed by the Real-Time Operations drafting team (Project 2007-03). As such, consider using the following language for R2: "Each TOP, BA, and GOP shall comply with each identified Reliability Directive issued and identified as such by its RC, unless such actions would violate safety, equipment, regulatory, or statutory requirements." Accordingly, please consider using the following language for R3: "Each TOP, BA, and GOP shall inform its RC of its inability to perform an identified Reliability Directive issued by that RC." Again, we do not believe the DP would receive an identified Reliability Directive directly from the RC and the DP applicability should be removed from this standard. The DP is appropriately captured under COM-002 and TOP-001 with respect to Reliability Directives. Accordingly, NERC's Reliability Functional Model V5 describes and identifies the DP's relationships with other functional entities to TOP and BA with respect to Real Time. Real Time 7. Implements voltage reduction and sheds load as directed by the Transmission Operator or Balancing Authority. 8. Implements system restoration plans as coordinated by the Transmission Operator. 9. Directs Load-Serving Entities to communicate requests for voluntary load curtailment. The following comments are regarding COM-001-2. The SDT should include an additional qualifier to Interpersonal Communications within the context of these requirements, for example (operational or dispatch center communications???). Technically, the air we breathe, as well as other mediums like "any" cell phone, fax lines, and/or email accounts would qualify under this proposed definition of Interpersonal Communication. Assuming at least one employed individual can speak, all entities could demonstrate compliance of this capability at all times, therefore, it is not clear the intent of these requirements are accurately being presented. It is recommended to include the use of "signed attestation letters" as examples of evidence under M4 and M11 and other measures as appropriate.
Group
FirstEnergy
Sam Ciccone
Yes
Yes
Yes
No
Although we agree with the intent of the requirement, we are concerned with the use of "any of its Interpersonal Communication". The word "any" is very inclusive and the team should consider narrowing it down to those capabilities that may adversely impact reliability.
Yes
Definition of Interpersonal Communications ♣ We understand that the team does not want to be prescriptive as far as the specific types of communication mediums since we live in an age of many forms of communication. But in this case it may be helpful to give examples in the definition. An auditor may interpret Interpersonal Communication to strictly include voice-related and two-way conversations. Depending on the circumstances, other mediums may be adequate, such as blast calls or instant messaging. This should be clarified in the definition. COM-001-2 ♣ In R9, it should be clear that the 2 hour timeframe is for initiation of corrective action because mitigation may take much longer. We suggest the last sentence of R9 state: "If the test is unsuccessful, the responsible entity shall, within 2 hours, initiate action to repair or designate a replacement Alternative Interpersonal Communications capability." ♣ In R10, the phrase "R1 through R6" should state "R1 through R8". COM-002-3 ♣ In R2, the use of the term recapitulate may not be appropriate. This term means "to summarize" the directive. Three-part communication during emergency situations should assure that the essential details of the directives are understood and a summary may inadvertently leave out important information. ♣ The effective date of COM-002-3 should be consistent with COM-001-2 and IRO-001-3 and state "the 1st calendar day of the 2nd calendar quarter". It currently shows the "1st calendar quarter in the standard and implementation plan. IRO-001-3 ♣ The third bullet under Data Retention addresses requirement R4 and measure M4 neither of which exist in the standard. ♣ In R1, the word "and" is missing between Generator Operator and Distribution Provider. ♣ VSL for R2 -- "N/A" should be removed from the High VSL -- Furthermore, the VSL should include language for instances when the entity cannot meet the RC's directive as afforded by R2.
Individual
Michelle D'Antuono
Ingleside Cogeneration LP
Yes
Ingleside Cogeneration LP believes that the intent of these three standards is to ensure reliable normal and emergency communications between BES operating entities. It should be the rare exception that BES-critical information must be communicated directly to an LSE, PSE, and TSP and IC. The impact of the Standards would be lessened if diffusely applied to multiple entities who do not normally engage in operations communications.
No
In the background section of this ballot, the project team indicates that the removal of the phrase is intended to signal that these requirements do NOT apply to the exchange of data. Although Ingleside Cogeneration LP agrees that the phrase is not a helpful description of the need for inter-entity communications -- and should be removed -- we do not see how the remaining language achieves the project team's purpose. It seems the confusion stems from the multitude of data communication types. Email messages between operating entities may be a valid communications path under COM-001-2, while telemetry/control is covered under other Standards. We believe that a technical guideline may be an appropriate vehicle to distinguish what types of communications are subject to these requirements, and which are not.
No
Most of Ingleside Cogeneration's communications capabilities rely on carriers who will immediately deploy technicians to repair land-based or wireless systems when they break. Although we may contact the carrier to inform them that the systems are not available -- or to determine their progress -- we do not want them waiting for our go-ahead before proceeding. If the intent of this requirement is to validate the operation of the repaired connection, or to establish interim means of communications with other operating entities, then Ingleside Cogeneration believes a re-write is in order. There is no reliability purpose being served otherwise that we can tell.
Yes
Ingleside Cogeneration agrees that it is important to clearly denote when a directive must be issued. In previous definitions, we believed that imprecise language made it difficult for the BA, RC, or TOP to determine if a gray area situation required a directive or not. With a more precise definition, it will eliminate second guessing by auditors that a directive was necessary because an outcome turned out poorly -- even if an Emergency was not declared or an Adverse Reliability Impact did not occur.
Ingleside Cogeneration LP is concerned that the entity-to-entity organization of the COM Standards is quickly being outdated by voice and video conferencing or one-to-many broadcasts. In addition, email may be a preferred mode of most communications to and from small Generator Operators. It is not clear that these technologies are precluded from consideration by COM-001 and COM-002 -- which means that some auditors may believe that they are. This leads to inconsistent application of the compliance criteria, and may discourage the use of some powerful technologies. It appears to us that some technical guidelines would be appropriate to help entities and auditors decide which are applicable under these Standards.
Group
MISO Standards Collaborators
Marie Knox
Yes
(1) In COM-001, the entities in R4 and R6 (now R5 and R6) should be the same, i.e. the BA needs to have the Interpersonal Communication capability as well as the Alternative Interpersonal Communication capability with the same entities. Although the need to have Alternative Interpersonal Communication capability should be assessed from the viewpoint that whether or not the absence of such capability can adversely affect reliability, the proposed standard does not require the capability in all cases. At the same time, this standard does not preclude such capability. Even though Interpersonal Communication capability is needed between a BA and a DP/GOP to communicate reliability instructions or directives, there are other communications paths which can be used in the case of the loss of that capability. Since TOPs are also required to have the capability, the BA can call the TOP and ask the TOP to contact the DP/GOP for them until they can implement capability. In addition, it is difficult to visualize entities which would not have the public telephone system or even cell phones available for use in the event of the loss of the capability.
Yes

(1) We agree with the addition of "Adjacent" entities in the quoted parts. However, there are some entities which may need the capability even though they are not "synchronously connected within the same interconnection". This standard does not require them to have the capability, but it does not preclude such capability. In these cases, those entities should evaluate whether the need for the capability is a reliability need or market coordination. If the entities were connected synchronously, actions taken by an entity could have immediate effect upon other entities. However, if not synchronously connected, changes in flows across the asynchronous ties would have to follow the interchange scheduling process with approval by all involved entities before changes could be enacted. Some TOPs do communicate with other TOPs even in another interconnection (e.g. between Quebec and all of its asynchronously interconnected neighbors). (2) Measure M3 does not cover the added R3.5 condition (having Interpersonal Communications capability with each adjacent TOP). M3 needs to be revised.
Yes
We urge the SDT to remove the phrase. If necessary, regional situations can be addressed by a regional variance.
Yes
Yes
The Data Retention Section in IRO-001 does not reflect the revised requirements. For example: the Electric Reliability Organization is no longer a responsible entity; the Reliability Coordinator should replace the ERO for keeping data for R1; Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider should replace the Reliability Coordinator for keeping data for R2; and there is no R4/M4. Additional comments associated with COM-002 We are concerned with the use of 'shall' in the measurement sections. 'Shall' statements should only be used in the Requirements, as these are the only enforceable items in the standard. The measures should not limit how we show compliance. If there are specific issues that the drafting team is proposing to be a requirement, they should be added to the requirements section of the standard. Measurement M1 should also allow entities to develop procedures, that are distributed to and trained on, in advance with recipients of directives that meet the requirements for the communication of what constitutes a Reliability Directive. The last sentence in the measurement should be revised to read: Such evidence could include, but is not limited to, dated and time -stamped voice recordings, dated and time -stamped transcripts of voice recordings, or dated operator logs to show that it identified the action as a Reliability Directive to the recipient or approved procedures that identify what constitutes a Reliability Directive and when Reliability Directives are issued. (R1) The Data Retention section states: "For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit." It is unclear on how an entity would be expected to provide evidence beyond 3 months when requested if the data retention period and established procedures do not require the evidence to be retained. The SDT should provide examples of what other types of evidence could be expected or the phrase should be removed.
Group
Florida Municipal Power Agency
Frank Gaffney
Yes
In COM-001-2 R5.3, should a BA have communications with a DP or LSE? For the TOP, it is the DP because the load influence is very local; however, for a BA the supply / demand balance is not local and in markets that allow retail competition, it may be that the LSE is the more appropriate functional entity. For instance, the Functional Model when discussing LSE on page 55 states that one of the LSE's real time duties is: "12. Receives requests from the Balancing Authority and Distribution Provider for voluntary load curtailment." If the LSE is the more appropriate entity, then R7 would need to be changed and a new requirement specific to LSE's would need to be added. For Florida, which does not have retail competition, it doesn't matter whether the DP or the LSE is more appropriate; hence, the "yes" answer.
Yes
Yes
No
By use of the term "any" in the phrase "a failure of any of its Interpersonal Communication" the standard will actually create a disincentive for redundant communications with DPs and GOPs due to compliance risk. To truly further the goals of reliability, the requirement should align with R3.3 and R3.4 which requires a primary Interpersonal Communications capability and R4 which does not require DPs or GOPs to have Alternative Interpersonal Communications capability. A possible solution is through use of the terms "Primary" for R3 and "Alternate" for R4 and then make R11 applicable to Primary only.
Yes
In the definition of Interpersonal Communication, the use of the word "medium" is ambiguous. Suggestions for alternatives: "system", "channel". COM-001-2, R1 and R3, the phrase: "have Interpersonal Communications capabilities", what if the communication system fails? Is that an immediate non-compliance (especially R3.3 and R3.4 which do not require a redundant system). Suggest using EOP-008 is type of language to allow restoration of failed equipment without non-compliance. COM-001-2, R9 - "Each . . . shall test its Alternative Interpersonal Communications capability", suggest adding the phrase "to each entity for which Alternative Interpersonal Communications is required" to add clarity. In addition, the type of testing is unclear and ambiguous. The is also ambiguity in the terms "direct". "directive", "direction" and "Reliability Directive". The SDT may want to consider using the terms "instruct" and "instruction" in place of "direct", "directive", "direction" to more clearly distinguish from a Reliability Directive.
Individual
Greg Rowland
Duke Energy
Yes
Yes
However, we believe that the phrase "synchronously connected within the same interconnection" should be struck, because TOPs are controlling DC ties and should be required to have communications with each other.
Yes
However, the definition of Interpersonal Communication should also be expanded to clearly include the drafting team's intent that the capability is NOT for the exchange of data. The phrase "for the exchange of interconnection and operating information" should also be struck from the Purpose statement.
No
The phrase "consult with . . . to determine a mutually agreeable time" makes this requirement too open-ended to be auditable and enforceable. We question why R11 does not establish a timeframe for notification similar to R10, which requires the RC, TOP or BA to make notification within 60 minutes of failure detection. We also question why DPs and GOPs are not required to have Alternative Interpersonal Communications capability in order to be able to make such notifications.
No
• Since FERC has not yet approved the new definition of Adverse Reliability Impact, we believe the term "Adverse Reliability Impact" should be replaced by the words of the BOT-approved definition: "the impact of an event that results in Bulk Electric System instability or cascading". • Also, add the phrase "and the communication is identified as a reliability directive to the recipient" to the end of the definition of Reliability Directive. This will eliminate potential confusion regarding when a communication is a Reliability Directive, and when a communication is a routine instruction. Revising the definition in this manner may also eliminate the need Requirement R1 of COM-002-3. If R1 is retained, we suggest rewording as follows: "Each Reliability Coordinator, Transmission Operator, or Balancing Authority shall identify a Reliability Directive to the recipient when it issues a Reliability Directive that requires an action or actions to be executed." • Proposed reworded definition: "Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where action by the recipient is necessary to address an Emergency or the impact of an event that results in Bulk Electric System instability or cascading, and the communication is identified as a Reliability Directive to the recipient." • COM-001-2 does not specify how much time an entity is allowed to restore failed Interpersonal Communications capability or failed Alternative Interpersonal Communications capability. R1 through R6 require that the RC, TOP and BA have both. R7 and R8 require that DPs and GOPs have Interpersonal Communications capability. An auditor could find an entity non-compliant with these requirements upon failure of either capability. R9, R10 and R11 specify actions to take upon failure, but do not relieve entities of responsibility under R1 through R8. • COM-001-2 R9, M9 and VSLs – M9 and VSLs should be revised to be consistent with wording of R9 phrase "at least once per calendar month". • COM-001-2 R10, M10 and VSLs – Clarity is needed regarding when the 60-minute clock starts. For example, suppose a failure is detected immediately upon occurrence of the failure. Does the 60-minute clock start immediately, or after the failure has lasted 30 minutes? When does the 60-minute clock start if a failure is detected and the entity is unsure when it occurred? • COM-001-2 R10, M10 and VSLs - If the failure only lasts for 35 minutes, it appears that the RC, TOP or BA is still required to notify entities identified in R1 through R6. Is this the drafting team's intent? • COM-001-2 R10, M10 and VSLs – Should be revised since the RC, TOP and BA are only required to have Alternative Interpersonal Communications capability with other RCs, TOPs and BAs per R2, R4 and R6. Suggested rewording for R10: "Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify entities with which it is required to have Alternative Interpersonal Communications capability as identified in R2, R4 and R6 within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer." • COM-001-2 M11 and VSL – Replace the word "their" with the word "its". • COM-001-2 Data Retention – The way Data Retention is being enforced, this whole section could just be reduced to a blanket statement that an entity must be able to provide evidence that it has been in compliance since its last audit. • COM-002-3 R2, M2 and VSL – Replace "and" with "or". Also, the phrase "repeat, restate, rephrase or recapitulate" seems excessive and may be intended to avoid a violation where an entity fails to repeat the Reliability Directive word for word. Suggested rewording: "Each Balancing Authority, Transmission Operator, Generator Operator or Distribution Provider that is the recipient of a Reliability Directive shall repeat the Reliability Directive back to the issuer with sufficient accuracy so that understanding can be confirmed." • COM-002-3 R3, M3 - Replace "and" with "or". • IRO-001-3 – We believe that the Purpose and the Requirements of this standard should be focused solely on situations where the Reliability Coordinator issues Reliability Directives to prevent an Emergency or Adverse Reliability Impact. • IRO-001-3 – The Purpose should be rewritten as follows: "To establish the authority of Reliability Coordinators to issue Reliability Directives to other entities to prevent an Emergency or the impact of an event that results in Bulk Electric System instability or cascading." • IRO-001-3 – R1 should be rewritten as follows: "Each Reliability Coordinator shall have authority to act or to issue Reliability Directives to others, including but not limited to the Transmission Operator, Balancing Authority and Generator Operator within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or the impact of an event that results in Bulk Electric System instability or cascading." • IRO-001-3 – R2 should be rewritten as follows: "Each Transmission Operator, Balancing Authority, Generator Operator or Distribution Provider shall comply with a Reliability Directive issued by the Reliability Coordinator unless the Reliability Directive cannot be physically implemented or unless such action would violate safety, equipment, regulatory, or statutory requirements." • IRO-001-3 – R3 should be rewritten as follows: "Each Transmission Operator, Balancing Authority, Generator Operator or Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to comply with a Reliability Directive in accordance with Requirement R2. • IRO-001-3 Measures and VSLs – Should be revised to conform with the above suggested revisions to requirements."
Individual
Kathleen Goodman
ISO New England
Yes

No
ISO-NE does not believe COM-001, in its entirety, is a results-based standards and therefore does not support the draft as written. We believe such "requirements" (i.e. capabilities) should be verified through an entity certification process. Additionally, results-based requirements should be the driver to have the capability to achieve them; on other words, there is no other way to reliably dispatch than to have communications facilities (electronic or voice).
No
ISO-NE does not believe COM-001, in its entirety, is a results-based standards and therefore does not support the draft as written. We believe such "requirements" (i.e. capabilities) should be verified through an entity certification process. Additionally, results-based requirements should be the driver to have the capability to achieve them; on other words, there is no other way to reliably dispatch than to have communications facilities (electronic or voice).
No
ISO-NE does not believe COM-001, in its entirety, is a results-based standards and therefore does not support the draft as written. We believe such "requirements" (i.e. capabilities) should be verified through an entity certification process. Additionally, results-based requirements should be the driver to have the capability to achieve them; on other words, there is no other way to reliably dispatch than to have communications facilities (electronic or voice).
Yes
none
Individual
H. Steven Myers
ERCOT ISO
No
Some concern for removal of LSE in particular from R2 and R3 from current IRO-001-2 R7 for the ERCOT region. ERCOT Region has QSE's that manage Load Resources. There may be some QSEs that are not registered as a GOP that deploy Load Resources. Per the current LSE JRO, QSEs with Load Resources are registered as LSEs. Not requiring them to deploy Load Resource directives could be perceived as a reliability gap created from previous version to this version. PSEs could be removed as long as they fall under BA authority.
Yes
These changes will clarify intentions regarding the undefined term "adjacent".
Yes
Yes
Yes
The definition of Reliability Directive appropriately clarifies the importance of knowing the level of importance of any instructions being issued. If there is no room for variance from the specific action required, or if there is no time to further negotiate or discuss the action required, it is important that the instruction be identified as a Reliability Directive and for such instructions to be followed in a timely fashion. Normal operating instructions typically do not rise to this level of urgency and some variation from the words will not result in unmanageable reliability impacts. Also, there typically may be time for addressing the instructions in more than one way.
Regarding COM-001-2: We are not clear on the time horizon of requirements for COM-001-2. Based upon the purpose statement, it appears that establishment would be ahead of real time. Wording in the requirements could be construed as maintaining at all times vs. establishing communications The timeline for mandatory/effectiveness may not be acceptable to establish communications with DPs if hardware procurement/projects must take place. Regarding IRO-001-3: We have some concern for the removal of LSE in particular from R2 and R3 from current IRO-001-2 for the ERCOT region. The ERCOT region has QSEs that manage Load Resources. There may be some QSEs that are not registered as a GOP that deploy Load Resources. Per the current LSE JRO, QSEs with Load Resources are registered as LSEs. Not requiring LSEs to deploy Load Resource directives could be perceived as a reliability gap created from the previous version to this version. PSEs could be removed as long as they fall under BA authority. The Data Retention section should be corrected to match the new requirements numbers and elimination of the previous version R1 with ERO. The Version History mentions six requirements retired, but only details five.
Individual
Anthony Jablonski
ReliabilityFirst
Yes
Yes
ReliabilityFirst agrees with adding the term adjacent but is unclear what the term adjacent is referring to. Does it mean directly connected or is it more than one layer out.
Yes
No
ReliabilityFirst believes Distribution Provider and Generator Operator should be added to Requirement R10 and Requirement R11 should be removed. Finite time frames should be prescribed for each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities. ReliabilityFirst believes that the failure of Interpersonal Communication between Distribution Providers/Generator Operators and Transmission Operators/Balancing Authorities could have the same negative effects similar to the failure of Interpersonal Communication by the Reliability Coordinator, Transmission Operator, and Balancing Authority.
No
ReliabilityFirst believes the definition of "Reliability Directive" should be all inclusive and include "all" actions initiated by the Reliability Coordinator, Transmission Operator or Balancing Authority (not just Emergency or Adverse Reliability Impacts). Even though Emergency or Adverse Reliability Impacts are defined, during operations, it may become a gray area to whether or not it falls under the intent of a "Reliability Directive." Furthermore, if the system falls under a condition that results in an Adverse Reliability Impact, it may be too late for a Reliability Coordinator, Transmission Operator or Balancing Authority to issue a Reliability Directive. ReliabilityFirst recommends the following for revision to the term "Reliability Directive": Reliability Directive - A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where an action by the recipient is required.
Comments on COM-001-2 1. Applicability Section a. RFC recommends adding the Generator Owner to the applicability section of the standard along with corresponding Requirements R8 and R11. ReliabilityFirst believes to maintain system reliability and based on certain business practices in effect, Generator Owners need to be required to have associated Interpersonal Communications with its Balancing Authority and Transmission Operator. 2. Requirement R7 and R8 a. ReliabilityFirst seeks further clarity on why the Distribution Provider and Generator Operator are not required to designate an Alternative Interpersonal Communications capability? Requirements R7 and R8 require the Distribution Providers and Generator Operators to have Interpersonal Communications capability but there is not corresponding requirement to have an Alternative Interpersonal Communications capability. ReliabilityFirst recommends adding two new requirements for the Distribution Provider and Generator Operator to designate an Alternative Interpersonal Communications capability. This will be consistent with how Requirements R1 through R6 are set up. 3. Requirement R9 a. Assuming new requirements for the Distribution Provider and Generator Operator to designate an Alternative Interpersonal Communications capability (based on previous comment) are added to the standard, the Distribution Provider and Generator Operator will need to be added to Requirement R9 to test its Alternative Interpersonal Communications capability at least once per calendar month. 4. Requirement R10 a. Based on the ReliabilityFirst comment submitted for Question 4, ReliabilityFirst believes the Distribution Provider and Generator Operator should be included in Requirement R10. b. Since Interpersonal Communications capabilities is a very important piece of operating the BES in a reliable manner, ReliabilityFirst believes the timeframe in which an entity is required to notify the entities is too long. ReliabilityFirst recommends the following language for Requirement R10: i. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider and Generator Operator shall notify entities as identified in Requirements R1 through R8 of a failure of its Interpersonal Communications capabilities that lasts 15 minutes or longer. The notification shall be made within 30 minutes of the detection of a failure. 5. VSLs for Requirement R1 through R8 a. ReliabilityFirst suggest gradating the VSLs for R1 through R8. Listed below is an example of how to grade the VSL for R1. The same type of approach could be used for R2 through R8 as well. i. High VSL- the Reliability Coordinator failed to have Interpersonal Communications capability with one or more of the entities listed in Parts 1.1 and 1.2. ii. Severe VSL - The Reliability Coordinator failed to have Interpersonal Communications capability with one or more of the entities listed in Parts 1.1 and 1.2. 6. VSL for Requirement R9 a. For consistency with the requirement language, ReliabilityFirst recommends adding the words "at least on a monthly basis" to the Lower, Moderate and High VSLs and adding the words "if the test was unsuccessful" to the end of the Lower, Moderate and High VSLs. Listed below is an example of the Lower VSL. i. The responsible entity tested the Alternative Interpersonal Communications capability at least once per calendar month but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communications in more than 2 hours and less than or equal to 4 hours if the test was unsuccessful. 7. VSL for Requirement R10 a. ReliabilityFirst provided alternate language for R10 in the comments listed above. If the alternate language is not incorporated, ReliabilityFirst recommends the following language for the Lower VSL. Similar language could be used for the Moderate, High and Severe VSLs as well. i. The responsible entity failed to notify entities as identified in Requirements R1 through R6 more than 60 minutes but less than or equal to 70 minutes of the detection of a failure of its Interpersonal Communications capabilities. b. If the alternate language for R10, in the comments listed above, is incorporated, ReliabilityFirst recommends the following language for the Lower VSL. Similar language could be used for the Moderate, High and Severe VSLs as well. i. The responsible entity failed to notify entities as identified in Requirements R1 through R6 more than 30 minutes but less than or equal to 740 minutes of the detection of a failure of its Interpersonal Communications capabilities c. For Moderate VSL (the VSL after the OR statement), ReliabilityFirst recommends using a percentage rather than the "least one, but not all" statement. For example, if there is say 100 impacted entities and the applicable entity only notify 1, they would only fail under the Moderate. In another scenario there is say 100 impacted entities and the applicable entity only notified 99, they would also fail under the Moderate as well. The use of percentages will help even this out. 8. VSL for Requirement R11 a. For consistency with the requirement language, ReliabilityFirst recommends the following language: i. The responsible entity that experiences a failure of any of its Interpersonal Communication capabilities failed to consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability. Comments on COM-002-3 1. Requirement R1 a. Based on ReliabilityFirst suggested change to the definition of "Reliability Directive" as noted in Question 5, ReliabilityFirst recommends deleting Requirement R1. Based on the suggested definition, any communication initiated, where an action by the recipient is required, is considered a "Reliability Directive." Thus, there would no longer be a need for responsible entity to identify the action as a "Reliability Directive" to the recipient. 2. VSL for Requirement R3 a. For consistency with the requirement language, ReliabilityFirst recommends the following language: i. The responsible entity issued a Reliability Directive, but failed to confirm that the response from the recipient of the Reliability Directive (in accordance with Requirement R2) was accurate. Comments on IRO-001-3 1. Requirement R1 a. ReliabilityFirst seeks further clarity on why Requirement R1 only requires the Reliability Coordinator to have the "authority to act" rather than requiring the Reliability Coordinator to actually "take action" to prevent identified events that result in an Emergency or Adverse Reliability Impacts. Having the "authority to act" does not inherently require the Reliability Coordinator to take action, if appropriate. b. ReliabilityFirst seeks further clarity on the language "to prevent identified events." If the event was already identified, how can the Reliability Coordinator act to prevent it? ReliabilityFirst recommends adding the word "potential" in between the words "prevent" and "identified." 2. Requirement R3 a. There is no time qualifier specified in Requirement R3 dealing with the timeframe in which the applicable entity has to inform its Reliability Coordinator of its inability to perform as directed in accordance with Requirement R2. Without a time qualifier, Requirement R3 is open ended and could cause issues if the applicable entity does not inform its Reliability Coordinator upon recognition of its inability to perform as directed in a timely manner. ReliabilityFirst recommends the following language for Requirement R3: i. Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform its Reliability Coordinator within 30 minutes upon recognition of its inability to perform as directed in accordance with Requirement R2. 3. VSL for Requirement R1 a. Requirement R1 requires the Reliability Coordinator to "...have the authority to act" - and the VSL does not reflect this language. ReliabilityFirst had questioned why Requirement R1, does not specifically require the RC to take action or direct actions in a comment submitted under Requirement R1. If the SDT does not change the language in Requirement R1, ReliabilityFirst recommends the following language: i. The Reliability Coordinator failed to have the authority to take action or direct actions, to prevent an identified event that resulted in an Adverse Reliability Impact

4. VSL for Requirement R2 a. For the High VSL, the words "fully comply" are ambiguous and open to interpretation. ReliabilityFirst recommends only having a Severe VSL. b. The Severe VSL states "directive" while Requirement R2 states "direction". To be consistent, ReliabilityFirst recommends the following language: i. "The Responsible Entity failed to comply with its Reliability Coordinator's direction"
Individual
Randall McCamish
City of Vero Beach
Yes
In COM-001-2 R5.3, should a BA have communications with a DP or LSE? For the TOP, it is the DP because the load influence is very local; however, for a BA the supply / demand balance is not local and in markets that allow retail competition, it may be that the LSE is the more appropriate functional entity. For instance, the Functional Model when discussing LSE on page 55 states that one of the LSE's real time duties is: "12. Receives requests from the Balancing Authority and Distribution Provider for voluntary load curtailment." If the LSE is the more appropriate entity, then R7 would need to be changed and a new requirement specific to LSE's would need to be added. For Florida, which does not have retail competition, it doesn't matter whether the DP or the LSE is more appropriate; hence, the "yes" answer.
Yes
Yes
No
By use of the term "any" in the phrase "a failure of any of its Interpersonal Communication" the standard will actually create a disincentive for redundant communications with DPs and GOPs due to compliance risk. To truly further the goals of reliability, the requirement should align with R3.3 and R3.4 which requires a primary Interpersonal Communications capability and R4 which does not require DPs or GOPs to have Alternative Interpersonal Communications capability. A possible solution is through use of the terms "Primary" for R3 and "Alternate" for R4 and then make R11 applicable to Primary only.
Yes
In the definition of Interpersonal Communication, the use of the word "medium" is ambiguous. Suggestions for alternatives: "system", "channel". COM-001-2, R1 and R3, the phrase: "have Interpersonal Communications capabilities", what if the communication system fails? Is that an immediate non-compliance (especially R3.3 and R3.4 which do not require a redundant system). Suggest using EOP-008 type of language to allow restoration of failed equipment without non-compliance. COM-001-2, R9 - "Each ... shall test its Alternative Interpersonal Communications capability", suggest adding the phrase "to each entity for which Alternative Interpersonal Communications is required" to add clarity. In addition, the type of testing is unclear and ambiguous. The is also ambiguity in the terms "direct", "directive", "direction" and "Reliability Directive". The SDT may want to consider using the terms "instruct" and "instruction" in place of "direct", "directive", "direction" to more clearly distinguish from a Reliability Directive.
Individual
Rich Salgo
NV Energy
Yes
Yes
Yes
Yes
Agree, however, the ability for a DP or GOP to have such consultation with its TOP or BA would likely be hampered by the failure of the Interpersonal Communications itself. DP and GOP are only required to have a single source for this Interpersonal Communications.
Yes
The meaning of R9 is open to some interpretation. It states that if the monthly test is unsuccessful, the entity shall "initiate action to repair or designate a replacement" AIC within 2 hours. The meaning of this is unclear in several ways: First, does "initiate action" apply to the remainder of the sentence or just to the "repair" option? Second, what constitutes initiation of action? Is it the intent of the SDT that the alternate interpersonal communications be restored within a 2-hour limit? If so, the words do not clearly state that, and it seems an impossible task to ensure no more than 2-hr outage to an alternate communications medium. I am voting affirmative under the interpretation that one must only "initiate" the repair or "initiate" the designation of a replacement option within this tight 2-hour limit.
Individual
Rebecca Moore Darrah
Midwest Independent Transmission System Operator
Yes
Yes
Yes
No
MISO requests clarification regarding (1) when Distribution Providers/Generator Operators have an obligation to collaborate with Transmission Operators versus Balancing Authorities; and (2) the obligation of Transmission Operators to inform Balancing Authorities (and vice versa) of an agreed upon time for restoration of Interpersonal Communication capability when collaboration occurs only between Transmission Operators and Distribution Providers/Generator Operators or, conversely, Balancing Authorities and Distribution Providers/Generator Operators.
No
The proposed definition of Reliability Directive is unacceptable because the use of the defined terms "Emergency" and "Adverse Reliability Impact" results in an undefined, broadened scope of responsibility for Reliability Coordinators when coupled with the definition of the Bulk Electric System. This may lead to confusion/ambiguity for Reliability Coordinators that must be clarified to ensure compliance. Further, this broadened scope may mis-direct Reliability Coordinator's attention and mitigation efforts to small-scale, localized issues that represent no true threat to the operation of the Interconnection.
COM-001-2, R2 and R6: MISO requests clarification as to whether the designation of Interpersonal Communications and Alternative Interpersonal Communications methods by Responsible Entities must be formally documented and/or agreed upon with those entities with which communications capability must be established. COM-001-2, R8: MISO suggests that the designation of Alternative Interpersonal Communications methods should not require formal documentation and may be agreed upon (when necessary) informally with those entities with which communications capability must be established in the event of an unsuccessful test of its Alternative Interpersonal Communications capability. COM-001-2, Requirement R10: MISO requests clarification as to whether "impacted entities" refers to those entities with which the Responsible Entity must have Interpersonal Communications and Alternative Interpersonal Communications capability. Further, MISO requests clarification as to whether the notification required by R10 must be made using the Alternative Interpersonal Communications method selected by the Responsible Entity. COM-002-3, R1 – R3: MISO respectfully submits that, while it appreciates the distinction in responsibilities proposed in the new COM-002-3 and acknowledges that such distinction is beneficial, these requirements increase compliance risk and potential penalty liability without attendant benefit to the reliability of the Bulk Electric System. MISO respectfully suggests that Requirements 2 and 3 be converted into sub-requirements as follows: R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time] R1.1. When the Reliability Coordinator, Transmission Operator or Balancing Authority identifies a stated action as a Reliability Directive, the receiving Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider shall repeat, restate, rephrase or recapitulate the Reliability Directive to the issuing Reliability Coordinator, Transmission Operator or Balancing Authority. [Violation Risk Factor: High][Time Horizon: Real-Time] R1.2. When the Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a Reliability Directive receives a response from the receiving Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider, it shall then either [Violation Risk Factor: High][Time Horizon: Real-Time]: • Confirm that the response from the recipient of the Reliability Directive (in accordance with Requirement R2) was accurate, or • Reissue the Reliability Directive to resolve any misunderstandings.
Individual
Don Jones
Texas Reliability Entity
Yes
No
(1) Requirements R1, R2, R3 and R4 should apply to all adjacent Reliability Coordinators and Transmission Operators, regardless of whether they are in the same Interconnection. The ERCOT Interconnection is asynchronously connected to adjacent Interconnections, and it is imperative that Functional Entities within Texas RE's purview be able to exchange operating information with Transmission Operators and Reliability Coordinators in those adjacent areas, even if they are in a different Interconnection. (2) Requirement parts R5.5 and R6.3 refer to "Adjacent Balancing Authorities." Measures M5 and M6 refer to "adjacent Balancing Authority" – note the small "a" on adjacent. "Adjacent Balancing Authority" is a defined term in the NERC Glossary, which has a more specific meaning than "adjacent Balancing Authority." Which term is intended in R5.5 and R6.3? If you don't intend to use the defined term, perhaps use a word like "contiguous" or "neighboring" rather than "adjacent."
Yes
No
(1) Why does R10 refer to "failure of its Interpersonal Communications capabilities" while R11 refers to "failure of **any of** its Interpersonal Communications capabilities"? What is the distinction that is

intended by addition of the words "any of"? (2) As a Compliance Enforcement Authority, we have several fundamental questions regarding what is intended in this standard. It appears the drafting team is using the defined term "Interpersonal Communications" to refer to a designated primary communication medium, and the term "Alternative Interpersonal Communications" to refer to one or more designated backup communication mediums. Is that correct? This should be clarified in the Standard. (3) There is ambiguity in the current draft because the defined term "Interpersonal Communications" appears to include primary, back-up and all other mediums that may be available (which may include landline phone, cell phone, satellite phone, instant messaging, email, and data links, all in one facility), including any "Alternative Interpersonal Communications". Do R10 and R11 apply to ALL available mediums, or just to the designated primary and back-up mediums? Does R9 apply to ALL available back-up mediums, or just to a specifically designated back-up medium?
No
We oppose the definition of Reliability Directive as it is currently being proposed in this standard because three-part communication should not be required only after an Emergency or Adverse Reliability Impact actually occurs. In particular we object to the removal of the word "expected" (or "anticipated") from the definition, because Reliability Directives may be required before a situation escalates to an Emergency, in order to prevent the Emergency from occurring. This proposed change potentially undermines efforts required to avoid emergencies and events. We note that there are instances in other Reliability Standards where "anticipated" conditions require actions to be taken (e.g. TOP-001-1 R5 and EOP-002 R4), when clear, concise, and definitive communication, verbal or electronic, is required to avoid or mitigate an impending emergency
(1) There are numerous errors in the Mapping Document in referencing the current version of the standard and requirement. Specifically, referencing IRO-001-2 where it appears that the document should reference standard IRO-001-3. In addition, the notes on page 2 of COM-002-3 are incorrect. (2) In the VRF/VSL Justification document, there are numerous errors in referring to standard versions and requirements. (3) In IRO-001-3, R1 – What is an "identified event," and who "identifies" an event that requires compliance with this requirement R1? An RC may choose not to "identify" an event, such as a limit violation, and run the risk of causing or exacerbating an emergency. If the RC does not "identify" the event, it may become an actual event and then fall within the standard. (4) In the VSL for IRO-001-3, R1, there should be language in the VSL to capture the term "Emergency," which was added in the Requirement. The High VSL for R2 needs to be fixed. (5) In IRO-001-3, R1, remove the "s" in the phrase "Adverse Reliability Impacts." (6) Referring to the Implementation Plan for IRO-001 – There is a different list in the Implementation Plan (R2, R4, R5, R6, R7, R9) than the Revision History of the Standard (R2, R4, R5, R6, R8). Where is the retirement of R1 shown? (7) Referring to COM-001-2: Measure 7, the word "that" is inadvertently repeated in the first sentence. (8) In COM-001-2, Measure 9, is "at least on a monthly basis" to be interpreted differently than "at least once per calendar month" as stated in the requirement? (9) In COM-001-2, there is a "Measure 12" bullet that should be removed. (10) Referring to COM-002-3: Electronic directives (which may be issued over many different types of electronic communication channels) are increasingly necessary to manage the modern, dynamic Bulk Power System (generation and transmission) on a real-time basis. The effective use of electronic directives is undermined by this proposed Standard in its current form. This draft standard, in conjunction with other standards that refer to directives, appears to require that directives (at least Reliability Directives) be given verbally. The failure of the NERC standards to address electronic directives may cause significant manpower issues for BAs with large portfolios of generation to manage. (11) In the VSL for COM-001-2 R4, a reference to Part 4.3 should be added. (12) In IRO-001-3, Part 1.3 Data Retention, the reference in the first bullet to "Electric reliability Organization" is incorrect. We think it should say "Reliability Coordinator" instead. The other references to entities and to Requirements in this Part 1.3 also appear to be incorrect and need to be updated and corrected. (13) Referring to COM-001-2, the prior version of this standard included Requirement R5: "Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have written operating instructions and procedures to enable continued operation of the system during the loss of telecommunications facilities." This Requirement has been removed from the present draft of COM-001-2. The mapping document seems to suggest that this Requirement was moved to EOP-008, but it is not there. We are concerned that removal of this Requirement will result in a reduction in the level of BES reliability and introduce a potential reliability gap.
Individual
David Kiguel
Hydro One Networks Inc.
Yes
No
(1) We agree with the addition of "Adjacent" entities in the quoted parts except the qualifier "synchronously connected within the same Interconnection" need to be removed from Parts 3.5 and 4.3 since TOPs do communicate with other TOPs even in another Interconnection (e.g. between Quebec and all of its asynchronously interconnected neighbors). Even in the case of ERCOT, TOPs on the two sides of a DC tie do communicate with each other for daily operations. (2) Measure M3 does not cover the added R3.5 condition (having Interpersonal Communications capability with each adjacent TOP). M3 needs to be revised.
No
(1) In the last posting, there were suggestions of removing the phrase "within the same Interconnection" from R1 (now R2.2) since there are RCs between two Interconnections that need to communicate with each other for reliability coordination (e.g. between Quebec and the RCs the Northeast such as IESO, NYISO, NBSO and ISO-NE, and between the RCs in WECC with the RCs in the Eastern Interconnection). Such coordination may include but not limited to curtailing interchange transactions crossing Interconnection/RC boundary, as stipulated in IRO-006. The SDT's response to our comments citing that the phrase was added to address the ERCOT situation leaves a reliability gap to the other situations. We again urge the SDT to remove the phrase. If necessary, the ERCOT situation can be addressed by a regional variance.
Yes
Yes
(1) The proposed implementation plan conflicts with Ontario regulatory practice respecting the effective date of the standard. It is suggested that this conflict be removed by appending to the implementation plan wording, after "applicable regulatory approval" in the Effective Dates Section A5 on P. 4 of the draft standard COM-001, COM-002 and IRO-001, and on P. 2 of COM-001's Implementation Plan and P. 1 of COM-002's and IRO-001's Implementation Plans, to the following effect: ", or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities." (2) COM-001: Measure M9: - "monthly basis". Suggest changing "monthly basis" to "at least once per calendar month" to be consistent the wording in R9. (3) IRO-001: Measures M1, M2, M3 – The types of evidence are listed in paragraph form. This is not consistent with presentation style in COM-001-2 Measures, where evidence is listed in bullet format. Suggest using bullet form for consistency. (4) IRO-001, Data Retention Section: i. The retention requirements do not reflect the revised requirements. For example: the Electric Reliability Organization is no longer a responsible entity; the Reliability Coordinator should replace the ERO for keeping data for R1; Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider should replace the Reliability Coordinator for keeping data for R2; and there is no R4/M4. ii. Section 1.3, second paragraph: "The Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider... shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:" The word "or" between Generator Operator and Distribution Provider should be changed to "and".
Individual
Gregory Campoli
New York Independent System Operator
Yes
No
It is not clear the distinction between an Emergency and ARI. We would like to confirm that Since ARI is the impact of an event that results in instability or cascading, that an ARI is a subset of an emergency? Or said differently is an ARI simply instability or cascading? Ultimately if ARI is a subset of Emergency, then why do we need both in the requirement?
COM-001 The drafting team has complicated the requirements by having different requirements between RC/TOP/BA and other entities such as GOP/LSE/DP. The proposal is for redundancy to be required only between RC/TOP/BA. The requirement should be simplified to require all identified entities to have plans for loss of primary communication channels. This could include third parties as a communication channel. COM-002 The drafting team added a requirement to identify a Reliability Directive is being initiated during an emergency to track 3-part communication for compliance purposes. This will change and complicate the communication protocols between normal and emergency operations simply to simplify compliance assessments. The NYISO is asking for clarification that an entity may identify Reliability Directives as a category of communications to be communicated through procedures and training, and will not require a different communication protocol between normal and emergency operations. Affective communications can only be achieve through consistent processes for all conditions. Compliance assessments should be made on when we are in an emergency or not, and not on how the dialogue was initiated.
Group
ZGlobal Engineering and Energy Solutions
Mary Jo Cooper
Yes
Yes
No
No
We are pleased that the drafting team addition provides addition description on the process for communicating failed Interpersonal Communication. However additional clarity should be made regarding if there is an expectation that the Interpersonal Communication should be available 24x7. There are many Distribution Providers that do not have a 24x7 managed facility that can view and respond to a communication received in real time on the Interpersonal Communication device. These DP's rely on on-call personnel for off-hour emergencies such as an outage on the distribution system. The on-call personnel may use a cell phone, pager, etc. In other cases the Transmission Operator or Balancing Authority may communicate by email and response is provided during business hours. In these cases, if the Transmission Operator or Balancing Authority had a system emergency they have the ability to isolate the distribution system from the grid and therefore do not require a 24x7 manned distribution. If the intent of the Standard is for ensuring real-time communication than the applicability should be limited to those Distribution Providers who have been required by the Transmission Operator or Balancing Authority to have a manned 24x7 manned facility. Many of the DP's referred to here have not received a real-time call in the last 20 years. Requiring them to staff 24x7 for a condition likely not to occur is cost prohibited and does not improve reliability.
Yes
Group

ACES Power Marketing Standards Collaborators
Jason Marshall
No
While we agree with removing LSE, PSE, and TSP, we do not agree with the need to include Distribution Provider in all the standards. For example, in IRO-001-3, the Distribution Provider will likely never receive a Reliability Directive directly from its Reliability Coordinator. More likely, the Reliability Directive will be issued by the Transmission Operator or Balancing Authority depending on if the issue is security or adequacy related.
Yes
Yes
We thank the drafting team for making this change and for the clear communication that the intent of this standard is not for data exchange in the response to comments. However, we do believe one additional change is necessary to make the intent absolutely clear. The purpose of statement of COM-001-2 still includes the phrase "to exchange Interconnection and operating information". Since a standard must stand on its own, we believe it is necessary to remove that phrase from the purpose statement to avoid misinterpretations in the future. Auditors and enforcement personnel are not required to understand the development history when enforcing the standard. Furthermore, the purpose is really to enable communications between these functional entities.
No
Requirement R11 does not fully address the issue of what is required by Distribution Providers and Generator Operators and introduces new issues. First, while the standard is intended to clarify that the Distribution Provider and Generator Operator do not need backup communications capability, it simply does not. Distribution Providers and Generator Operators are required to have an Interpersonal Communications capability in Requirement R7 and R8 respectively. Unfortunately, the effectiveness of these requirements persists even when the Distribution Provider or Generator Operator experiences a failure of its Interpersonal Communications capability. When Requirement R11 applies, the Distribution Provider or Generator Operator will still be obligated to comply with Requirements R7 and R8 respectively and will, in fact, be in violation of these requirements because the Distribution Provider or Generator Operator no longer has the capability. Second, capability is used inconsistently between Requirement R7 and R11 which leads to confusion. In Requirement R7, it is singular while in Requirement R11 is plural. It needs to be clear that only the failure of the capability identified in R7 and R8 needs to be reported by the Distribution Provider and Generator Operator respectively. Third, if the requirements focused on communications devices rather than capabilities, they would come closer to communicating the intent. Requirement R11 would better complement Requirement R7 and R8 if the focus was on having a communication medium or device. A Generator Operator with an installed communications device or medium still has that device or medium even when it is not functioning properly and could still meet Requirements R7 and R8. However, they don't have the Interpersonal Communications capability if the device is not functioning properly.
Yes
The following comments are regarding IRO-001-3. We disagree with including "authority" in this standard. FERC Order 693a, paragraph 112, made it clear that the authority of a registered entity is established through the approval of the standards by FERC. Thus, a Reliability Coordinator gets its authority to issue Reliability Directives by having a requirement that states it must issue Reliability Directives approved by the Commission. Please change "shall have authority to act" in Requirement R1 back to "shall act". Please also remove all other vestiges of authority from the standards including in the purpose, measures and VSLs. Requirement R1 should require the use of Reliability Directives. The requirement compels the Reliability Coordinator "to direct others to act to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impact". Reliability Directives are necessary to address Adverse Reliability Impacts or Emergencies and trigger the use of three-part communications identified in COM-002-3. COM-002-3 R1 really compels the Reliability Coordinator to use a Reliability Directive for Emergencies and Adverse Reliability Impacts with the opening clause: "When a Reliability Coordinator, Transmission Operator, or Balancing Authority determines actions need to be executed as a Reliability Directive". What else could be more important for a Reliability Coordinator to issue a Reliability Directive than for an Emergency or Adverse Reliability Impact? Thus, not requiring the use of Reliability Directives for Adverse Reliability Impacts and Emergencies makes IRO-001-3 R1 and COM-002-3 R1 inconsistent. For clarity and consistency, Requirement R2 and R3 should also be clear that the responsible entities will respond to the Reliability Coordinator's Reliability Directives. Furthermore, this would make the standard consistent with how Reliability Directives are handled by the Transmission Operator in the draft TOP-001-2 standard proposed by the Real-Time Operations drafting team (Project 2007-03). The Data Retention section needs to be modified. The first bullet applies to the Electric Reliability Organization and Requirement R1 and Measure M1. The actual requirement and measure apply to the Reliability Coordinator. Furthermore, five calendar years exceeds the audit period of three years for a Reliability Coordinator. The second bullet incorrectly applies to the Reliability Coordinator and Requirement R2 and Measure M2. Requirement R2 and Measurement M2 apply to Transmission Operators, Balancing Authorities, Generator Operators and Distribution Providers. The third bullet mentions Requirement R4 and Measurement M4. There is no Requirement R4 and Measurement M4 in the standard. The VSLs for Requirement R1 are not consistent with the requirement. The VSL states that it is for failure to act while the requirement compels the Reliability Coordinator to have the authority to act. This modifies the requirement which is not allowed under FERC VSL guidelines. The VSLs for Requirement R2 need to include the "unless" clause from the requirement. Otherwise, the VSL implies that the responsible entity violated the requirement for failing to follow the directive even if they could not for one of the reasons listed in the requirement. This again is not consistent with FERC guidelines that state VSLs cannot modify the requirement. The following comments pertain to COM-001-2. We recommend striking "capability" from all of the requirements. It is not clear to us how this helps when a definition for Interpersonal Communications is written already and applies to a communication medium. Furthermore, we think it causes confusion and actually contradicts the intent of the standard. Because Requirements R1, R3, R5, R7 and R8 focus on capability, the responsible entity will be in violation anytime its medium that it uses for the primary capability does not function properly. Whereas if the requirement stated that the responsible entity was to designate a primary communications medium, the responsible entity is not in violation if that medium is not functioning properly. It would be clear that Requirement R2, R4 and R6 are intended to be complementary. Furthermore, it is not clear why Requirements R1, R3, R5, R7 and R8 state that the responsible entity shall "have" when the companion Requirements R2, R4, and R6 state "designate." Since Requirement R10 deals with a failure of its Interpersonal Communications capabilities and not Alternate Interpersonal Communications capability, it should only refer to the entities in Requirements R1, R3, and R5. Currently, it includes R1 through R6. We suggest changing "physical assets" to "demonstration of physical assets". Since evidence is provided to the auditor and the auditor takes the evidence with them, providing them evidence that is a "physical asset" would be problematic. We believe that the VSLs could be written to provide more gradations. For example, if a Transmission Operator or Balancing Authority failed to have Interpersonal Communications capability with a Distribution Provider but had Interpersonal Communications capability with all other required entities, it has met the vast majority of the requirement. Since VSLs are a measure of how much the requirement was missed by the responsible entity, jumping to a Severe VSL does not seem to adequately capture that the responsible entity met the vast majority of the requirement. Requirements R4 and R6 even seem to recognize this by not including Distribution Provider in the list of entities to which the Transmission Operator or Balancing Authority are required to designate Alternate Interpersonal Communications capability. The following comments pertain to COM-002-3. While COM-002-3 is well written to explain the three-part communications requirements and makes it perfectly clear when Reliability Directive has been issued, the opening clause leaves the responsible entity open to second guessing on whether they should have issued a Reliability Directive. This problem could be solved by changing the opening clause to "When a Reliability Coordinator, Transmission Operator, or Balancing Authority determines actions need to be executed as a Reliability Directive". In the second bullet of Requirement R3, we suggest using "Restate" in place of "Reissue". The responsible entity is not really reissuing the Reliability Directive. They are still in the act of trying to get the Reliability Directive issued and are simply re-communicating it because it was not understood.
Individual
Andrew Z. Pusztai
American Transmission Company, LLC
Yes
Yes
Yes
Yes
Yes
Group
Kansas City Power & Light
Michael Gammon
Yes
No
Requirements R4.3 and R6.3 require TOP's and BA's to establish alternative means of "interpersonal communications" with other TOP's and BA's without regard to the reliability impact each TOP or BA has on the interconnection. Why would it be necessary for a TOP with one 161kv transmission line or a BA with 100 MW of total load, or one GOP with a 30MW unit to realize additional costs when the facilities they operate have little reliability impact? Rationale criteria should be included here to identify the TOP's and BA's where alternative means of "interpersonal communications" should be implemented. Furthermore, these requirements do not recognize the condition when another party refuses to install alternative communication equipment. TOP's and BA's have no authority over other TOP's and BA's to establish alternative means of communication. Requirements that are dependent on the actions of other parties over which you have no control or authority are poor requirements. In addition, most RC's have established satellite telephone systems as back-up communication with TOP's and BA's. Some RC's may have to establish additional communication systems with some BA's as these requirements impose to avoid Standards of Conduct issues.
Yes
No
How does a DP or GOP experiencing a failure of its "interpersonal communications" consult with its TOP or BA to determine a mutually agreeable time for restoration of "interpersonal communications"? There are no requirements that require alternative "interpersonal communications" for the DP and GOP. This requirement cannot be fulfilled and should be removed.
Yes
R9 – considering the reliability of communication systems and System Operator attention may be on more important operational concerns, a 2 hour response to a problem with the alternative means of communication is over sensitive. Allowing for sometime in an operating shift would be more in line, such as 8 hours. Violation Severity Levels for COM-001-2: The VSL's for requirements R1-R8 and R11 do not recognize the efforts of Entities to meet the requirements. If an Entity failed to establish communications or alternative communications with 1 Entity out of 20 should that be Severe? Implementation Plan for COM-001-2: The implementation plan is too aggressive at completing in 6 months after regulatory approvals. Establishing agreements with other RC's, TOP's and BA's for alternative "interpersonal communications" regarding the various types of communications available that meet these requirements will take more than 6 months. Recommend 12 months to allow Entities sufficient time to reach agreements and to establish the communications.

Consideration of Comments

Reliability Coordination – Project 2006-06

The Reliability Coordination Drafting Team thanks all commenters who submitted comments on the fifth formal posting for Project 2006-06—Reliability Coordination. These standards were posted for a 30-day public comment period from January 9, 2012 through February 8, 2012. Stakeholders were asked to provide feedback on the standards and associated documents through a special electronic comment form. There were 62 sets of comments, including comments from approximately 170 different people from approximately 106 companies representing 9 of the 10 Industry Segments, as shown in the table on the following pages.

Summary Consideration

The RCSDT received comments from stakeholders, where a majority of those comments were focused on compliance elements of the standards, various errors, and other ambiguities. The RCSDT believes it has been responsive to the many comments and has either provided adequate explanation, where applicable, as well as incorporating the needed clarifications or corrections. There were no strong minority issues revealed in the comments which the RCSDT could not address. Revisions made to the standards are summarized in the following sections by standard.

COM-001-2

In the last posting and successive ballot, the standard received approval from about half of the ballot body with numerous comments. The RCSDT made substantive changes to the standard based on comments. The changes to COM-001-2, R3 and R4 require the standard to undergo a second successive ballot. The RCSDT believes it has addressed stakeholder comments and concerns in such a way that the standard is improved and meets the expectation expressed in comments for reliability and industry approval. Upon achieving industry consensus, this standard will advance to a recirculation ballot.

Purpose: Removed the text “for the exchange of Interconnection and operating information” based on comments received and due to the fact that the standard is for capability, which enables information exchange under other standards.

Effective Date: The language in the effective date was made consistent with current Standard Drafting Guidelines.

Requirements: Most changes were minor. In places where the capitalized word “Adjacent” began the requirement Parts, the RCSDT added the word “Each” and made “Adjacent” lowercase to avoid the perception of a defined glossary term. This change occurred in Parts 1.2, 2.2, 3.5, 4.3, 5.5, and 6.3. A significant change occurred in requirements R3 and R4. The RCSDT addressed stakeholders concerns

about the use of “synchronously connected within the same Interconnection.” This was addressed by removing the phrase “within the same Interconnection;” however, other comments were concerned that synchronously did not address DC ties. The RCSDT addressed this by adding a Part, which reads, “Each Transmission Operator asynchronously connected” to Requirements R3 and R4. Requirement R10 was updated to more accurately reflect the reference to other requirements. It should not have referenced R1 through R6; but, rather, R1, R3, and R5. Requirement R11 was updated to address stakeholder concerns about reaching a “mutually agreeable time,” so was changed to “mutually agreeable action.” Other minor changes included making plural terms singular and replacing “per” for “each” for readability and understanding.

Some commenters had concerns about conditions of non-compliance if the entity’s Interpersonal Communication capability failed. To address this concern, the RCSDT added conforming language to Requirements R1, R3, R5, R7 and R8 that bridges the potential gap in non-compliance for a failed Interpersonal Communication capability.

Measures: Most changes to the measures were non-substantive and provided better formatting for readability. Measures M3 and M4 were updated to align with the changes to the parts of Requirements R3 and R4 regarding synchronous and asynchronous. Several measures had inconsistent example evidence for the performance of the requirement. For example, time (hour/minute) based elements are introduced in R9 and R10; however, the measures did not note using dated and “time-stamped” evidence. Likewise, previous requirements did make use of “time-stamped” where there was no time based (hour/minute) performance. The RCSDT found this an unnecessary compliance burden. Other minor changes included making plural terms singular and replacing “per” for “each,” for readability and understanding.

Compliance, Compliance Enforcement Authority: The language in the CEA section was made consistent with current Standard Drafting Guidelines.

Compliance, Data Retention: The language in the data retention section was made consistent with current Standard Drafting Guidelines. The bulleted items were reformatted for consistency and readability.

Violation Severity Levels: Clarifying changes were made to the VSLs. Terms were made singular, the word “Requirement” added to appropriately designate the applicable requirement, and added the two newly-created parts from Requirements R3 and R4. The RCSDT added High VSLs for Requirements R1 through R8 to conform with VSL Guidelines. Requirements R1 through R8 are not binary only.

COM-002-3

The changes to COM-002-3 are considered non-substantive; therefore, the standard will advance to a recirculation ballot. The RCSDT believes it addressed stakeholder comments and concerns in such a

way that the updated sections of the standard is improved and overall meets industry's expectation for approval. Following approval, this standard will be submitted for adoption by the NERC Board of Trustees

Effective Date: The language in the effective date was made consistent with current Standard Drafting Guidelines.

Requirements: For the named functional entities in Requirements R2 and R4, the conjunction "and" previously used has been changed to "or," based on comments received from stakeholders.

Measures: Corresponding changes to Measures M2 and M3 were made in regards to Requirement R2 and R3. Measure M2 received an addition to include the phrasing, "restated, rephrased, or recapitulated" for consistency with Requirement R2.

Compliance, Compliance Enforcement Authority: The language in the CEA section was made consistent with current Standard Drafting Guidelines.

Compliance, Data Retention: The language in the data retention section was made consistent with current Standard Drafting Guidelines. Some bulleted items were corrected to accurately align them with the respective requirements.

Violation Severity Levels: One clarifying change was made to the R3 VSL. The RCSDT added a High VSL to accurately capture the condition where the entity failed to confirm the response of the recipient and removed the first part of the Severe VSL.

IRO-001-3

The changes to IRO-001-3 are considered nonsubstantive; therefore, the standard will advance to a recirculation ballot. The RCSDT believes it addressed stakeholder comments and concerns in such a way that the updated sections of the standard are improved and overall meets industry's expectation for approval. Following approval, this standard will be submitted for adoption by the NERC Board of Trustees

Effective Date: The language in the effective date was made consistent with current Standard Drafting Guidelines.

Requirements: In requirement R1, the last word (glossary term) was made singular for clarity and consistency with the definition. Requirement R2 was missing a conjunction in the functional entities, and this has been added.

Measures: Measure M1 was updated to use past tense language, consistent with drafting guidelines. Also, the parenthetical on “Reliability Directive(s)” was removed and the glossary term made singular for consistency with R1. Measure M2 addressed stakeholder comments by adding the word “physically,” phrase now reads, “physically implemented” to be consistent with Requirement R2, as well as making the term “direction” singular.

Compliance, Compliance Enforcement Authority: The language in the CEA section was made consistent with current Standard Drafting Guidelines.

Compliance, Data Retention: The language in the data retention section was made consistent with current Standard Drafting Guidelines. Some bulleted items were corrected to accurately align them with the respective requirements and remove inaccurate bullets from previous postings.

Violation Severity Levels: Clarifying changes were made to the R1 VSL. The phrase, “exercise its authority” was added, based on stakeholder comment, to more accurately reflect Requirement R1. The RCSDT removed the High VSL from R2, and more accurately incorporated it into the Sever VSL.

Additional Information

All comments submitted may be reviewed in their original format on the standard’s project page:

http://www.nerc.com/filez/standards/Reliability_Coordination_Project_2006-6.html

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President of Standards and Training, Herb Schrayshuen, at 404-446-2560, or at herb.schrayshuen@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.¹

¹ The appeals process is in the Standard Processes Manual: http://www.nerc.com/files/Appendix_3A_StandardsProcessesManual_20120131.pdf

Index to Questions, Comments, and Responses

1. The RCSDT has revised the applicability of the standards and implementation plans by aligning COM-001-2, COM-002-3, and IRO-001-2 to apply to the same entities and by removing LSE, PSE and TSP as applicable entities from the COM standards. Additionally, the Interchange Coordinator has been removed as an applicable entity from the standards. Do you agree with this change in applicability to the three standards? If not, please explain in the comment area below. ... 14
2. Do you agree with the addition of “Adjacent” entities in COM-001-2, Parts 3.5, 4.3, 5.5 and 6.3 of COM-001-2? If not, please explain in the comment area below. 28
3. The RCSDT removed the phrase "to exchange Interconnection and operating information" in COM-001-2, Requirements R1 through R8 based on stakeholder comments. Do you agree with the revision? If not, please explain in the comment area below. 39
4. A new requirement was added for clarity regarding what is required of Distribution Providers and the Generator Operators: R11. Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability. [Violation Risk Factor: Medium][Time Horizon: Real-time Operations] This requirement requires collaboration between entities to restore a failed communications capability. Do you agree with the new requirement? If not, please explain in the comment area below..... 47
5. The proposed definition of Reliability Directive shown in COM-002-3 was revised to include Adverse Reliability Impact as shown to more fully address emergencies or events that might lead to instability or Cascading: Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact. Do you agree with the proposed definition? If not, please explain in the comment area below. 76
6. Do you have any other comment, not expressed in questions above, for the RC SDT?..... 96

The Industry Segments are:

- 1 — Transmission Owners
- 2 — RTOs, ISOs
- 3 — Load-serving Entities
- 4 — Transmission-dependent Utilities
- 5 — Electric Generators
- 6 — Electricity Brokers, Aggregators, and Marketers
- 7 — Large Electricity End Users
- 8 — Small Electricity End Users
- 9 — Federal, State, Provincial Regulatory or other Government Entities
- 10 — Regional Reliability Organizations, Regional Entities

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
1.	Group	Gerald Beckerle	SERC OC Standards Review Group	X		X							
Additional Member Additional Organization Region Segment Selection													
1.	Mike Hirst	Cogentrix	SERC	5									
2.	Jeff Harrison	AECI	SERC	1, 3, 5, 6									
3.	Sam Holeman	Duke Energy	SERC	1, 3, 5, 6									
4.	Michael Belle	SCE&G	SERC	1, 3, 5, 6									
5.	Bob Dalrymple	TVA	SERC	1, 3, 5, 6									
6.	Joel Wise	TVA	SERC	1, 3, 5, 6									
7.	Jake Miller	Dynegy	SERC	5									
8.	Robert Thomasson	BREC	SERC	1									
9.	Alvis Lanton	SIPC	SERC	1									
10.	Tim Hattaway	PowerSouth	SERC	1, 5									
11.	Shardra Scott	Southern	SERC	1, 5									
12.	Greg Stone	Duke Energy	SERC	1, 3, 5, 6									
13.	Tom Burns	PJM	SERC	2									

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
14.	Steve Corbin	SERC Reliability Corp.	SERC 10										
15.	Brad Young	LGE/KU	SERC 3										
16.	Wayne Van Liere	LGE/KU	SERC 3										
17.	Gary Hutson	SMEPA	SERC 1, 3, 4, 5										
18.	Scott Brame	NCEMC	SERC 1, 3, 4, 5										
19.	Devan Hoke	SERC Reliability Corp.	SERC 10										
20.	Jim Case	Entergy	SERC 1, 3, 6										
21.	William Berry	OMU	SERC 3, 5										
22.	John Troha	SERC Reliability Corp.	SERC 10										
2.	Group	Ron Sporseen	Pacific Northwest Generating Cooperative	X		X	X				X		
	Additional Member	Additional Organization	Region Segment Selection										
1.	Bud Tracy	Blachly-Lane Electric Cooperative	WECC 3										
2.	Dave Markham	Central Electric Cooperative	WECC 3										
3.	Dave Hagen	Clearwater Power Company	WECC 3										
4.	Roman Gillen	Consumers Power Inc.	WECC 1, 3										
5.	Roger Meader	Coos-Curry Electric Cooperative	WECC 3										
6.	Dave Sabala	Douglas Electric Cooperative	WECC 8										
7.	Bryan Case	Fall River Electric Cooperative	WECC 3										
8.	Rick Crinklaw	Lane Electric Cooperative	WECC 3										
9.	Ray Ellis	Lincoln Electric Cooperative	WECC 8										
10.	Annie Terracciano	Northern Lights Inc.	WECC 3										
11.	David Gottula	Okanogan Electric Cooperative	WECC 8										
12.	Aleka Scott	PNGC Power	WECC 4										
13.	Heber Carpenter	Raft River Electric Cooperative	WECC 3										
14.	Steve Eldrige	Umatilla Electric Cooperative	WECC 1, 3										
15.	Marc Farmer	West Oregon Electric Cooperative	WECC 4										
16.	Margaret Ryan	PNGC Power	WECC 8										
3.	Group	Guy Zito	Northeast Power Coordinating Council										X
	Additional Member	Additional Organization	Region Segment Selection										
1.	Alan Adamson	New York State Reliability Council, LLC	NPCC 10										
2.	Greg Campoli	New York Independent System Operator	NPCC 2										

Group/Individual		Commenter	Organization		Registered Ballot Body Segment																			
					1	2	3	4	5	6	7	8	9	10										
3.	Sylvain Clermont	Hydro-Quebec TransEnergie	NPCC	1																				
4.	Chris de Graffenried	Consolidated Edison Co. of New York, Inc.	NPCC	1																				
5.	Gerry Dunbar	Northeast Power Coordinating Council	NPCC	10																				
6.	Brian Evans-Mongeon	Utility Services	NPCC	8																				
7.	Mike Garton	Dominion Resources Services, Inc.	NPCC	5																				
8.	Peter Yost	Consolidated Edison Co. of New York, Inc.	NPCC	3																				
9.	Chantel Haswell	FPL Group, Inc.	NPCC	5																				
10.	David Kiguel	Hydro One Networks Inc.	NPCC	1																				
11.	Michael R. Lombardi	Northeast Utilities	NPCC	1																				
12.	Randy MacDonald	New Brunswick Power Transmission	NPCC	9																				
13.	Bruce Metruck	New York Power Authority	NPCC	6																				
14.	Lee Pedowicz	Northeast Power Coordinating Council	NPCC	10																				
15.	Robert Pellegrini	The United Illuminating Company	NPCC	1																				
16.	Si Truc Phan	Hydro-Quebec TransEnergie	NPCC	1																				
17.	David Ramkalawan	Ontario Power Generation, Inc.	NPCC	5																				
18.	Saurabh Saksena	National Grid	NPCC	1																				
19.	Michael Schiavone	National Grid	NPCC	1																				
20.	Wayne Sipperly	New York Power Authority	NPCC	5																				
21.	Tina Teng	Independent Electricity System Operator	NPCC	2																				
22.	Donald Weaver	New Brunswick System Operator	NPCC	2																				
23.	Ben Wu	Orange and Rockland Utilities	NPCC	1																				
4.	Group	Will Smith	MRO NSRF												X	X	X	X	X	X				X
Additional Member		Additional Organization	Region	Segment Selection																				
1.	Mahmood Safi	OPPD	MRO	1, 3, 5, 6																				
2.	Chuck Lawrence	ATC	MRO	1																				
3.	Tom Webb	WPS	MRO	3, 4, 5, 6																				
4.	Jodi Jenson	WAPA	MRO	1, 6																				
5.	Ken Goldsmith	ALTW	MRO	4																				
6.	Alice Ireland	XCEL/NSP	MRO	1, 3, 5, 6																				
7.	Dave Rudolph	BEPC	MRO	1, 3, 5, 6																				
8.	Eric Ruskamp	LES	MRO	1, 3, 5, 6																				
9.	Joe DePoorter	MGE	MRO	3, 4, 5, 6																				

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
10. Scott Nickels		RPU	MRO 4										
11. Terry Harbour		MEC	MRO 3, 5, 6, 1										
12. Marie Knox		MISO	MRO 2										
13. Lee Kittelson		OTP	MRO 1, 3, 4, 5										
14. Scott Bos		MPW	MRO 1, 3, 5, 6										
15. Tony Eddleman		NPPD	MRO 1, 3, 5										
16. Mike Brytowski		GRE	MRO 1, 3, 5, 6										
17. Richard Burt		MPC	MRO 1, 3, 5, 6										
5.	Group	Claire Lloyd	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	X		X	X	X	X				
No additional members listed.													
6.	Group	Brenda Powell	CCG, CPG, CECD						X				
Additional Member		Additional Organization		Region	Segment Selection								
1.	C. J. Ingersol	Constellation Energy Control & Dispatch		SERC	3								
2.	A. Y. Hammad	Constellation Power Source Generation, Inc.		RFC	5								
3.				ERCOT	5, 6								
4.				FRCC	6								
5.				MRO	6								
6.				NPCC	5, 6								
7.				SPP	6								
8.				WECC	5, 6								
9.				RFC	6								
10.				SERC	6								
7.	Group	Brent Ingebrigtsen	LG&E and KU Services Company	X		X		X	X				
No additional members listed.													
8.	Group	Chris Higgins	Bonneville Power Administration	X		X		X	X				
Additional Member		Additional Organization		Region	Segment Selection								
1.	Huy	Ngo	WECC	1									
2.	Paul	Blake	WECC	1									
3.	Ted	Snodgrass	WECC	1									
9.	Group	Annette M. Bannon	PPL Electric Utilities and PPL Supply NERC	X				X	X				

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
			Registered Organizations										
Additional Member		Additional Organization		Region Segment Selection									
1.	Annette Bannon	PPL Generation, LLC on behalf of NERC Registered Entities	RFC	5									
2.			WECC	5									
3.	Mark Heimbach	PPL EnergyPlus, LLC	MRO	6									
4.			NPCC	6									
5.			RFC	6									
6.			SERC	6									
7.			SPP	6									
8.			WECC	6									
9.	Brenda Truhe	PPL Electric Utilities Corp.	RFC	1									
10.	Group	Robert Rhodes	SPP Standards Review Group	X	X	X	X	X	X				
Additional Member		Additional Organization		Region Segment Selection									
1.	John Allen	City Utilities of Springfield	SPP	1, 4									
2.	Michelle Corley	CLECO Power	SPP	1, 3, 5									
3.	Jonathan Hayes	Southwest Power Pool	SPP	2									
4.	Allen Klassen	Westar Energy	SPP	1, 3, 5, 6									
5.	Terri Pyle	Oklahoma Gas & Electric	SPP	1, 3, 5									
11.	Group	Mike Garton	Dominion	X		X		X	X				
Additional Member		Additional Organization		Region Segment Selection									
1.	Michael Gildea	Dominion Resource Services, Inc.	NPCC	5, 6									
2.	Louis Slade	Dominion Resource Services, Inc.	RFC	5, 6									
3.	Connie Lowe	Dominion Resource Services, Inc.	MRO	5, 6									
4.	Michael Crowley	Virginia Electric and Power Company	SERC	1									
12.	Group	Steve Rueckert	Western Electricity Coordinating Council										X
No additional members listed.													
13.	Group	Emily Pennel	Southwest Power Pool Regional Entity										X
No additional members listed.													
14.	Group	Sam Ciccone	FirstEnergy	X		X	X	X	X				
Additional Member		Additional Organization		Region Segment Selection									

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
1.	John Reed	FE	RFC	1									
2.	Mark Pavlick	FE	RFC	1, 3, 4, 5, 6									
3.	Doug Hohlbaugh	FE	RFC	1, 3, 4, 5, 6									
4.	Brian Orians	FE	RFC	5									
5.	Bill Duge	FE	RFC	5									
6.	Kevin Querry	FE	RFC	5									
15.	Group	Marie Knox	MISO Standards Collaborators		X								
Additional Member Additional Organization Region Segment Selection													
1.	Jim Cyrulewski	JDRJC Associates, LLC	RFC	8									
2.	Barb Kedrowski	We Energies	RFC	3, 4, 5									
3.	Joe O'Brien	NIPSCO	RFC	1, 3, 5, 6									
16.	Group	Frank Gaffney	Florida Municipal Power Agency	X		X	X	X	X				
Additional Member Additional Organization Region Segment Selection													
1.	Timothy Beyrle	City of New Smyrna Beach	FRCC	4									
2.	Jim Howard	Lakeland Electric	FRCC	3									
3.	Greg Woessner	Kissimmee Utility Authority	FRCC	3									
4.	Lynne Mila	City of Clewiston	FRCC	3									
5.	Joe Stonecipher	Beaches Energy Services	FRCC	1									
6.	Cairo Vanegas	Fort Pierce Utility Authority	FRCC	4									
7.	Randy Hahn	Ocala Utility Services	FRCC	3									
17.	Group	Mary Jo Cooper	Global Engineering and Energy Solutions			X							
Additional Member Additional Organization Region Segment Selection													
1.	Colin Murphey	City of Ukiah	WECC	3									
2.	Elizabeth Kirkley	City of Lodi	WECC	3									
3.	Salmon River Electric Coop	Salmon River Electric Coop	WECC	3									
18.	Group	Jason Marshall	ACES Power Marketing Standards Collaborators						X				
Additional Member Additional Organization Region Segment Selection													
1.	Mark Ringhausen	Old Dominion Electric Cooperative	SERC	3, 4									
2.	Susan Sosbe	Wasbush Valley Power Association	RFC	3									
19.	Group	Michael Gammon	Kansas City Power & Light	X		X		X	X				

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
Additional Member		Additional Organization	Region	Segment Selection									
1.	Jessi Tucker	Kansas City Power & Light	SPP	1, 3, 5, 6									
2.	Brett Holland	Kansas City Power & Light	SPP	1, 3, 5, 6									
20.	Individual	Chris Chavez	Salt River Project	X		X		X	X				
21.	Individual	Janet Smith, Regulatory Affairs Supervisor	Arizona Public Service Company	X		X		X	X				
22.	Individual	Antonio Grayson	Southern Company	X		X		X	X				
23.	Individual	Jennifer Wright	San Diego Gas & Electric	X		X		X					
24.	Individual	Steve Alexanderson	Central Lincoln			X	X					X	
25.	Individual	Paul Kerr	Shell Energy North America						X				
26.	Individual	Keira Kazmerski	Xcel Energy	X		X		X	X				
27.	Individual	Edward J Davis	Entergy Services, Inc	X		X		X	X				
28.	Individual	Michael Falvo	Independent Electricity System Operator		X								
29.	Individual	Si Truc PHAN	Hydro-Quebec TransEnergie	X									
30.	Individual	Daniel Duff	Liberty Electric Power LLC					X					
31.	Individual	Joe O'Brien	NIPSCO	X		X		X	X				
32.	Individual	Darryl Curtis	Oncor Electric Delivery Company LLC	X									
33.	Individual	Chris de Graffenried	Consolidated Edison Co. of NY, Inc.	X		X		X	X				
34.	Individual	Anthony Jankowski	We Energies			X	X	X					
35.	Individual	J. S. Stonecipher, PE	City of Jacksonville Beach dba/ Beaches Energy Services	X								X	
36.	Individual	Scott Berry	Indiana Municipal Power Agency				X						
37.	Individual	Jeff Longshore	Luminant Energy Company LLC						X				
38.	Individual	Brian J. Murphy	NextEra Energy, Inc.	X		X		X	X				
39.	Individual	David Thorne	Pepco Holdings Inc.	X		X							
40.	Individual	John Bee	Exelon	X		X		X					
41.	Individual	Joe Petaski	Manitoba Hydro	X		X		X	X				

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
42.	Individual	Michael Brytowski	Great River Energy	X		X		X	X				
43.	Individual	David Burke	Orange and Rockland Utilities, Inc.	X		X							
44.	Individual	Michael Schiavone	Niagara Mohawk (dba National Grid)			X							
45.	Individual	Thad Ness	American Electric Power	X		X		X	X				
46.	Individual	RoLynda Shumpert	South Carolina Electric and Gas	X		X		X	X				
47.	Individual	Jason Snodgrass	Georgia Transmission Corporation	X									
48.	Individual	Bill Keagle	BGE	X									
49.	Individual	Don Schmit	Nebraska Public Power District	X		X		X					
50.	Individual	Neil Phinney	Georgia System Operations			X	X						
51.	Individual	Michelle D'Antuono	Ingleside Cogeneration LP					X					
52.	Individual	Greg Rowland	Duke Energy	X		X		X	X				
53.	Individual	Kathleen Goodman	ISO New England		X								
54.	Individual	H. Steven Myers	ERCOT ISO		X								
55.	Individual	Anthony Jablonski	ReliabilityFirst										X
56.	Individual	Randall McCamish	City of Vero Beach	X		X						X	
57.	Individual	Rich Salgo	NV Energy	X		X		X					
58.	Individual	Rebecca Moore Darrah	Midwest Independent Transmission System Operator		X								
59.	Individual	Don Jones	Texas Reliability Entity										X
60.	Individual	David Kiguel	Hydro One Networks Inc.	X		X							
61.	Individual	Gregory Campoli	New York Independent System Operator		X								
62.	Individual	Andrew Z. Pusztai	American Transmission Company, LLC	X									

1. The RCSDT has revised the applicability of the standards and implementation plans by aligning COM-001-2, COM-002-3 and IRO-001-3 to apply to the same entities and by removing LSE, PSE and TSP as applicable entities from the COM standards. Additionally, the Interchange Coordinator has been removed as an applicable entity from the standards. Do you agree with this change in applicability to the three standards? If not, please explain in the comment area below.

Summary Consideration: Most commenters agreed with removing the LSE, PSE, and TSP from the three standards. Some did not agree with keeping the Distribution Provider (DP) within the standards. The RCSDT in being responsive to the FERC directive in Order No. 693, Paragraph 487, considered the DP entity; however, concluded having the DP is appropriate in responding to the directive to allow for reliable operations in normal and emergency situations. In reference to the implementation for DPs and GOPs, the RCSDT believes there is not a significant burden for most DP and GOP entities to implement an Interpersonal Communication capability. Some comments referenced the NERC Functional Model V5 concerning DP and GOP entities; however, the model is clear on the basic activities and supports the DP and GOP being applicable to the standards. The model also supports the removal of LSEs, for example. The RCSDT did not modify the applicability of the standards with regard to functional entities.

Organization	Yes or No	Question 1 Comment
ACES Power Marketing Standards Collaborators	No	While we agree with removing LSE, PSE, and TSP, we do not agree with the need to include Distribution Provider in all the standards. For example, in IRO-001-3, the Distribution Provider will likely never receive a Reliability Directive directly from its Reliability Coordinator. More likely, the Reliability Directive will be issued by the Transmission Operator or Balancing Authority depending on if the issue is security or adequacy related.
Response: The RCSDT is addressing a FERC directive (P487, Order 693) to include the DP in COM-001, and the RCSDT has included the DP in COM-002 and IRO-001 applicability because these standards are related to reliability communications. The RCSDT agrees with the point that communication will most likely be from the BA or TOP; however, the communications may come from the RC. No change made.		
Entergy Services, Inc	No	R3 adds additional responsibilities for the TOP to have Interpersonal Communications capability with EACH DP and GOP in its footprint. Similarly, R4 gives the TOP responsibility to have alternative

Organization	Yes or No	Question 1 Comment
		communications capability with each of these entities. This is a significant additional responsibility for the TOP to document and perhaps arrange for additional means of communication with these entities. The RCSDT is addressing a FERC directive (P487, Order 693) to include the DP and GOP. The intent is to have Interpersonal Communication capability with the DP and GOP, and not to build additional communication facilities, but to be able “to interact, consult, or exchange information.” In contrast to R3, R4 does not include the DP or GOP. No change made. The short time frame provided for implementation of these requirements is not consistent with the additional effort and compliance documentation that is necessary to implement these requirements. Entergy recommends that the implementation time frame for these new requirements that apply to new entities, or expand the application of COM-001 for existing entities have an effective date 12 months beyond the applicable regulatory approval. Additionally, the implementation of the requirements that apply to the DP and GOP will represent an increase in the amount of documentation that must be retain to demonstrate compliance, and in some cases may also result in their having to purchase equipment or install new alternate means of communication. The RCSDT believes that six months is adequate, considering additional facilities should not have to be built to establish communications with the DP and GOP; similarly, compliance documentation should not impose significant work on the entities part. No change made. What is the improvement in reliability expected as a result of these new requirements? The expected reliability result is addressed in the FERC directive (P487, Order 693), “...ensure there is no reliability gap during normal and

Organization	Yes or No	Question 1 Comment
		emergency operations. For example, during a blackstart when normal communications may be disrupted, it is essential that the Transmission Operator, Balancing Authority and Reliability Coordinator maintain communications with their Distribution Providers and Generator Operators.” No change made.
Response: See response above.		
Independent Electricity System Operator	No	In COM-001, we commented earlier that the entities in R4 and R6 (now R5 and R6) should be the same, i.e. the BA needs to have the Interpersonal Communication capability as well as the Alternative Interpersonal Communication capability with the same entities. The SDT’s response indicates that the suggested change is not needed since additionally requiring DP and GOP entities to have Alternative Interpersonal Communication capability would impose more cost on smaller DP and GOP entities that have little or no risk impact to the bulk electric system. We disagree with this assessment since the need to have Alternative Interpersonal Communication capability should be assessed from the viewpoint that whether or not the absence of such capability can adversely affect reliability. If Interpersonal Communication capability is needed between a BA and a DP/GOP to communicate reliability instructions or directives, then it is deemed necessary that such communication be provided at all times, which indicates the need for an alternative capability. We once again urge the SDT to make the list of entities in R5 and R6 to be the same.
Response: The RCSDT asserts the standard meets FERC Order 693 regarding DP and GOP entities by requiring these entities to have Interpersonal Communication capability. Additionally, requiring DP and GOP entities to have Alternative Interpersonal Communication capability only imposes more cost on smaller DP and GOP entities that have little or no risk impact to the Bulk Electric System. No change made.		

Organization	Yes or No	Question 1 Comment
Georgia System Operations	No	While we agree with removing LSE, PSE, and TSP, we do not agree with the need to include Distribution Provider in all the standards. For example, in IRO-001-3, the Distribution Provider will likely never receive a Reliability Directive directly from its Reliability Coordinator. More likely, the Reliability Directive will be issued by the Transmission Operator or Balancing Authority depending on if the issue is security or adequacy related. The RCSDT is addressing a FERC directive (P487, Order 693) to include the DP in COM-001, and the RCSDT has included the DP in COM-002 and IRO-001 applicability because these standards are related to reliability communications. The RCSDT agrees with the point that communication will most likely be from the BA or TOP; however, the communications may come from the RC. No change made. Accordingly, NERC's Reliability Functional Model V5² describes and identifies the DP's relationships with other Functional Entities to the TOP and BA with respect to Real Time. Real Time³ 7. Implements voltage reduction and sheds load as directed by the Transmission Operator or Balancing Authority. 8. Implements system restoration plans as coordinated by the Transmission Operator. 9. Directs Load-Serving Entities to communicate requests for voluntary load curtailment. With respect to the Functional Model V5, please see Page 31, "18. Issues

² NERC Functional Model Version 5, (http://www.nerc.com/files/Functional_Model_V5_Final_2009Dec1.pdf)

³ NERC Functional Model Version 5, "Functional Entity – Distribution Provider," pg 47, (http://www.nerc.com/files/Functional_Model_V5_Final_2009Dec1.pdf)

Organization	Yes or No	Question 1 Comment
		corrective actions and emergency procedures directives (e.g., curtailments or load shedding) to Transmission Operators, Balancing Authorities, Generator Operators, Distribution Providers, and Interchange Coordinators.” No change made.
Response: See response above.		
ERCOT ISO	No	Some concern for removal of LSE in particular from R2 and R3 from current IRO-001-2 R7 for the ERCOT region. ERCOT Region has QSE’s ⁴ that manage Load Resources. There may be some QSEs that are not registered as a GOP that deploy Load Resources. Per the current LSE JRO, QSEs with Load Resources are registered as LSEs. Not requiring them to deploy Load Resource directives could be perceived as a reliability gap created from previous version to this version. PSEs could be removed as long as they fall under BA authority.
Response: The RCSDT believes the DP is the correct entity because the LSE does not own assets. The definition of LSE is, “The functional entity that secures energy and transmission service (and reliability related services) to serve the electrical demand and energy requirements of its end use customers.” In contrast, the definition of a DP is, “The functional entity that provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer.” Additionally, the Functional Model V5 demonstrates this under the Reliability Coordinator, “18. Issues corrective actions and emergency procedures directives (e.g., curtailments or load shedding) to Transmission Operators, Balancing Authorities, Generator Operators, Distribution Providers, and Interchange Coordinators.” No change made.		
City of Green Cove Springs	Affirmative	COM-001-2: In R5.3, should a BA have communications with a DP or LSE? For the TOP, it is the DP because the load influence is very local; however, for a BA the supply / demand balance is not local and in markets that allow retail competition, I'm thinking LSE is the right functional entity. For Florida,

⁴ Qualifying Scheduling Entities, (<http://www.ercot.com/services/rq/qse/>)

Organization	Yes or No	Question 1 Comment
		it doesn't really matter. If the LSE is the "correct" entity, then R7 would need to be changed and a new requirement specific to LSE's would need to be added. The RCSDT believes the DP should be included and that the LSE should not because the Functional Model V5 addresses this case. See Page 47, "Distribution Provider," of the Functional Model V5, Item 9. "Directs Load-Serving Entities to communicate requests for voluntary load curtailment." The DP is the asset owner and would direct the LSE to perform actions. No change made. COM-001-2, R9 – "Each ... shall test its Alternative Interpersonal Communications capability", suggest adding the phrase "to each entity for which Alternative Interpersonal Communications is required" to add clarity. The RCSDT believes the additional phrasing has little value to the overall requirement. The requirement specifically applies to those responsible entities listed, and it further aligns with R2, R4 and R6. No change made.
Response: See response above.		
Beaches Energy Services	Affirmative	COM-001-2: In R5.3, should a BA have communications with a DP or LSE? For the TOP, it is the DP because the load influence is very local; however, for a BA the supply/demand balance is not local and in markets that allow retail competition, I'm thinking LSE is the right functional entity. For Florida, it doesn't really matter. If the LSE is the "correct" entity, then R7 would need to be changed and a new requirement specific to LSE's would need to be added.
Response: The RCSDT believes the DP should be included and not the LSE because the Functional Model V5 addresses this case. See Page 47, "Distribution Provider," of the Functional Model V5, Item 9. "Directs Load-Serving Entities to communicate requests for voluntary load curtailment." With regard to R7, the DP is the asset owner and would direct the LSE to perform actions. No		

Organization	Yes or No	Question 1 Comment
change made.		
MISO Standards Collaborators	Yes	(1) In COM-001, the entities in R4 and R6 (now R5 and R6) should be the same, i.e. the BA needs to have the Interpersonal Communication capability as well as the Alternative Interpersonal Communication capability with the same entities. Although the need to have Alternative Interpersonal Communication capability should be assessed from the viewpoint that whether or not the absence of such capability can adversely affect reliability, the proposed standard does not require the capability in all cases. At the same time, this standard does not preclude such capability. Even though Interpersonal Communication capability is needed between a BA and a DP/GOP to communicate reliability instructions or directives, there are other communications paths which can be used in the case of the loss of that capability. Since TOPs are also required to have the capability, the BA can call the TOP and ask the TOP to contact the DP/GOP for them until they can implement capability. In addition, it is difficult to visualize entities which would not have the public telephone system or even cell phones available for use in the event of the loss of the capability.
Response: The RCSDT stresses the standard meets FERC Order 693 regarding DP and GOP entities by requiring these entities to have Interpersonal Communication capability. Additionally, requiring DP and GOP entities to have Alternative Interpersonal Communication capability only imposes more cost on smaller DP and GOP entities that have little or no risk impact to the Bulk Electric System. No change made.		
Florida Municipal Power Agency	Yes	In COM-001-2 R5.3, should a BA have communications with a DP or LSE? For the TOP, it is the DP because the load influence is very local; however, for a BA the supply / demand balance is not local and in markets that allow retail competition, it may be that the LSE is the more appropriate functional entity. For instance, the Functional Model when discussing LSE on page 55

Organization	Yes or No	Question 1 Comment
		states that one of the LSE's real time duties is: "12. Receives requests from the Balancing Authority and Distribution Provider for voluntary load curtailment."⁵ The RCSDT believes the DP should be included and not the LSE because the Functional Model V5 addresses this case. See Page 47, "Distribution Provider," of the Functional Model V5, Item 9. "Directs Load-Serving Entities to communicate requests for voluntary load curtailment." In this case (COM-001), the load curtailment is voluntary and would generally be for economics, the exchange of operating information and not reliability actions. No change made. If the LSE is the more appropriate entity, then R7 would need to be changed and a new requirement specific to LSE's would need to be added. For Florida, which does not have retail competition, it doesn't matter whether the DP or the LSE is more appropriate; hence, the "yes" answer. With regard to R7, the DP is the asset owner and would direct the LSE to perform actions. No change made.
Response: See response above.		
Georgia Transmission Corporation	Yes	While we agree with removing LSE, PSE, and TSP, we do not agree with the need to include Distribution Provider in all the standards. For example, in IRO-001-3, the Distribution Provider will likely never receive a Reliability Directive directly from its Reliability Coordinator. Reliability Directives received by Distribution Providers will be issued by the Transmission Operator or Balancing Authority depending on if the issue is security or adequacy related. Accordingly, NERC's Reliability Functional Model V5

⁵ NERC Functional Model Version 5, "Functional Entity – Load Serving Entity," pg 55, (http://www.nerc.com/files/Functional_Model_V5_Final_2009Dec1.pdf)

Organization	Yes or No	Question 1 Comment
		describes and identifies the DP's relationships with other Functional Entities to the TOP and BA with respect to Real Time. Real Time⁶ 7. Implements voltage reduction and sheds load as directed by the Transmission Operator or Balancing Authority. 8. Implements system restoration plans as coordinated by the Transmission Operator. 9. Directs Load-Serving Entities to communicate requests for voluntary load curtailment. The RCSDT is addressing a FERC directive (P487, Order 693) to include the DP in COM-001, and the RCSDT has included the DP in COM-002 and IRO-001 applicability because these standards are related to reliability communications. The RCSDT agrees with the point that communication will most likely be from the BA or TOP; however, the communications may come from the RC. With respect to the Functional Model V5, please see Page 31, "18. Issues corrective actions and emergency procedures directives (e.g., curtailments or load shedding) to Transmission Operators, Balancing Authorities, Generator Operators, Distribution Providers, and Interchange Coordinators." No change made. Lastly, we believe that Distribution Providers requirements with respect to complying with Reliability Directives received by TOPs and BAs are adequately covered by Reliability Standards TOP-001 and COM-002. The RCSDT agrees that TOP-001 and COM-002 apply to DP complying with Reliability Directives; however, IRO-001 applies to having the authority to act or direct others act and may not necessarily be done by issuing a

⁶ NERC Functional Model Version 5, "Functional Entity – Distribution Provider," pg 47, (http://www.nerc.com/files/Functional_Model_V5_Final_2009Dec1.pdf)

Organization	Yes or No	Question 1 Comment
		Reliability Directive. No change made.
Response: See response above.		
Ingleside Cogeneration LP	Yes	Ingleside Cogeneration LP believes that the intent of these three standards is to ensure reliable normal and emergency communications between BES operating entities. It should be the rare exception that BES-critical information must be communicated directly to an LSE, PSE, and TSP and IC. The impact of the Standards would be lessened if diffusely applied to multiple entities who do not normally engage in operations communications.
Response: Thank you for your comment.		
City of Vero Beach	Yes	In COM-001-2 R5.3, should a BA have communications with a DP or LSE? For the TOP, it is the DP because the load influence is very local; however, for a BA the supply / demand balance is not local and in markets that allow retail competition, it may be that the LSE is the more appropriate functional entity. For instance, the Functional Model when discussing LSE on page 55 states that one of the LSE's real time duties is: "12. Receives requests from the Balancing Authority and Distribution Provider for voluntary load curtailment."⁷ The RCSDT notes that the LSE should not be included because the Functional Model V5 addresses this case. See Page 47, "Distribution Provider," of the Functional Model V5, Item 9. "Directs Load-Serving Entities to communicate requests for voluntary load curtailment." No change made.

⁷ NERC Functional Model Version 5, "Functional Entity – Load Serving Entity," pg 55, (http://www.nerc.com/files/Functional_Model_V5_Final_2009Dec1.pdf)

Organization	Yes or No	Question 1 Comment
		If the LSE is the more appropriate entity, then R7 would need to be changed and a new requirement specific to LSE's would need to be added. For Florida, which does not have retail competition, it doesn't matter whether the DP or the LSE is more appropriate; hence, the "yes" answer. With regard to R7, the DP is the asset owner and directs the LSE to perform actions. No change made.
Response: See response above.		
SERC OC Standards Review Group	Yes	
Pacific Northwest Generating Cooperative	Yes	
MRO NSRF	Yes	
City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Yes	
LG&E and KU Services Company	Yes	
Bonneville Power Administration	Yes	
SPP Standards Review Group	Yes	
Dominion	Yes	
Western Electricity Coordinating Council	Yes	

Organization	Yes or No	Question 1 Comment
Southwest Power Pool Regional Entity	Yes	
FirstEnergy	Yes	
Global Engineering and Energy Solutions	Yes	
Kansas City Power & Light	Yes	
Salt River Project	Yes	
Southern Company	Yes	
San Diego Gas & Electric	Yes	
Central Lincoln	Yes	
Shell Energy North America	Yes	
Xcel Energy	Yes	
Liberty Electric Power LLC	Yes	
NIPSCO	Yes	
Oncor Electric Delivery Company LLC	Yes	
Consolidated Edison Co. of NY, Inc.	Yes	
We Energies	Yes	

Organization	Yes or No	Question 1 Comment
Luminant Energy Company LLC	Yes	
NextEra Energy, Inc.	Yes	
Pepco Holdings Inc.	Yes	
Exelon	Yes	
Manitoba Hydro	Yes	
Great River Energy	Yes	
Orange and Rockland Utilities, Inc.	Yes	
Niagara Mohawk (dba National Grid)	Yes	
American Electric Power	Yes	
South Carolina Electric and Gas	Yes	
BGE	Yes	
Nebraska Public Power District	Yes	
Duke Energy	Yes	
ISO New England	Yes	
ReliabilityFirst	Yes	
NV Energy	Yes	

Organization	Yes or No	Question 1 Comment
Midwest Independent Transmission System Operator	Yes	
Texas Reliability Entity	Yes	
Hydro One Networks Inc.	Yes	
New York Independent System Operator	Yes	
American Transmission Company, LLC	Yes	
City of Jacksonville Beach dba/ Beaches Energy Services		In R5.3, should a BA have communications with a DP or LSE? For the TOP, it is the DP because the load influence is very local; however, for a BA the supply/demand balance is not local and in markets that allow retail competition, I'm thinking LSE is the right functional entity. For Florida, it doesn't really matter. If the LSE is the "correct" entity, then R7 would need to be changed and a new requirement specific to LSE's would need to be added
Response: The RCSDT notes that the LSE not should be included because the Functional Model V5 addresses this case. See Page 47, "Distribution Provider," of the Functional Model V5, Item 9. "Directs Load-Serving Entities to communicate requests for voluntary load curtailment." With regard to R7, the DP is the asset owner and directs the LSE to perform actions. No change made.		
Indiana Municipal Power Agency		No comment.

2. Do you agree with the addition of “Adjacent” entities in COM-001-2, Parts 3.5, 4.3, 5.5 and 6.3 of COM-001-2? If not, please explain in the comment area below.

Summary Consideration: The majority of comments were regarding COM-001-2, R3 and R4. Concerns included issues with the use of “Adjacent Transmission Operators” and “synchronously connected within the same Interconnection.” The capitalized word “Adjacent,” beginning the requirement gives the appearance of an undefined glossary term. Therefore, the RCSDT addressed this by starting the applicable Parts of those requirements with “Each” to form “Each adjacent Transmission Operator...” and avoiding the need for another glossary term for something that is widely understood within the industry. The RCSDT made an additional clarifying change to address the issue that some Transmission Operators may not be adjacent for situations other than synchronously connected within the same Interconnection in the traditional understanding. For example, some entities have connections beyond the interconnection and some connections are asynchronous. To address this concern, the RCSDT separated the requirements to identify “synchronously connected” and “asynchronously connected,” and removed the “within the same Interconnection” criteria. Other minor formatting and reference errors were noted and corrected.

Organization	Yes or No	Question 2 Comment
SERC OC Standards Review Group	No	We are concerned regarding communications between Transmission Operators on opposite ends of DC ties, which may or may not be in the same interconnection. Similarly, COM-001, R1.2 limits the requirement of adjacent Reliability Coordinators to the same interconnection and this should not be limited to the same interconnection whether it is synchronous or non-synchronous. The measures should also be verified to ensure that they align properly with the final requirements.
Response: The RCSDT has made clarifying changes by adding a Part to R3 and R4 to address asynchronous connections between Transmission Operators, and has eliminated the phrase “within the same interconnection.” See change in COM-001-2, R3 and R4. Requirement R1 addresses a reliability need for adjacent Reliability Coordinators synchronously connected within the same Interconnection to have Interpersonal Communication capability; however, it does not preclude or limit the Reliability Coordinator from establishing Interpersonal Communication capability with others. The RCSDT does not see where there is a need to communicate with other Reliability Coordinator’s from one interconnection to another. No change made.		

Organization	Yes or No	Question 2 Comment
Northeast Power Coordinating Council	No	NERC uses the terms “adjacent” and “neighboring” in various standards. It is generally believed that those terms have the same meanings, but there are those who believe those terms, as used, are intended to have different meanings. To ensure a consistent usage and understanding, the definition of the term adjacent must be made known before its addition to the standard. Consideration should be given to using only one term in all standards if adjacent and neighboring are intended to mean the same thing. Both terms are used in NERC Standards, sometimes both in the same standard. For example, EOP-001-2b uses “neighboring” in R5, and “adjacent” in R3.3.
Response: The RCSDT thanks you for your comment and recognizes the confusion created by having “Adjacent” start the sentence. This gave the appearance of a defined NERC glossary term. The RCSDT has made clarify changes to the requirements and measures to eliminate this problem. See changes to COM-001-2, R1.2, R2.2, R3.5, R4.3, R5.5, and R6.3.		
MRO NSRF	No	NERC has formally defined “Adjacent Balancing Authority” in the NERC Glossary of Terms, but not “Adjacent Transmission Operator.” The MRO NSRF recommends that “Adjacent Transmission Operator” be defined similar to the “Adjacent Balancing Authority” definition in the NERC Glossary of Terms.
Response: The RCSDT thanks you for your comment and recognizes the confusion created by having “Adjacent” start the sentence. This gave the appearance of a defined NERC glossary term. The RCSDT has made clarify changes to the requirements and measures to eliminate this problem. See changes to COM-001-2, R1.2, R2.2, R3.5, R4.3, R5.5, and R6.3.		
Kansas City Power & Light	No	Requirements R4.3 and R6.3 require TOP’s and BA’s to establish alternative means of “interpersonal communications” with other TOP’s and BA’s without regard to the reliability impact each TOP or BA has on the interconnection. Why would it be necessary for a TOP with one 161kv transmission line or a BA with 100 MW of total load, or one GOP with a 30MW unit to realize additional costs when the facilities they operate have little reliability impact? Rationale criteria should be included here to identify the TOP’s and BA’s where

Organization	Yes or No	Question 2 Comment
		alternative means of “interpersonal communications” should be implemented. Furthermore, these requirements do not recognize the condition when another party refuses to install alternative communication equipment. TOP’s and BA’s have no authority over other TOP’s and BA’s to establish alternative means of communication. Requirements that are dependent on the actions of other parties over which you have no control or authority are poor requirements. In addition, most RC’s have established satellite telephone systems as back-up communication with TOP’s and BA’s. Some RC’s may have to establish additional communication systems with some BA’s as these requirements impose to avoid Standards of Conduct issues.
Response: The RCSDT has not placed any limiting applicability on entities in being responsive to the FERC directive (P487, Order 693), “...ensure there is no reliability gap during normal and emergency operations. For example, during a blackstart when normal communications may be disrupted, it is essential that the Transmission Operator, Balancing Authority and Reliability Coordinator maintain communications with their Distribution Providers and Generator Operators.” The RCSDT does not prescribe the criteria for alternative means of Interpersonal Communication capability, so each entity may determine its own needs to meet the requirement. With regard to requiring other BAs or TOPs to install Alternative Interpersonal Communication capability as registered entities, other BAs or TOPs have the same responsibility to comply with the requirement. Having a satellite backup is an acceptable form of communication; however, the RCSDT does not understand the comment about the Standards of Conduct issues. No change made.		
Southern Company	No	We are concerned regarding communications between Transmission Operators on opposite ends of DC ties, which may or may not be in the same interconnection. Similarly, COM-001, R1.2 limits the requirement of adjacent Reliability Coordinators to the same interconnection and this should not be limited to the same interconnection whether it is synchronous or non-synchronous. The measures should also be verified to ensure that they align properly with the final requirements.
Response: The RCSDT has made clarifying changes by adding Parts to R3 and R4 to address asynchronous connections between		

Organization	Yes or No	Question 2 Comment
Transmission Operators and have eliminated the phrase “within the same interconnection.” See change in COM-001-2, R3 and R4. Requirement R1 addresses a reliability need for adjacent Reliability Coordinators synchronously connected within the same Interconnection to have Interpersonal Communication capability; however, it does not preclude or limit the Reliability Coordinator from establishing Interpersonal Communication capability with others. The RCSDT does not see where there is a need to communicate with other Reliability Coordinators from one Interconnection to another. No change made.		
Xcel Energy	No	In COM-001-2, R4.3. Adjacent Transmission Operators synchronously connected within the same Interconnection. This new requirement has a term that is not defined Adjacent Transmission Operators.
Response: The RCSDT thanks you for your comment and recognizes the confusion created by having “Adjacent” start the sentence. This gave the appearance of a defined NERC glossary term. The RCSDT has made clarifying changes to the requirements and measures to eliminate this problem. See changes to COM-001-2, R1.2, R2.2, R3.5, R4.3, R5.5, and R6.3.		
Independent Electricity System Operator	No	(1) We agree with the addition of “Adjacent” entities in the quoted parts except the qualifier “synchronously connected within the same Interconnection” need to be removed from Parts 3.5 and 4.3 since TOPs do communicate with other TOPs even in another Interconnection (e.g. between Quebec and all of its asynchronously interconnected neighbors). Even in the case of ERCOT, TOPs on the two sides of a DC tie do communicate with each other for daily operations. The RCSDT has made clarifying changes by adding a Part to R3 and R4 to address asynchronous connections between Transmission Operators and has eliminated the phrase “within the same interconnection.” See change in COM-001-2, R3 and R4. (2) Measure M3 does not cover the added R3.5 condition (having Interpersonal Communications capability with each adjacent TOP). M3 needs to be revised. The RCSDT thanks you for catching this oversight. The corresponding TOP entity in R3.5 has been added to the Measure M3.
Response: See response above.		

Organization	Yes or No	Question 2 Comment
Exelon	No	May have an unintended effect on registrations as some GOPs use an intermediately dispatch organization that perform actions on behalf of the generating units.
Response: Having an intermediary dispatching actions for generation units is okay; however, the responsible GOP should have adequate agreements to perform these activities; for example, a Joint Registration Organization (Type 1) or Coordinated Functional Registration (Formerly Type 2). No change made.		
ISO New England	No	ISO-NE does not believe COM-001, in its entirety, is a results-based standards and therefore does not support the draft as written. We believe such "requirements" (i.e. capabilities) should be verified through an entity certification process. Additionally, results-based requirements should be the driver to have the capability to achieve them; on other words, there is no other way to reliably dispatch than to have communications facilities (electronic or voice).
Response: Although this is not a results-based standard, the RCSDT believes it is a significant improvement over the current COM-001 standard. No change made.		
Texas Reliability Entity	No	(1) Requirements R1, R2, R3 and R4 should apply to all adjacent Reliability Coordinators and Transmission Operators, regardless of whether they are in the same Interconnection. The ERCOT Interconnection is asynchronously connected to adjacent Interconnections, and it is imperative that Functional Entities within Texas RE's purview be able to exchange operating information with Transmission Operators and Reliability Coordinators in those adjacent areas, even if they are in a different Interconnection. The RCSDT has made clarifying changes by adding a Part to R3 and R4 to address asynchronous connections between Transmission Operators and has eliminated the phrase "within the same Interconnection." See change in COM-001-2, R3 and R4. (2) Requirement parts R5.5 and R6.3 refer to "Adjacent Balancing Authorities."

Organization	Yes or No	Question 2 Comment
		Measures M5 and M6 refer to “adjacent Balancing Authority” - note the small “a” on adjacent. “Adjacent Balancing Authority” is a defined term in the NERC Glossary, which has a more specific meaning than “adjacent Balancing Authority.” Which term is intended in R5.5 and R6.3? If you don’t intend to use the defined term, perhaps use a word like “contiguous” or “neighboring” rather than “adjacent.” The RCSDT thanks you for your comment and recognizes the confusion created by having “Adjacent” start the sentence. This gave the appearance of a defined NERC glossary term. The RCSDT has made clarifying changes to the requirements and measures to eliminate this problem. See changes to COM-001-2, R1.2, R2.2, R3.5, R4.3, R5.5, and R6.3.
Response: See response above.		
Hydro One Networks Inc.	No	(1) We agree with the addition of “Adjacent” entities in the quoted parts except the qualifier “synchronously connected within the same Interconnection” need to be removed from Parts 3.5 and 4.3 since TOPs do communicate with other TOPs even in another Interconnection (e.g. between Quebec and all of its asynchronously interconnected neighbors). Even in the case of ERCOT, TOPs on the two sides of a DC tie do communicate with each other for daily operations. The RCSDT has made clarifying changes by adding a Part to R3 and R4 to address asynchronous connections between Transmission Operators and has eliminated the phrase “within the same Interconnection.” See change in COM-001-2, R3 and R4. (2) Measure M3 does not cover the added R3.5 condition (having Interpersonal Communications capability with each adjacent TOP). M3 needs to be revised. The RCSDT thanks you for catching this oversight. The corresponding TOP entity in R3.5 has been added to the Measure M3.
Response: See response above.		

Organization	Yes or No	Question 2 Comment
SPP Standards Review Group	Yes	We concur with the addition of “Adjacent” but ask that the SDT give some consideration to allowing an exemption in R6.3 for relatively small loads, less than 20 MW, that are pseudo tied into a Balancing Authority. Loss of these facilities would not place a burden on the BES and should not require Alternative Interpersonal Communications capabilities.
Response: The RCSDT has not placed any limiting applicability on entities in being responsive to the FERC directive (P487, Order 693), “...ensure there is no reliability gap during normal and emergency operations. For example, during a blackstart when normal communications may be disrupted, it is essential that the Transmission Operator, Balancing Authority and Reliability Coordinator maintain communications with their Distribution Providers and Generator Operators.” The RCSDT does not prescribe the criteria for alternative means of Interpersonal Communication capability so each entity may determine its own needs to meet the requirement. With regard to requiring other BAs or TOPs to install Alternative Interpersonal Communication capability as registered entities, other BAs or TOPs have the same responsibility to comply with the requirement. Having a satellite backup is an acceptable form of communication. No change made.		
MISO Standards Collaborators	Yes	(1) We agree with the addition of “Adjacent” entities in the quoted parts. However, there are some entities which may need the capability even though they are not “synchronously connected within the same Interconnection.” This standard does not require them to have the capability, but it does not preclude such capability. In these cases, those entities should evaluate whether the need for the capability is a reliability need or market coordination. If the entities were connected synchronously, actions taken by an entity could have immediate effect upon other entities. However, if not synchronously connected, changes in flows across the asynchronous ties would have to follow the interchange scheduling process with approval by all involved entities before changes could be enacted. Some TOPs do communicate with other TOPs even in another Interconnection (e.g. between Quebec and all of its asynchronously interconnected neighbors). The RCSDT has made clarifying changes by adding a Part to R3 and R4 to address asynchronous connections between Transmission Operators and has eliminated the

Organization	Yes or No	Question 2 Comment
		phrase “within the same Interconnection.” See change in COM-001-2, R3 and R4. (2) Measure M3 does not cover the added R3.5 condition (having Interpersonal Communications capability with each adjacent TOP). M3 needs to be revised. The RCSDT thanks you for catching this oversight. The corresponding TOP entity in R3.5 has been added to the Measure M3.
Response: See response above.		
Entergy Services, Inc	Yes	Entergy agrees with the inclusion of the term “Adjacent” in these requirements to limit the entities that the BA or TOP must have communications capability with to those that they border.
Response: Thank you for your comment.		
Duke Energy	Yes	However, we believe that the phrase “synchronously connected within the same Interconnection” should be struck, because TOPs are controlling DC ties and should be required to have communications with each other.
Response: The RCSDT has made clarifying changes by adding a Part to R3 and R4 to address asynchronous connections between Transmission Operators and has eliminated the phrase “within the same Interconnection.” See change in COM-001-2, R3 and R4.		
ERCOT ISO	Yes	These changes will clarify intentions regarding the undefined term "adjacent."
Response: The RCSDT thanks you for your comment and recognizes the confusion created by having “Adjacent” start the sentence. This gave the appearance of a defined NERC glossary term. The RCSDT has made conforming measures to eliminate this problem. See changes to COM-001-2, R1.2, R2.2, R3.5, R4.3, R5.5, and R6.3.		
ReliabilityFirst	Yes	ReliabilityFirst agrees with adding the term adjacent but is unclear what the term adjacent is referring to. Does it mean directly connected or is it more than one layer out.

Organization	Yes or No	Question 2 Comment
Response: The RCSDT thanks you for your comment and recognizes the confusion created by having “Adjacent” start the sentence. This gave the appearance of a defined NERC glossary term. The RCSDT has made conforming measures to eliminate this problem. See changes to COM-001-2, R1.2, R2.2, R3.5, R4.3, R5.5, and R6.3.		
Pacific Northwest Generating Cooperative	Yes	
City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Yes	
LG&E and KU Services Company	Yes	
Bonneville Power Administration	Yes	
Dominion	Yes	
Western Electricity Coordinating Council	Yes	
Southwest Power Pool Regional Entity	Yes	
FirstEnergy	Yes	
Florida Municipal Power Agency	Yes	
Global Engineering and	Yes	

Organization	Yes or No	Question 2 Comment
Energy Solutions		
ACES Power Marketing Standards Collaborators	Yes	
Salt River Project	Yes	
San Diego Gas & Electric	Yes	
Liberty Electric Power LLC	Yes	
NIPSCO	Yes	
Oncor Electric Delivery Company LLC	Yes	
We Energies	Yes	
City of Jacksonville Beach dba/ Beaches Energy Services	Yes	
Luminant Energy Company LLC	Yes	
NextEra Energy, Inc.	Yes	
Pepco Holdings Inc.	Yes	
Manitoba Hydro	Yes	
Niagara Mohawk (dba	Yes	

Organization	Yes or No	Question 2 Comment
National Grid)		
American Electric Power	Yes	
South Carolina Electric and Gas	Yes	
Georgia Transmission Corporation	Yes	
BGE	Yes	
Nebraska Public Power District	Yes	
Georgia System Operations	Yes	
City of Vero Beach	Yes	
NV Energy	Yes	
Midwest Independent Transmission System Operator	Yes	
American Transmission Company, LLC	Yes	
Indiana Municipal Power Agency		No comment.

3. The RCSDT removed the phrase "to exchange Interconnection and operating information" in COM-001-2, Requirements R1 through R8 based on stakeholder comments. Do you agree with the revision? If not, please explain in the comment area below.

Summary Consideration: Several commenters noted the phrase “to exchange Interconnection and operating information” should also be removed from the Purpose statement. The RCSDT agrees and removed this phrase from the Purpose statement. Some concerns also noted COM-001-2 should also add additional language to clarify the standard is not for the exchange of data. Since the standard focuses on having communication capability, the additional clarity is not needed; therefore, the RCSDT made no change. Some commenters noted items which have been addressed in the questions above.

Organization	Yes or No	Question 3 Comment
Global Engineering and Energy Solutions	No	
Independent Electricity System Operator	No	In the last posting, we suggest removing the phrase “within the same Interconnection” from R1 (now R2.2) since there are RCs between two Interconnections that need to communicate with each other for reliability coordination (e.g. between Quebec and the RCs in the Northeast such as IESO, NYISO, NBSO and ISO-NE, and between the RCs in WECC with the RCs in the Eastern Interconnection). Such coordination may include but not limited to curtailing interchange transactions crossing Interconnection/RC boundary, as stipulated in IRO-006. The SDT’s response to our comments citing that the phrase was added to address the ERCOT situation leaves a reliability gap to the other situations. We again urge the SDT to remove the phrase. If necessary, the ERCOT situation can be addressed by a regional variance.
Response: The RCSDT has made clarifying changes by adding a Part to R3 and R4 to address asynchronous connections between Transmission Operators and has eliminated the phrase “within the same Interconnection.” See change in COM-001-2, R3 and R4.		

Organization	Yes or No	Question 3 Comment
Great River Energy	No	"to exchange interconnection and operation information" was removed from the requirements in COM-001-2 but remains in the purpose. For consistency, it needs to be removed. It could read, <i>"To establish Interpersonal Communication capabilities for the exchange of information necessary to maintain reliability."</i>
Response: The SDT agrees and has made a conforming change to the Purpose of COM-001. See revised Purpose statement.		
Ingleside Cogeneration LP	No	In the background section of this ballot, the project team indicates that the removal of the phrase is intended to signal that these requirements do NOT apply to the exchange of data. Although Ingleside Cogeneration LP agrees that the phrase is not a helpful description of the need for inter-entity communications - and should be removed - we do not see how the remaining language achieves the project team's purpose. It seems the confusion stems from the multitude of data communication types. Email messages between operating entities may be a valid communications path under COM-001-2, while telemetry/control is covered under other Standards. We believe that a technical guideline may be an appropriate vehicle to distinguish what types of communications are subject to these requirements, and which are not.
Response: The RCSDT has drafted performance requirements that are intended to be flexible enough to accommodate different technologies and innovation by industry. It is not the intent of the drafting team to establish all the possible methods of communicating. Drafting teams generally do not create guidelines. No change made.		
ISO New England	No	ISO-NE does not believe COM-001, in its entirety, is a results-based standards and therefore does not support the draft as written. We believe such "requirements" (i.e. capabilities) should be verified through an entity certification process. Additionally, results-based requirements should be the driver to have the capability to achieve them; on other words, there is no other way to reliably dispatch than to

Organization	Yes or No	Question 3 Comment
		have communications facilities (electronic or voice).
Response: Although this is not a results-based standard, the RCSDT believes it is a significant improvement over the current COM-001 standard. No change made.		
Hydro One Networks Inc.	No	(1) In the last posting, there were suggestions of removing the phrase “within the same Interconnection” from R1 (now R2.2) since there are RCs between two Interconnections that need to communication with each other for reliability coordination (e.g. between Quebec and the RCs the Northeast such as IESO, NYISO, NBSO and ISO-NE, and between the RCs in WECC with the RCs in the Eastern Interconnection). Such coordination may include but not limited to curtailing interchange transactions crossing Interconnection/RC boundary, as stipulated in IRO-006. The SDT’s response to our comments citing that the phrase was added to address the ERCOT situation leaves a reliability gap to the other situations. We again urge the SDT to remove the phrase. If necessary, the ERCOT situation can be addressed by a regional variance.
Response: Requirement R1 addresses a reliability need for adjacent Reliability Coordinators synchronously connected within the same interconnection to have Interpersonal Communication capability; however, it does not preclude or limit the Reliability Coordinator from establishing Interpersonal Communication capability with others. The RCSDT does not see where there is a need to communicate with other Reliability Coordinators from one Interconnection to another. No change made.		
SERC OC Standards Review Group	Yes	We suggest that this phrase should also be removed from the “Purpose” statement.
Response: The SDT agrees and has made a conforming change to the Purpose of COM-001: See revised Purpose statement.		
MISO Standards Collaborators	Yes	We urge the SDT to remove the phrase. If necessary, regional situations can be addressed by a regional variance.
Response: The SDT agrees and has made a conforming change to the Purpose of COM-001: See revised Purpose statement.		

Organization	Yes or No	Question 3 Comment
ACES Power Marketing Standards Collaborators	Yes	We thank the drafting team for making this change and for the clear communication that the intent of this standard is not for data exchange in the response to comments. However, we do believe one additional change is necessary to make the intent absolutely clear. The purpose of statement of COM-001-2 still includes the phrase “to exchange Interconnection and operating information.” Since a standard must stand on its own, we believe it is necessary to remove that phrase from the purpose statement to avoid misinterpretations in the future. Auditors and enforcement personnel are not required to understand the development history when enforcing the standard. Furthermore, the purpose is really to enable communications between these functional entities.
Response: The SDT agrees and has made a conforming change to the Purpose of COM-001: See revised Purpose statement.		
Southern Company	Yes	We suggest that this phrase should also be removed from the “Purpose” statement.
Response: The SDT agrees and has made a conforming change to the Purpose of COM-001: See revised Purpose statement.		
Entergy Services, Inc	Yes	Yes, the requirements of this standard pertain to having communications capability. The specific content of that communication should not be the subject of the standard.
Response: The SDT agrees and has made a conforming change to the Purpose of COM-001: See revised Purpose statement.		
We Energies	Yes	Please add "does not include telemetered or derived data"
Response: The standard COM-001 is for Interpersonal Communication capability, which facilitates the communication (i.e., “... to interact, consult, or exchange information.”) and not the exchange of data which is addressed in IRO-010. No change made.		
Duke Energy	Yes	However, the definition of Interpersonal Communication should also be expanded to clearly include the drafting team’s intent that the capability is NOT for the exchange

Organization	Yes or No	Question 3 Comment
		of data. The phrase “for the exchange of Interconnection and operating information” should also be struck from the Purpose statement.
Response: The SDT agrees and has made a conforming change to the Purpose of COM-001: See revised Purpose statement. The standard COM-001 is for Interpersonal Communication capability, which facilitates the communication (i.e., “... to interact, consult, or exchange information.”) and not the exchange of data which is addressed in IRO-010. No change made.		
Pacific Northwest Generating Cooperative	Yes	
MRO NSRF	Yes	
City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Yes	
LG&E and KU Services Company	Yes	
Bonneville Power Administration	Yes	
SPP Standards Review Group	Yes	
Dominion	Yes	
Western Electricity Coordinating Council	Yes	

Organization	Yes or No	Question 3 Comment
Southwest Power Pool Regional Entity	Yes	
FirstEnergy	Yes	
Florida Municipal Power Agency	Yes	
Kansas City Power & Light	Yes	
Salt River Project	Yes	
San Diego Gas & Electric	Yes	
Central Lincoln	Yes	
Xcel Energy	Yes	
Liberty Electric Power LLC	Yes	
NIPSCO	Yes	
Oncor Electric Delivery Company LLC	Yes	
Consolidated Edison Co. of NY, Inc.	Yes	
City of Jacksonville Beach dba/ Beaches Energy Services	Yes	

Organization	Yes or No	Question 3 Comment
Luminant Energy Company LLC	Yes	
NextEra Energy, Inc.	Yes	
Pepco Holdings Inc.	Yes	
Exelon	Yes	
Manitoba Hydro	Yes	
Orange and Rockland Utilities, Inc.	Yes	
Niagara Mohawk (dba National Grid)	Yes	
American Electric Power	Yes	
South Carolina Electric and Gas	Yes	
BGE	Yes	
Nebraska Public Power District	Yes	
ERCOT ISO	Yes	
ReliabilityFirst	Yes	
City of Vero Beach	Yes	

Organization	Yes or No	Question 3 Comment
NV Energy	Yes	
Midwest Independent Transmission System Operator	Yes	
Texas Reliability Entity	Yes	
American Transmission Company, LLC	Yes	
Indiana Municipal Power Agency		No comment.

4. **A new requirement was added for clarity regarding what is required of Distribution Providers and the Generator Operators:**
R11. Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability. [Violation Risk Factor: Medium][Time Horizon: Real-time Operations] This requirement requires collaboration between entities to restore a failed communications capability. Do you agree with the new requirement? If not, please explain in the comment area below.

Summary Consideration: Most of the comments pertain to compliance and clarity concerns; for example, the use of “any of” in the requirement. The phrase “any of” has been eliminated to resolve this concern. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure. Other comments recommended using the terms, such as, “primary,” “secondary,” “device,” “means,” and “medium” with regard to the proposed definitions. The RCSDT emphasizes the requirements are for “capability” and adding such proposed terms is not needed to achieve the necessary clarity. Some commenters raised concerns about being able to reach “mutually agreeable time” for restoration. The RCSDT addressed these concerns by revising the phrase to “mutually agreeable action,” which allows the applicable entities to reach consensus on the effort needed to restore communications. This change also provides flexibility to the entities in addressing the steps to restore communications rather than focusing on the time for restoration. The requirement does not limit the sources of information. Allowing the DP and GOP to reach a mutually agreeable action, eliminates the need for Alternative Interpersonal Communication capability considering the limited impact a failure might have on DPs and GOPs overall. From a compliance standpoint, the DP or GOP that is working to restore its Interpersonal Communication capability is not out of compliance as far as the entity is meeting the requirement for taking action to restore its capability. Other similar concerns pertained to having 24/7 dispatch, which is an operational function. The requirements are constructed around having communication capability. The RCSDT understands there may be entities that have certain operations where there is not 24/7 staffing and these cases should be addressed by their operation with other entities through agreements, procedures or other means as needed for reliable operations. Other minor corrections and formatting issues noted were reviewed and corrected accordingly.

Some commenters were concerned that large entities would not be capable of meeting the 60-minute notification upon the loss of their Interpersonal Communication capability. The RCSDT notes this pertains to the BA, RC, and TOP, which are required to have an Alternative Interpersonal Communication capability, and should have the ability to accomplish the required notification. Also, the loss of Interpersonal Communication capability may not always impact the entire capability. This time frame does not apply to the DP and GOP since the Alternative Interpersonal Communication capability is not required for these functional entities. Other minor formatting and corrections to references were made, such as, focusing on using the singular form of words rather than the plural to avoid confusion.

Organization	Yes or No	Question 4 Comment
Alliant Energy Corp. Services, Inc.	Negative	COM-001-2: Alliant Energy is opposed to the use of the word "any" as it is too broad. It should be revised to the primary Interpersonal Communication capabilities with the Transmission Operator or Balancing Authority.
Response: The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure. The RCSDT emphasizes the requirement refers only to Interpersonal Communication capabilities. Adding the phrase “to the primary” is not needed. Please refer to the definitions of Interpersonal Communication and Alternative Interpersonal Communication for clarification. No change made.		
Wisconsin Electric Power Marketing; Wisconsin Electric Power Co.	Negative	R11 is not clear on the purpose of the statement “determine a mutually agreeable time for restoration” this could be driven by forces outside the control any of the entities. I think, “provide estimated restoration and actual restoration time and determine mutually agreeable alternative during outage” would be better.
Response: The RCSDT has made clarifying changes to R11 to use mutually agreeable action rather than time for restoration.		
Lakeland Electric	Negative	Use of the term "any" in the new R11 and immediate non-compliance if there is a failure in a communication system.
Response: The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure.		
SERC OC Standards Review Group	No	We suggest Requirement 11 should be deleted as the generic nature of the term “...any of its Interpersonal Communications capabilities...” could be interpreted to include communications capabilities used for internal DP/GO purposes. Such DP/GO internal communications capability would not be critical to BES reliability. Also, no BES reliability benefit is realized by the parties simply agreeing to a time for the

Organization	Yes or No	Question 4 Comment
		restoration of the failed Interpersonal Communication capability.
Response: The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure.		
Pacific Northwest Generating Cooperative	No	As per COM-001-2, R7, “Each Distribution Provider shall have Interpersonal Communications capability with the following entities...” R11 states that the DP or GOP that experiences a failure of its Interpersonal Communications ability shall consult with TOPs and BAs and agree on how to restore Interpersonal Communications. We believe better language might be, “Restore Interpersonal Communications with your TOP/BA as soon as operationally feasible.”
Response: The RCSDT notes that R11 does not limit the sources of information used by the DP or GOP in establishing a mutually agreeable restoration time for its Interpersonal Communication capability with its TOP or BA. That is precisely why R11 is written in this manner. This allows flexibility on the part of the TOP and BA in determining when the Interpersonal Communication capability must be restored. In situations where there is little or no impact to the reliability of the BES, some flexibility could be allowed without requiring the acquisition of Alternative Interpersonal Communication capability. The RCSDT has made clarifying changes to R11 to use mutually agreeable action rather than time for restoration.		
MRO NSRF	No	Please note that the use of the word “any” as in “Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities...” will be viewed as meaning every Interpersonal Communication medium that an Entity has or uses. The NSRF recommends that the word “any” be removed from this Requirement. The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure. The NSRF recommends that R11 be revised to read:

Organization	Yes or No	Question 4 Comment
		<i>“Each Distribution Provider and Generator Operator that experiences a failure of any of its primary (or defined) Interpersonal Communication capabilities with its Transmission Operator or Balancing Authority...”</i> In that way it focuses it down to the communications issues with the TOP or BA. In lieu of “primary” the SDT could state “defined” as long as it is not meant to be “any.” The RCSDT emphasizes the requirement refers only to Interpersonal Communication capabilities. Adding the phrase “to the primary” is not needed. Please refer to the definitions of Interpersonal Communication and Alternative Interpersonal Communication for clarification. No change made. The latter part of R11 states; “...shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability.” This ambiguous statement does not support reliability. Consulting with a TOP or BA does not solve the problem of the lack of Interpersonal Communication capabilities. The NSRF recommends this be rewritten as: <i>“...shall consult with inform their Transmission Operator or Balancing Authority as applicable as to the status of the Interpersonal Communication capability.”</i> So the new R11 would read: <i>“Each Distribution Provider and Generator Operator that experiences a failure of its primary (or designated) Interpersonal Communication with their Transmission Operator or Balancing Authority shall inform them, as applicable, as to the status of the Interpersonal Communication capability.”</i> The RCSDT has made clarifying changes to R11 to use mutually agreeable action rather than time for restoration.
Response: See response above.		

Organization	Yes or No	Question 4 Comment
LG&E and KU Services Company	No	Regarding R11, as written it is unclear when the DP and GOP are required to consult with their TOP or BA. “[A] failure of any of its Interpersonal Communication capabilities” could be construed to mean any internal phone line of either the DP or GOP failing. Internal phone lines do not affect either the DP’s or GOP’s ability to communicate with the TOP or BA. If the DP or GOP loses its Interpersonal Communication with an entity it is required to have the capability with, then the entity must consult with that entity to determine a mutually agreeable action (was time) to restore. A failure of the entity’s capability means the entity is no longer able to communicate with its BA or TOP, then it must consult with the affected entity. It is also unclear whether a failure of an interpersonal communication capability would require consultation if there were multiple other interpersonal communication capabilities that were still fully functional. Furthermore, what exactly is required in “consultation” and who would be responsible if the “consulting” entities did not come to a “mutually agreeable time” are questions that are left unanswered. LG&E and KU Services Company suggest the following language: <i>R11. Each Distribution Provider and Generator Operator that experiences a failure of more than one of its Means for Interpersonal Communications or failure of its Alternative Means for Interpersonal Communication with their Transmission Operator or Balancing Authority shall notify their Transmission Operator or Balancing Authority regarding the time to restore the impacted Means for Interpersonal Communication or Alternative Means for Interpersonal Communication.</i> The RCSDT thanks you for your comment; however, great lengths were taken in communicating mediums regarding IC and AIC and finds that adding “Means” to the proposed terms being defined diminishes clarity of the definition. No change made.

Organization	Yes or No	Question 4 Comment
Response: See response above.		
PPL Electric Utilities and PPL Supply NERC Registered Organizations	No	PPL has concerns with the use of the word “any” in this requirement. PPL recommends striking the words “any of” and instead using “its primary” as follows: The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure. <i>Each Distribution Provider and Generator Operator that experiences a failure of its primary Interpersonal Communication capabilities with its Transmission Operator or Balancing Authority...” In the current version, it is unclear when the DP and GOP are required to consult with their TOP or BA.</i> The RCSDT notes that the requirement refers only to Interpersonal Communication capabilities. Adding the phrase “to the primary” is not needed. Please refer to the definitions of Interpersonal Communication and Alternative Interpersonal Communication for clarification. No change made. “[A] failure of any of its Interpersonal Communication capabilities” could be construed to mean an internal phone line of either the DP or GOP failing. Internal phone lines do not affect either the DP’s or the GOP’s ability to communicate with the TOP or BA. It is also unclear whether a failure of an interpersonal communication capability would require consultation if there were multiple other interpersonal communication capabilities that were still fully functional. The RCSDT believes an entity meets the intent of the requirement when it has Interpersonal Communication capability, whether through a single capability or multiple capabilities. A single failure of an entity’s capability would not require any consultation if the entity continues to have the capability. The drafting team has removed the phrase “any of” as a clarifying change. Additionally, the RCSDT made a

Organization	Yes or No	Question 4 Comment
		clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure.
Response: See response above.		
SPP Standards Review Group	No	We would suggest deleting the phrase ‘any of’ in the Requirement. It would then read: <i>‘Each DP and GOP that experiences a failure of its Interpersonal Communication...’</i> The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure. Also, how does the DP or GOP consult with its TOP or BA when it loses its Interpersonal Communications capability? To do this wouldn’t they have to have an Alternative Interpersonal Communications capability? The RCSDT believes each entity must determine how to accomplish this (R11) and having another requirement or change would be overly prescriptive. No change made.
Response: See response above.		
Western Electricity Coordinating Council	No	We have two concerns with R11 as worded. First, the term "as applicable" is undefined. Who decides what is applicable. We suggest that words clarifying which entity, TOP or BA, the DP and GO experiencing a failure of any of its Interpersonal Communication capabilities must consult with. The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “as applicable” in COM-001, R11.

Organization	Yes or No	Question 4 Comment
		Second, the inclusion of the "mutually agreeable" time to restore the Interpersonal Communication capability is problematic. Although unlikely, two entities could "mutually agree" to an exceptionally long time frame for restoration (two years) and that unreasonable timeframe would meet the requirement as long as they both agreed. Suggest some finite time limit be included. The RCSDT has made clarifying changes to R11 to reference "mutually agreeable action," rather than "time" for restoration. The use of "action" eliminates the need for a timeframe. New information regarding the restoration parameters may change under a mutually agreeable action.
Response: See response above.		
FirstEnergy	No	Although we agree with the intent of the requirement, we are concerned with the use of "any of its Interpersonal Communication." The word "any" is very inclusive and the team should consider narrowing it down to those capabilities that may adversely impact reliability.
Response: The RCSDT appreciates your comment and has made clarifying changes by removing the phrase "any of" in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure.		
Florida Municipal Power Agency	No	By use of the term "any" in the phrase "a failure of any of its Interpersonal Communication" the standard will actually create a disincentive for redundant communications with DPs and GOPs due to compliance risk. The RCSDT appreciates your comment and has made clarifying changes by removing the phrase "any of" in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure. To truly further the goals of reliability, the requirement should align with R3.3 and R3.4 which requires a primary Interpersonal Communications capability and R4 which

Organization	Yes or No	Question 4 Comment
		does not require DPs or GOPs to have Alternative Interpersonal Communications capability. A possible solution is through use of the terms “Primary” for R3 and “Alternate” for R4 and then make R11 applicable to Primary only. The term “Interpersonal Communication” is a defined term in this standard. As such, it has a different meaning than “Alternative Interpersonal Communication,” thus there should be no confusing of the two. In addition, the word “primary” purposely does not exist in the requirements since the RCSDT did not intend to create a requirement for redundancy. Redundancy continues to be a good practice, but it is not required by this standard except that some entities must have both an Interpersonal Communication capability and a designated Alternative Interpersonal Communication capability. No change made.
Response: See response above.		
Global Engineering and Energy Solutions	No	We are pleased that the drafting team addition provides addition description on the process for communicating failed Interpersonal Communication. However additional clarity should be made regarding if there is an expectation that the Interpersonal Communication should be available 24x7. There are many Distribution Providers that do not have a 24x7 managed facility that can view and respond to a communication received in real time on the Interpersonal Communication device. These DPs rely on on-call personnel for off-hour emergencies such as an outage on the distribution system. The on-call personnel may use a cell phone, pager, etc. In other cases, the Transmission Operator or Balancing Authority may communicate by email and response is provided during business hours. In these cases, if the Transmission Operator or Balancing Authority had a system emergency they have the ability to isolate the distribution system from the grid and therefore do not require a 24x7 manned distribution. If the intent of the Standard is for ensuring real-time communication than the

Organization	Yes or No	Question 4 Comment
		applicability should be limited to those Distribution Providers who have been required by the Transmission Operator or Balancing Authority to have a manned 24x7 manned facility. Many of the DPs referred to here have not received a real-time call in the last 20 years. Requiring them to staff 24x7 for a condition likely not to occur is cost prohibited and does not improve reliability.
Response: The RCSDT thanks you for your comment. There is no requirement for 24/7 support. The requirement is to have communications capability. The type of system (e.g., On-Call) is not prescribed in the standard, and the standard is designed not to impose needless communications requirements. The Purpose of COM-001-2 is, “To establish Interpersonal Communication capabilities necessary to maintain reliability. No change made.		
ACES Power Marketing Standards Collaborators	No	Requirement R11 does not fully address the issue of what is required by Distribution Providers and Generator Operators and introduces new issues. The RCSDT notes that R11 grants the DP and GOP flexibility in determining, in conjunction with its TOP or BA, when its Interpersonal Communication capability requires restoration. This would provide allowances for those entities, which have little or no impact on the reliability of the BES. No change made. First, while the standard is intended to clarify that the Distribution Provider and Generator Operator do not need backup communications capability, it simply does not. Distribution Providers and Generator Operators are required to have an Interpersonal Communications capability in Requirement R7 and R8 respectively. Unfortunately, the effectiveness of these requirements persists even when the Distribution Provider or Generator Operator experiences a failure of its Interpersonal Communications capability. When Requirement R11 applies, the Distribution Provider or Generator Operator will still be obligated to comply with Requirements R7 and R8 respectively and will, in fact, be in violation of these requirements because the Distribution Provider or Generator Operator no longer has the capability. The RCSDT thanks you for your comment. Requirements R7 and R8 have been revised to account for the failure of Interpersonal Communication capability. The

Organization	Yes or No	Question 4 Comment
		intent of R11 is to require the responsible entity to take action upon the failure of its Interpersonal Communication. Second, capability is used inconsistently between Requirement R7 and R11, which leads to confusion. In Requirement R7, it is singular while in Requirement R11 is plural. It needs to be clear that only the failure of the capability identified in R7 and R8 needs to be reported by the Distribution Provider and Generator Operator respectively. The RCSDT thanks you for your observation and has modified COM-001-2 R11 to be singular and to more clearly address the entities being consulted with upon a failure. Third, if the requirements focused on communications devices rather than capabilities, they would come closer to communicating the intent. Requirement R11 would better complement Requirement R7 and R8 if the focus was on having a communication medium or device. The RCSDT believes that prescribing a device or medium would limit an entity. In regards to a device not functioning properly is contrary to R10, notification of Interpersonal Communication capability failure. Please refer to the definition of Interpersonal Communication and Alternative Interpersonal Communication. No change made. A Generator Operator with an installed communications device or medium still has that device or medium even when it is not functioning properly and could still meet Requirements R7 and R8. However, they don't have the Interpersonal Communications capability if the device is not functioning properly. The RCSDT thanks you for your comment. Requirements R7 and R8 have been revised to account for the failure of Interpersonal Communication capability. The intent of R11 is to require the responsible entity to take action upon the failure of its Interpersonal Communication.

Organization	Yes or No	Question 4 Comment
Response: See response above.		
Kansas City Power & Light	No	How does a DP or GOP experiencing a failure of its “interpersonal communications” consult with its TOP or BA to determine a mutually agreeable time for restoration of “interpersonal communications”? There are no requirements that require alternative “interpersonal communications” for the DP and GOP. This requirement cannot be fulfilled and should be removed.
Response: The RCSDT notes that R11 does not limit the sources of information used by the DP or GOP in establishing a mutually agreeable restoration time for its Interpersonal Communication capability with its TOP or BA; that is precisely why R11 is written in this manner. This allows flexibility on the part of the TOP and BA in determining when the Interpersonal Communication capability must be restored. In situations where there is little or no impact to the reliability of the BES, some flexibility could be allowed without requiring the acquisition of Alternative Interpersonal Communication capability. The RCSDT has made clarifying changes to R11 to use mutually agreeable action, rather than time for restoration.		
Southern Company	No	We suggest the following changes: - Requirement 10 should include Distribution Providers and Generator Operators, The RCSDT stresses that R11 grants the DP and GOP flexibility in determining, in conjunction with its TOP or BA, when its Interpersonal Communication capability must be restored. This would provide allowances for those entities, which have little or no impact on the reliability of the BES, while not requiring them to obtain Alternative Interpersonal Communication capabilities. Making the proposed changes would eliminate this flexibility. Removing R11 takes away the RCSDT’s effort to include those provisions in the standard. No change made. - Entities to be notified should be “as identified in requirements R1 through R8”, The RCSDT thanks you for pointing this out. The RCSDT has modified the language of R10 to refer to R1, R3, and R5, rather than “R1 through R6” since the responsible entities are limited to the RC, the TOP, and the BA in these requirements.

Organization	Yes or No	Question 4 Comment
		3. Requirement 11 should be deleted, and, The RCSDT thanks you for your comment. COM-001-2 R11 requires the entity to consult with its BA or TOP when it experiences a failure of its Interpersonal Communication capability. The BA or TOP need to know communication is compromised between the DP or GOP. 4. Measures (M10) and VSLs should be adjusted accordingly. The RCSDT did not elect to include the DP and GOP in R10; therefore, Measure, M10 and the corresponding VSLs were not adjusted. No change made.
Response: See response above.		
Central Lincoln	No	The new requirement presents us with a paradoxical situation. The communication has failed, so we must consult; yet consultation requires communication. We note that the SDT used the word “any”, implying that multiple communication paths are required. The reality of the situation at Central Lincoln, due to our remote location, is that a single back hoe incident at the right location can take out all of our of our communication capability (including the terrestrial portion of the cellular networks) with our BA/TO; making this requirement impossible to meet for this circumstance using our present capabilities. The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure. Furthermore, R11 addresses the direction given in Order 693 that DP and GOP entities do not necessarily need to have Alternative Interpersonal Communication capability. The requirement allows flexibility in “consult with” by not naming the method. If all communications are out, then the DP or GOP may have to meet the requirement by an in-person consultation.

Organization	Yes or No	Question 4 Comment
		We also note that no time limit was indicated. Most interruptions are brief, and fixed before consultation could reasonably take place. CEAs will be finding entities non-compliant for quickly fixing problems at their end without first consulting to ensure the restoration time was agreeable. To avoid non-compliance, entities will be forced delay repairs while they investigate alternative communication paths for consultation purposes. We fail to see how such an outcome improves reliability. The DP and GOP are only required to have Interpersonal Communication capability. If the DP or GOP restores its Interpersonal Communication capability before it could reasonably contact the affected entity by another method, there is no failure to comply. The DP or GOP could then consult with the affected entity to determine a mutually agreeable action. In this case, the RCSDT believes the "action" would then be the entities acknowledging the failure and the repair; therefore, no mutually agreeable action is needed. The RCSDT recognizes there is no way to account for all the various circumstances in a failure. To comply, the DP and GOP are still required to consult the entity which the failure affected regardless of whether the Interpersonal Communication capability was restored or is still failed. No change made. The new requirement is one sided, requiring the DP and GOP to consult with no corresponding requirement for the TO or BA to have personnel available for such a consultation. Consultation failure or failure to mutually agree due to actions or inactions on the part of the TO or BA should not result in an enforcement action against the DP or GOP, yet that is how the requirement is written. The RCSDT notes that once the failure has been detected, the responsible entity must make the consultation with the BA or TOP; that relieves the compliance burden. While the RCSDT understands your concern about single points of failure, the question becomes should this relieve the DP or GOP of the requirement for having Interpersonal Communication capabilities. No change made. The new requirement fails to add any "clarity" to the other requirements, and we don't see that the stakeholders thought there was a problem with DP/GOP obligation

Organization	Yes or No	Question 4 Comment
		clarity. Instead, it adds new obligations with no justification for how they enhance reliability. We suggest removing the requirement. Based on the RCSDT's understanding of the comments received on the previous posting, the industry desired additional clarity on specifically what communication capabilities the DP and GOP were required to have. There was confusion that the standard did not specifically say that the DP and GOP were required to have Alternative Interpersonal Communication capabilities. R11 clarifies that a DP and GOP are not required to have Alternative Interpersonal Communication capability if the DP or GOP consult with their TOP or BA, whichever is applicable in the given situation, and they mutually agree that the restoration action does not adversely impact the reliability of the BES. No change made.
Response: See response above.		
Entergy Services, Inc	No	The DP or GOP should have to notify the TOP and BA of its communications failure, similar to the requirement in R10 for TOP and BA. The DP or GOP should restore the communications capability as soon as possible. Entergy does not agree that the TOP or BA should have to negotiate the restoration time with the DP or GOP. This is an unreasonable burden on the BA and TOP.
Response: The RCSDT notes that R11 does not exempt the DP or GOP from notifying its TOP or BA when they experience a communication failure. There is nothing in R11 that says a DP or GOP does not have to restore its communications capability. What is in R11 is flexibility. The RCSDT has gone to great lengths to provide some flexibility for those DPs and GOPs with little or no impact on the reliability of the BES. FERC directed NERC to provide for this consideration. While one could consider this a negotiation, the notification is required so some sort of communication must be made. All that is being asked of the BA and TOP is to give some consideration for the entities involved and the overall situation. The SDT modified the requirement so mutual agreement must be reached on an "action" for restoration rather than a "time" for restoration.		
Liberty Electric Power LLC	No	The phrase "mutually agreeable time" needs to be replaced in order to make this standard acceptable. This phrasing creates a potential violation if equipment functionality cannot be restored in the time frame preferred by another entity, even

Organization	Yes or No	Question 4 Comment
		if the time of repair is beyond the control of the RE. This phrase should be replaced with "inform their TO or BA as applicable of the failure, and provide estimates as to the time the Interpersonal Communication capabilities will be restored."
Response: The RCSDT has gone to great lengths to provide some flexibility for those DPs and GOPs with little or no impact on the reliability of the BES. FERC directed NERC to provide for this consideration. Therefore, we use the language as proposed in R11. Mutually agreeable implies that both parties are willing to accept the outcome. It doesn't mean that a DP or GOP must comply with the wishes of its TOP or BA because as you state that could be beyond the control of the DP or GOP. However, what transpires in the consultation is a realization of what the situation is, what the impacts to reliability are and a determination of what is amicable to both parties. The RCSDT has made clarifying changes to R11 to use mutually agreeable action rather than time for restoration.		
We Energies	No	R11 Implies that R8 and R9 are independent and redundant to R5.3, R5.4 and R3.3 and R3.4. R11 is not clear on the purpose of the statement "determine a mutually agreeable time for restoration" this could be driven by forces outside the control any of the entities. I think" provide estimated restoration and actual restoration time and determine mutually agreeable alternative during outage" would be better. Update M9 accordingly.
Response: The RCSDT has made clarifying changes to R11 to use mutually agreeable action, rather than time for restoration.		
Indiana Municipal Power Agency	No	IMPA does not believe that this requirement is necessary in order to ensure communication lines are restored by Distribution Providers and Generator Operators. If this requirement is kept, IMPA does not think the use of the words "a failure of any of its Interpersonal Communication capabilities" is acceptable. The RCSDT notes the intent of this requirement is not to ensure that DP and GOP communication lines are restored. The intent of this requirement is to provide some flexibility for the DP or GOP that does not have an impact on the reliability of the BES. Depending on the impact of the given entity, the TOP or BA can be flexible in specifying when the Interpersonal Communication capability must be restored,

Organization	Yes or No	Question 4 Comment
		rather than requiring the availability and use of an Alternative Interpersonal Communication capability. No change made. The wording is too inclusive and should apply to only primary Interpersonal Communication capabilities. IMPA is also concerned about how entities are supposed to know when the telephone companies may have equipment repaired in order to determine a mutually agreeable time to restore Interpersonal Communication capability. The entity may have no control over the restoration and hence would not be able to set a time other than whenever the capabilities are restored by for instance the telephone company. The RCSDT deliberately avoided the use of primary and secondary mediums and elected to use communications capabilities. As such, R11 applies to Interpersonal Communication capabilities of the DP and GOP. The RCSDT has gone to great lengths to provide some flexibility for those DPs and GOPs with little or no impact on the reliability of the BES. FERC directed NERC to provide for this consideration. Therefore, we use the language as proposed in R11. No change made. It does not mean that a DP or GOP must comply with the wishes of its TOP or BA because as you state that could be beyond the control of the DP or GOP. However, what transpires in the consultation is a realization of the situation, what the impacts to reliability are and a determination of what is amicable to both parties. No change made. The RCSDT has made clarifying changes to R11 to use mutually agreeable action rather than time for restoration. In addition, entities will have to keep evidence to show that a “mutually” agreeable time was reached by two or more entities. The most workable solution would be to require notification if primary Interpersonal Communication is lost and a follow-up notification when that capability is restored. The RCSDT notes that R11 does not limit the sources of information used by the DP or GOP in establishing a mutually agreeable restoration action for its Interpersonal Communication capability with its TOP or BA; that is precisely why R11 is written in

Organization	Yes or No	Question 4 Comment
		this manner. This allows flexibility on the part of the TOP and BA in determining when the Interpersonal Communication capability must be restored. In situations where there is little or no impact to the reliability of the BES, some flexibility could be allowed without requiring the acquisition of Alternative Interpersonal Communication capability. No change made.
Response: See response above.		
NextEra Energy, Inc.	No	NextEra Energy, Inc. (NextEra), which includes Florida Power & Light Company, believes that Requirement 11 of COM-001-2, as drafted, is too vague to be adopted as a mandatory Reliability Standard. For example, it is unclear what is meant by “shall consult.” The North American Electric Reliability Corporation’s (NERC) Rules of Procedure state that a foundation of any Reliability Standard is that: “. . . [the] reliability standard shall be stated using clear and unambiguous language. Responsible entities, using reasonable judgment and in keeping with good utility practices, are able to arrive at a consistent interpretation of the required performance.” The term “shall consult” is not a term generally understood or used in the electric utility industry, and, therefore, does not enable a consistent interpretation of the performance required. Accordingly, NextEra requests that Requirement 11 either: (i) be deleted; or (ii) be redrafted to read more like Requirement 10.
Response: The RCSDT believes the term, “consult,” is well understood. Basically, entities must have a conversation. No change made.		
Manitoba Hydro	No	COM-001-2 R11 does not specify a timeline in which entities have to come up with a ‘mutually agreeable’ time to restore Interpersonal Communication capability. Manitoba Hydro believes this omission creates a reliability gap and suggests that wording be revised as follows: ‘... shall consult with their Transmission Operator or

Organization	Yes or No	Question 4 Comment
		Balancing Authority as applicable and determine a mutually agreeable time to restore the Interpersonal Communication capability within 24 hours of experiencing the failure.'
Response: The RCSDT has made clarifying changes to R11 to use mutually agreeable action rather than time for restoration. The RCSDT believes R11 grants the DP and GOP flexibility in determining, in conjunction with its TOP or BA, when its Interpersonal Communication capability must be restored. This would provide allowances for those entities, which have little or no impact on the reliability of the BES while not requiring them to obtain Alternative Interpersonal Communication capabilities. No change made.		
Great River Energy	No	Capability is not used consistently in R7 and R11. It changes from singular to plural.
Response: The RCSDT thanks you for your observation. Generally, the singular implies the plural or vice-versa. The RCSDT has corrected R10 and R11 to be consistent with the singular application.		
American Electric Power	No	Regarding COM-001-02 R10 and R11, some of the entity pairs (for example, BA to a GO) are not required to have alternative inter-personnel communication. How can the notification occur with 60 minutes for example, when primary communication is not available for a role that doesn't require an alternate means of communication? In addition, requiring notification within 60 minutes in Requirement 10 would not be feasible for larger entities that might have hundreds of contacts to make.
Response: The RCSDT thanks you for your comment. The notification within 60 minutes found in R10 pertains to the BA, RC and TOP; therefore, these entities are required to have designated Alternative Interpersonal Communication capability with other entities and more specifically other BA, TOP and RC entities. It is understood by virtue of R11 that the DP and GOP may not have Alternative Interpersonal Communication capability and may not be notified within 60 minutes. No change made.		
Georgia Transmission Corporation	No	The intent of this requirement is not yet clear. Technically, the air we breathe, as well as other mediums like "any" cell phone, fax lines, and/or email accounts would qualify under this proposed definition of Interpersonal Communication. The burden for compliance evidence to demonstrate failure of "any of its Interpersonal Communication capability" would seem unobtainable and could prove to be a daily

Organization	Yes or No	Question 4 Comment
		occurrence (dropped phone calls, etc.). The following is suggested to utilize the singular form of capability rather than plural form of capabilities: <i>R11. Each Distribution Provider and Generator Operator that experiences a failure of its Interpersonal Communication capability shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability.</i>
Response: The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure.		
Nebraska Public Power District	No	We would suggest deleting the phrase ‘any of’ in the Requirement. It would then read: <i>‘Each DP and GOP that experiences a failure of its Interpersonal Communication...’</i> The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure. Also, how does the DP or GOP consult with its TOP or BA when it loses its Interpersonal Communications capability? To do this wouldn’t they have to have an Alternative Interpersonal Communications capability? The RCSDT notes that R11 does not limit the sources of information used by the DP or GOP in establishing mutually agreeable action for restoration for its Interpersonal Communication capability with its TOP or BA; that is precisely why R11 is written in this manner. This allows flexibility on the part of the TOP and BA in determining when the Interpersonal Communication capability must be restored. In situations where there is little or no impact to the reliability of the BES, some flexibility could be

Organization	Yes or No	Question 4 Comment
		allowed without requiring the acquisition of Alternative Interpersonal Communication capability. No change made.
Response: See response above.		
Georgia System Operations	No	The intent of this requirement is not yet clear. Technically, the air we breathe, as well as other mediums like “any” cell phone, fax lines, and/or email accounts would qualify under this proposed definition of Interpersonal Communication. The burden for compliance evidence to demonstrate failure of “any of its Interpersonal Communication capability” would seem unobtainable and could prove to be a daily occurrence (dropped phone calls, etc.). The following is suggested: <i>R11. Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capability shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability.</i>
Response: The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure.		
Ingleside Cogeneration LP	No	Most of Ingleside Cogeneration’s communications capabilities rely on carriers who will immediately deploy technicians to repair land-based or wireless systems when they break. Although we may contact the carrier to inform them that the systems are not available – or to determine their progress – we do not want them waiting for our go-ahead before proceeding. If the intent of this requirement is to validate the operation of the repaired connection, or to establish interim means of communications with other operating entities, then Ingleside Cogeneration believes a re-write is in order. There is no reliability purpose being served otherwise that we can tell.
Response: The RCSDT believes there is nothing in R11 that says repairs by communication technicians should wait on anyone for a		

Organization	Yes or No	Question 4 Comment
		go-ahead. The RCSDT sees it working this way: When a communication link goes down, a communication technician is dispatched as soon as the failure is noted and according to the agreements regarding repair between the provider and the user. When the user contacts the provider, an estimate of the anticipated repair time should be provided. One would expect this type of arrangement in service agreements. The user, DP or GOP, then takes that time to the consultation with the TOP or BA. Based on this anticipated restoration time and the impact the DP or GOP has on the reliability of the BES, a mutually agreed to restoration action is established. No change made.
Duke Energy	No	The phrase “consult with... to determine a mutually agreeable time” makes this requirement too open-ended to be auditable and enforceable. The RCSDT has made clarifying changes to R11 to use mutually agreeable action rather than time for restoration. We question why R11 does not establish a timeframe for notification similar to R10, which requires the RC, TOP or BA to make notification within 60 minutes of failure detection. The RCSDT thanks you for your comment. The notification within 60 minutes found in R10 pertains to the BA, RC and TOP; therefore, these entities are required to have designated Alternative Interpersonal Communication capability with other entities and more specifically other BA, TOP and RC entities. It is understood by virtue of R11 that the DP and GOP would not have Alternative Interpersonal Communication capability and would not be notified within 60 minutes. No change made. We also question why DPs and GOPs are not required to have Alternative Interpersonal Communications capability in order to be able to make such notifications. The RCSDT believes that R11 grants the DP and GOP flexibility in determining, in conjunction with its TOP or BA, when its Interpersonal Communication capability must be restored. This would provide allowances for those entities which have little or no impact on the reliability of the BES while not requiring them to obtain Alternative Interpersonal Communication capabilities. The requirement allows flexibility in “consult with” by not naming the method. If all communications are out,

Organization	Yes or No	Question 4 Comment
		then the DP or GOP may have to meet the requirement by an in-person consultation. No change made.
Response: See response above.		
ISO New England	No	ISO-NE does not believe COM-001, in its entirety, is a results-based standards and therefore does not support the draft as written. We believe such “requirements” (i.e. capabilities) should be verified through an entity certification process. Additionally, results-based requirements should be the driver to have the capability to achieve them; on other words, there is no other way to reliably dispatch than to have communications facilities (electronic or voice).
Response: Although this is not a results-based standard, the RCSDT believes it is a significant improvement over the current COM-001 standard. No change made.		
ReliabilityFirst	No	ReliabilityFirst believes Distribution Provider and Generator Operator should be added to Requirement R10 and Requirement R11 should be removed. Finite time frames should be prescribed for each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities. ReliabilityFirst believes that the failure of Interpersonal Communication between Distribution Providers/Generator Operators and Transmission Operators/Balancing Authorities could have the same negative effects similar to the failure of Interpersonal Communication by the Reliability Coordinator, Transmission Operator, and Balancing Authority.
Response: If the RCSDT made the changes proposed, the standards loses the flexibility of the TOP and BA to work with DPs and GOPs which have little or no adverse reliability impact on the BES. The RCSDT feels we need to maintain this flexibility. In fact, FERC directed NERC to do so in Order 693. No change made.		
City of Vero Beach	No	By use of the term “any” in the phrase “a failure of any of its Interpersonal

Organization	Yes or No	Question 4 Comment
		Communication” the standard will actually create a disincentive for redundant communications with DPs and GOPs due to compliance risk. The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure. To truly further the goals of reliability, the requirement should align with R3.3 and R3.4 which requires a primary Interpersonal Communications capability and R4 which does not require DPs or GOPs to have Alternative Interpersonal Communications capability. A possible solution is through use of the terms “Primary” for R3 and “Alternate” for R4 and then make R11 applicable to Primary only. The RCSDT deliberately stayed away from the use of primary and secondary mediums and prefers to use communications capabilities. Further, the RCSDT has gone to great lengths to provide some flexibility for those DPs and GOPs with little or no impact on the reliability of the BES. FERC directed NERC to provide for this consideration. Therefore, we use the language as proposed in R11. Mutually agreeable implies that both parties are willing to accept the outcome. It doesn’t mean that a DP or GOP must comply with the wishes of its TOP or BA because as you state that could be beyond the control of the DP or GOP. But what transpires in the consultation is a realization of what the situation is, what the impacts to reliability are and a determination of what is amicable to both parties. No change made. The RCSDT emphasizes the requirement refers only to Interpersonal Communication capabilities. Adding the phrase “to the primary” is not needed. Please refer to the definitions of Interpersonal Communication and Alternative Interpersonal Communication for clarification. No change made.
Response: See response above.		
Midwest Independent	No	MISO requests clarification regarding

Organization	Yes or No	Question 4 Comment
Transmission System Operator		(1) when Distribution Providers/Generator Operators have an obligation to collaborate with Transmission Operators versus Balancing Authorities; and (2) the obligation of Transmission Operators to inform Balancing Authorities (and vice versa) of an agreed upon time for restoration of Interpersonal Communication capability when collaboration occurs only between Transmission Operators and Distribution Providers/Generator Operators or, conversely, Balancing Authorities and Distribution Providers/Generator Operators.
Response: The RCSDT believes, (1) As specified in R11, the DP and GOP have an obligation to consult with their TOP and/or BA with who they are experiencing an Interpersonal Communication capability failure. If the DP or GOP experiences a failure with the TOP, then they consult with the TOP. If that failure is with the BA, they consult with the BA. If the failure is with both the TOP and BA, they consult with both. (2) There is no such obligation. Both the TOP and BA are required to have Alternative Interpersonal Communication capability, which would be used as a substitute for the Interpersonal Communication capability. No change made.		
Texas Reliability Entity	No	(1) Why does R10 refer to “failure of its Interpersonal Communications capabilities” while R11 refers to “failure of **any of** its Interpersonal Communications capabilities”? What is the distinction that is intended by addition of the words “any of”? The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure. (2) As a Compliance Enforcement Authority, we have several fundamental questions regarding what is intended in this standard. It appears the drafting team is using the defined term “Interpersonal Communications” to refer to a designated primary communication medium, and the term “Alternative Interpersonal Communications” to refer to one or more designated backup communication mediums. Is that correct?

Organization	Yes or No	Question 4 Comment
		This should be clarified in the Standard. (2) The RCSDT deliberately stayed away from the use of primary and secondary mediums and prefers to use communications capabilities. However, you are correct in considering the Alternative Interpersonal Communication capability as a substitute for the Interpersonal Communication capability, as specified in their respective definitions. No change made. (3) There is ambiguity in the current draft because the defined term “Interpersonal Communications” appears to include primary, back-up and all other mediums that may be available (which may include landline phone, cell phone, satellite phone, instant messaging, email, and data links, all in one facility), including any “Alternative Interpersonal Communications.” (3) Interpersonal Communication capability could use any of the mediums mentioned in your comment. Likewise, the Alternative Interpersonal Communication capability could be any of those mediums, as well, provided that it did not use the same infrastructure as the Interpersonal Communication capability. No change made. Do R10 and R11 apply to ALL available mediums, or just to the designated primary and back-up mediums? Does R9 apply to ALL available back-up mediums, or just to a specifically designated back-up medium? The RCSDT deliberately stayed away from the use of primary and secondary mediums and prefers to use communications capabilities. Further, the RCSDT has gone to great lengths to provide some flexibility for those DPs and GOPs with little or no impact on the reliability of the BES. FERC directed NERC to provide for this consideration. Therefore, we use the language as proposed in R11. Mutually agreeable implies that both parties are willing to accept the outcome. It doesn’t mean that a DP or GOP must comply with the wishes of its TOP or BA because as you state that could be beyond the control of the DP or GOP. But what transpires in the consultation is a realization of what the situation is, what the impacts to reliability are

Organization	Yes or No	Question 4 Comment
		and a determination of what is amicable to both parties. No change made.
Response: See response above.		
Dominion	Yes	Dominion agrees with the intent of R11; however, suggest language changes for consistency with R10 as follows: <i>R11. Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability. [Violation Risk Factor: Medium][Time Horizon: Real-time Operations]</i>
Response: The RCSDT has made clarifying changes to R11 to use mutually agreeable action, rather than time for restoration.		
NV Energy	Yes	Agree, however, the ability for a DP or GOP to have such consultation with its TOP or BA would likely be hampered by the failure of the Interpersonal Communications itself. DP and GOP are only required to have a single source for this Interpersonal Communications.
Response: RCSDT did not want to burden the DP and GOP with having Alternative Interpersonal Communication capability based on Paragraph 508 of Order No. 693. There are multiple avenues of communication technology available to comply with R11. No change made.		
NIPSCO		If the Interpersonal Communication is down, and no backup is required for the DP and GOP, how are they to consult and collaborate?
Response: RCSDT did not want to burden the DP and GOP with having Alternative Interpersonal Communication capability based on Paragraph 508 of Order No. 693. There are multiple avenues of communication technology available to comply with R11. No change made.		
City of Tacoma, Department	Yes	

Organization	Yes or No	Question 4 Comment
of Public Utilities, Light Division, dba Tacoma Power		
Bonneville Power Administration	Yes	
Southwest Power Pool Regional Entity	Yes	
MISO Standards Collaborators	Yes	
Salt River Project	Yes	
San Diego Gas & Electric	Yes	
Xcel Energy	Yes	
Independent Electricity System Operator	Yes	
Oncor Electric Delivery Company LLC	Yes	
City of Jacksonville Beach dba/ Beaches Energy Services	Yes	
Luminant Energy Company LLC	Yes	
Pepco Holdings Inc.	Yes	

Organization	Yes or No	Question 4 Comment
Exelon	Yes	
Niagara Mohawk (dba National Grid)	Yes	
South Carolina Electric and Gas	Yes	
BGE	Yes	
ERCOT ISO	Yes	
Hydro One Networks Inc.	Yes	
American Transmission Company, LLC	Yes	

5. The proposed definition of Reliability Directive shown in COM-002-3 was revised to include Adverse Reliability Impact as shown to more fully address emergencies or events that might lead to instability or Cascading: Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact. Do you agree with the proposed definition? If not, please explain in the comment area below.

Summary Consideration: There were a significant number of comments about the definition of Reliability Directive with accompanying suggested language; for example, having the definition to prescribe a level of performance. The practice of writing a level of performance within a definition is discouraged and generally prevents future use of the term. Several comments pertained to compliance with the requirements; for example, would an entity be required to use three-part communication for a voltage schedule? The requirements do not preclude an entity from doing so; however, the requirements focus on the situation of addressing an Emergency or Adverse Reliability Impact. Other concerns were raised that the terms “Emergency” and “Adverse Reliability Impact” are the same. The RCSDT believes these terms capture independent conditions. The term “Emergency” implies situations where the event is anticipated or currently happening. Likewise, Adverse Reliability Impact clearly identifies a potential or actual event in the phrase, “an event that results in.” The RCSDT notes the definition of Adverse Reliability Impact is the revised term, which is NERC Board of Trustees adopted and is pending regulatory filing in IRO-014-2. Additionally, using the currently adopted version does not capture the full spectrum of the proposed definition by the RCSDT.

The development of the term Reliability Directive concept places a heightened awareness on actions that are required to avoid an Adverse Reliability Impact. Additionally, the use of “direct” is consistent with the uses of “direct” in other standards. A commenter had a concern about the removal of “issued in a clear, concise, and definitive manner” would lead to repeating the process. The RCSDT believes it to be in the interest of the issuer to do this without the burden of a requirement. Additionally, this type of requirement would be difficult to measure and by virtue of the issuer having to confirm the Reliability Directive; it is to the issuer’s advantage to be clear for efficient communications. Other minor formatting and corrections to references were made to align requirements, measures, and compliance components. Several other comments were made that are addressed in the questions above.

Organization	Yes or No	Question 5 Comment
Constellation Power Source Generation, Inc.	Negative	As we commented on Project 2007-03 TOP-001-2, the definition of Reliability Directive is an improvement but the definition must capture the identification concept that is reflected in the Requirement (R1). As a result, when Reliability

Organization	Yes or No	Question 5 Comment
		Directive is used elsewhere, it would be clear that the communication must be identified as a Reliability Directive. We suggest the following revision to the definition and it should follow through to Project 2006-06 IRO-001-3 and Project 2007-03 TOP-001-2, eventually being added to the Reliability Standards Glossary of Terms. <i>A communication identified as a Reliability Directive by a Reliability Coordinator, Transmission Operator, or Balancing Authority to initiate action by the recipient to address an Emergency or Adverse Reliability Impact.</i> The RCSDT thanks you for your comment; however, the suggested improvement is addressed in the requirement COM-002-3, R1 (see below). Definitions should avoid a structure that identifies an action or performance of an entity. The Standard Processes Manual (SPM), “Process for Developing a Defined Term”, Page 22 states in the first paragraph: “Definitions shall not contain statements of performance Requirements.” No change made. “R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time]” IRO-001-3 uses the term ‘direct’ in its purpose statement, R1, R2 and R3. To avoid confusion with a Reliability Directive (both for auditors and entities), we suggest the following: To establish the authority of Reliability Coordinators to make requests of other entities to prevent an Emergency or Adverse Reliability Impacts to the Bulk Electric System. <i>R1: Each Reliability Coordinator shall have the authority to act or request others to act (which could include issuing Reliability Directives) to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or</i>

Organization	Yes or No	Question 5 Comment
		<i>Adverse Reliability Impacts.</i> <i>R2: Each Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider shall comply with its Reliability Coordinator's request unless compliance with the request cannot be physically implemented, or unless such actions would violate safety, equipment, regulatory or statutory requirements, or unless the TOP, BA, GOP or DP convey a business reason not to comply with the request but express that they will comply if a Reliability Directive is given.</i> <i>R3: Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to perform as requested in accordance with Requirement R2.</i> The RCSDT feels the use of direct and directed is consistent with the purpose and application of those terms in other standards. The RCSDT believes using the word "request" makes the requirement conditional and is not consistent with the purpose of the standard. No change made.
Response: See response above.		
MidAmerican Energy Co.	Negative	Do not nest definitions. The use of the word "any" in the COM-002-3 and IRO-001-3 definition of "Emergency" is too broad and should be deleted. The use of "any" in regulatory standards almost always causes unintended consequences. The RCSDT appreciates your comment and has made clarifying changes by removing the phrase "any of" in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure. The definition should be shortened to read: <i>"Abnormal system condition that requires automatic or immediate manual actions to prevent or limit Bulk Electric System transmission facility or generation failures that</i>

Organization	Yes or No	Question 5 Comment
		<i>could result in instability, uncontrolled separation, or cascading.”</i> The RCSDT appreciates the suggested rewording of the definition. The suggestion creates a disconnect with the already approved NERC glossary term. Additionally, the proposed definition adds new words which were not included originally. The RCSDT does not propose a new definition of Emergency. No change made.
Response: See response above.		
Tennessee Valley Authority	Negative	We suggest adding the words “and identified as a reliability directive to the recipient” at the end of the definition of Reliability Directive. The RCSDT thanks you for your comment; however, the suggested improvement is addressed in the requirement COM-002-3, R1 (see below). Definitions should avoid a structure that identifies an action or performance of an entity. The Standard Processes Manual (SPM), “Process for Developing a Defined Term”, Page 22 states in the first paragraph: “Definitions shall not contain statements of performance Requirements.” No change made. “R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time]” For R2, we question the phrase “physically implemented” and recommend that the intent be clarified in the language. The RCSDT believes there may be conditions where an entity may not be able to physically implement the direction; for example, an entity that does not have the right to access certain equipment or cannot manually operate a broken apparatus. We feel the proposed language achieves the intended purpose. No change made.
Response: See response above.		

Organization	Yes or No	Question 5 Comment
SERC OC Standards Review Group	No	We suggest adding the words “and identified as a reliability directive to the recipient” at the end of the definition of Reliability Directive. As written, this definition could lead to a dispute of what communications are Reliability Directives; leading to further dispute as to what Requirements are applicable. By adding this clarity in the definition of this term, clarity will not be needed in the application of this definition as is proposed in COM-002-3, Req 1. This would allow the removal of R1 from COM-002-3
Response: The RCSDT thanks you for your comment; however, the suggested improvement is addressed in the requirement COM-002-3, R1 (see below). Definitions should avoid a structure that identifies an action or performance of an entity. The Standard Processes Manual (SPM), “Process for Developing a Defined Term”, Page 22 states in the first paragraph: “Definitions shall not contain statements of performance Requirements.” No change made. “R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time]”		
CCG, CPG, CECD	No	As we commented on Project 2007-03 TOP-001-2, the definition of Reliability Directive is an improvement but the definition must capture the identification concept that is reflected in the Requirement (R1). As a result, when Reliability Directive is used elsewhere, it would be clear that the communication must be identified as a Reliability Directive. We suggest the following revision to the definition and it should follow through to Project 2006-06 IRO-001-3 and Project 2007-03 TOP-001-2, eventually being added to the Reliability Standards Glossary of Terms. <i>“A communication identified as a Reliability Directive by a Reliability Coordinator, Transmission Operator, or Balancing Authority to initiate action by the recipient to address an Emergency or Adverse Reliability Impact.”</i>
Response: The RCSDT thanks you for your comment; however, the suggested improvement is addressed in the requirement COM-		

Organization	Yes or No	Question 5 Comment
002-3, R1 (see below). Definitions should avoid a structure that identifies an action or performance of an entity. The Standard Processes Manual (SPM), “Process for Developing a Defined Term”, Page 22 states in the first paragraph: “Definitions shall not contain statements of performance Requirements.” No change made. “R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time]”		
Arizona Public Service Company	No	There is a risk of not properly identifying an abnormal condition (Emergency or Adverse Reliability Impact) in time to require specific use of the statement ‘this is a Reliability Directive’ when issuing switching on the system in the event of an emergency. The RCSDT believes that it is the responsibility of each entity to identify abnormal conditions when it requires an action to be executed as a Reliability Directive. If conditions are not identified as having Emergency or Adverse Reliability Impact, then the requirement is not applicable. No change made. This is a deviation from consistently using 3-way communication when an emergency occurs. It may not be apparent that an emergency exists and breaking from consistent use of expected 3-way communication could cause confusion. The RCSDT believes this does not preclude an entity from utilizing 3-part communications for activities other than Reliability Directives. No change made.
Response: See response above.		
Southern Company	No	This definition would encompass more communication than is now included. The definition now requires that a directive be declared as a part of the three part communication. For example, sending out the voltage schedule each morning would be included as a directive using the new definition. The RCSDT thanks you for your comment; however, we believe the definition of Reliability Directive is specific in the nature of the communication while providing

Organization	Yes or No	Question 5 Comment
		adequate flexibility for the responsible entity to define those conditions that would rise to the level of a Reliability Directive. No change made. We suggest adding the words “and identified as a reliability directive to the recipient” at the end of the definition of Reliability Directive. This would allow the removal of R1 from COM-002-3 The RCSDT thanks you for your comment; however, the suggested improvement is addressed in the requirement COM-002-3, R1 (see below). Definitions should avoid a structure that identifies an action or performance of an entity. The Standard Processes Manual (SPM), “Process for Developing a Defined Term”, Page 22 states in the first paragraph: “Definitions shall not contain statements of performance Requirements.” No change made. “R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time]”
Response: See response above.		
Entergy Services, Inc	No	An Adverse Reliability Impact is a type of Emergency. Including a new term for Adverse Reliability Impact and including both terms in the definition for Reliability Directive doesn’t add clarity. I suggest changing the definition for Reliability Directive to remove phrase “or Adverse Reliability Impact.”
Response: The RCSDT thanks you for your comment; however, the RCSDT believes the definition captures two independent conditions, anticipated and after or post event. The definition of Emergency implies situations where the event is anticipated or currently happening. Likewise, the definition of Adverse Reliability Impact clearly identifies as a potential or actual event in the phrase, “an event that results in.” Both conditions are important to the definition. The RCSDT notes that the term, “Adverse Reliability Impact,” is a currently defined NERC Glossary term; however, the term as it appears in the standard is the revised term, which is NERC Board of Trustee adopted and pending regulatory filing in IRO-014-2: “The impact of an event that results in Bulk		

Organization	Yes or No	Question 5 Comment
Electric System instability or Cascading.” No change made.		
NextEra Energy, Inc.	No	NextEra objects to the use of “Adverse Reliability Impact” in Reliability Standards COM-002-3 and IRO-001-3. NextEra requests that the use of Adverse Reliability Impact be revised as suggested below or it be deleted from the definition of Reliability Directive. NextEra does not agree with the use of Adverse Reliability Impact in the definition of “Reliability Directive” for the following reasons: 1. This term Adverse Reliability Impact is ambiguous. In part, the term is ambiguous because it includes in its definition the term “instability,” which has lead to considerable misunderstanding and confusion in the industry. There are also differing views on what is (and is not) Cascading, because the definition is not sufficiently clear. For example, some believe instability and Cascading occur when an event affects multiple substations of one Transmission Operator, while others believe instability or Cascading only occur when the event affects more than one Transmission Operator’s system. As mentioned in response to item 4, above, Reliability Standards must be clear and consistently interpreted. It is not appropriate to issue a Standard that perpetuates the use of terms that lack consistent interpretation. 2. While not perfect, the term Emergency is better understood in the industry, and it may include many or all of the instances of instability or Cascading intended to be captured by Adverse Reliability Impact. Consequently, it is not advisable to introduce Adverse Reliability Impact as a new term, when it is not clearly distinguishable from Emergency. NextEra is concerned that an unclear and imprecise term, such as Adverse Reliability Impact, does not promote reliability, and, such a term is particularly troublesome in the context of real time system operations. Therefore, for the reasons stated above, NextEra believes that the term Adverse Reliability Impact should be deleted from the definition of Reliability Directive. In the alternative, if Adverse Reliability Impact is not deleted from the definition of Reliability Directive in Reliability Standards COM-002-3 and IRO-001-3, NextEra

Organization	Yes or No	Question 5 Comment
		requests that Adverse Reliability Impact be revised to read: <i>“an event or condition on the Bulk Electric System that may, or is leading to, Cascading over more than one Bulk Electric System transmission system.”</i>
Response: The RCSDT thanks you for your comment; however, the RCSDT believes the definition captures two independent conditions, anticipated and after or post event. The definition of Emergency implies situations where the event is anticipated or currently happening. Likewise, the definition of Adverse Reliability Impact clearly identifies as a potential or actual event in the phrase, “an event that results in.” Both conditions are important to the definition. The RCSDT notes that the term, “Adverse Reliability Impact,” is a currently defined NERC Glossary term; however, the term as it appears in the standard is the revised term, which is NERC Board of Trustee adopted and pending regulatory filing in IRO-014-2: “The impact of an event that results in Bulk Electric System instability or Cascading.” No change made.		
Niagara Mohawk (dba National Grid)	No	The "adverse reliability impact" definition is not clear, is this an actual event or contingency? The words imply it is an actual event, which is already covered in the "Directive" definition. If the intent is to apply directives to potential stability or cascading contingencies it should say so.
Response: The RCSDT notes that the term, “Adverse Reliability Impact,” is a currently defined NERC Glossary term; however, the term as it appears in the standard is the revised term, which is NERC Board of Trustee adopted and pending regulatory filing in IRO-014-2: “The impact of an event that results in Bulk Electric System instability or Cascading.” The pending definition covers the application to potential instability and cascading conditions. The RCSDT included the phrase “to address” in the proposed definition of “Reliability Directive” to account for (1) potential and (2) actual events leading to an Emergency or Adverse Reliability Impact.” No change made.		
BGE	No	BGE would prefer that the definition of Reliability Directive include the requirement to identify the fact that a Reliability Directive is being issued. See the following proposed definition: <i>Reliability Directive: A communication initiated and identified as a Reliability Directive, by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an Emergency or Adverse</i>

Organization	Yes or No	Question 5 Comment
		<i>Reliability Impact.</i>
Response: The RCSDT thanks you for your comment; however, the suggested improvement is addressed in the requirement COM-002-3, R1 (see below). Definitions should avoid a structure that identifies an action or performance of an entity. The Standard Processes Manual (SPM), “Process for Developing a Defined Term”, Page 22 states in the first paragraph: “Definitions shall not contain statements of performance Requirements.” No change made. “R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time]”		
Duke Energy	No	-Since FERC has not yet approved the new definition of Adverse Reliability Impact, we believe the term “Adverse Reliability Impact” should be replaced by the words of the BOT-approved definition: “the impact of an event that results in Bulk Electric System instability or Cascading.” The RCSDT notes that the term, “Adverse Reliability Impact,” is a currently defined NERC Glossary term; however, the term as it appears in the standard is the revised term, which is NERC Board of Trustee adopted and pending regulatory filing in IRO-014-2: “The impact of an event that results in Bulk Electric System instability or Cascading.” The RCSDT thanks you for your comment; however, by inserting the text of the currently adopted version of the Adverse Reliability Impact definition would create a loss of continuity in the intent of the pending definition. No change made. -Also, add the phrase “and the communication is identified as a reliability directive to the recipient” to the end of the definition of Reliability Directive. This will eliminate potential confusion regarding when a communication is a Reliability Directive, and when a communication is a routine instruction. Revising the definition in this manner may also eliminate the need Requirement R1 of COM-002-3. If R1 is retained, we suggest rewording as follows: <i>“Each Reliability Coordinator, Transmission Operator, or Balancing Authority shall identify a Reliability Directive to the recipient when it issues a Reliability Directive</i>

Organization	Yes or No	Question 5 Comment
		<i>that requires an action or actions to be executed.”</i> The RCSDT thanks you for your comment; however, the suggested improvement is addressed in the requirement COM-002-3, R1 (see below). Definitions should avoid a structure that identifies an action or performance of an entity. The Standard Processes Manual (SPM), “Process for Developing a Defined Term”, Page 22 states in the first paragraph: “Definitions shall not contain statements of performance Requirements.” No change made. “R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time]” -Proposed reworded definition: <i>“Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where action by the recipient is necessary to address an Emergency or the impact of an event that results in Bulk Electric System instability or Cascading, and the communication is identified as a Reliability Directive to the recipient.”</i> The RCSDT thanks you for your comment; however, the suggested improvement is addressed in the requirement COM-002-3, R1 (see below). Definitions should avoid a structure that identifies an action or performance of an entity. The Standard Processes Manual (SPM), “Process for Developing a Defined Term”, Page 22 states in the first paragraph: “Definitions shall not contain statements of performance Requirements.” No change made. “R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time]”

Organization	Yes or No	Question 5 Comment
Response: See response above.		
ReliabilityFirst	No	ReliabilityFirst believes the definition of “Reliability Directive” should be all inclusive and include “all” actions initiated by the Reliability Coordinator, Transmission Operator or Balancing Authority (not just Emergency or Adverse Reliability Impacts). Even though Emergency or Adverse Reliability Impacts are defined, during operations, it may become a gray area to whether or not it falls under the intent of a “Reliability Directive.” The RCSDT appreciates your comment about including all actions initiated by the BA, RC and TOP; however, the RCSDT has determined that the development of the Reliability Directive concept improves reliability by placing a heightened awareness on actions that are required to avoid an Adverse Reliability Impact. Additionally, the industry does not support the proposed suggestion above based on previous postings and comments. No change made. Furthermore, if the system falls under a condition that results in an Adverse Reliability Impact, it may be too late for a Reliability Coordinator, Transmission Operator or Balancing Authority to issue a Reliability Directive. ReliabilityFirst recommends the following for revision to the term “Reliability Directive”: <i>Reliability Directive - A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where an action by the recipient is required.</i> The RCSDT has determined that the development of the Reliability Directive concept as currently drafted, improves reliability by placing a heightened awareness on actions that are required to avoid an Adverse Reliability Impact. Additionally, the industry does not support the proposed suggestion above based on previous postings and comments. No change made.
Response: See response above.		

Organization	Yes or No	Question 5 Comment
Midwest Independent Transmission System Operator	No	The proposed definition of Reliability Directive is unacceptable because the use of the defined terms “Emergency” and “Adverse Reliability Impact” results in an undefined, broadened scope of responsibility for Reliability Coordinators when coupled with the definition of the Bulk Electric System. This may lead to confusion/ambiguity for Reliability Coordinators that must be clarified to ensure compliance. Further, this broadened scope may mis-direct Reliability Coordinator’s attention and mitigation efforts to small-scale, localized issues that represent no true threat to the operation of the Interconnection.
Response: The RCSDT thanks you for your comment; however, the RCSDT believes the definition actually narrows the responsibility by framing the condition(s) within which it is appropriate for anticipated actions necessary to address an Emergency or Adverse Reliability Impact. The IRO standards require the Reliability Coordinator to respond to issues regardless of the scale of issues. No change made.		
Texas Reliability Entity	No	We oppose the definition of Reliability Directive as it is currently being proposed in this standard because three-part communication should not be required only after an Emergency or Adverse Reliability Impact actually occurs. In particular, we object to the removal of the word “expected” (or “anticipated”) from the definition, because Reliability Directives may be required before a situation escalates to an Emergency, in order to prevent the Emergency from occurring. This proposed change potentially undermines efforts required to avoid emergencies and events. We note that there are instances in other Reliability Standards where “anticipated” conditions require actions to be taken (e.g. TOP-001-1 R5 and EOP-002 R4), when clear, concise, and definitive communication, verbal or electronic, is required to avoid or mitigate an impending emergency.
Response: The RCSDT notes that the term, “Adverse Reliability Impact,” is a currently defined NERC Glossary term; however, the term as it appears in the standard is the revised term, which is NERC Board of Trustee adopted and pending regulatory filing in IRO-014-2: “The impact of an event that results in Bulk Electric System instability or Cascading.” The pending definition covers the		

Organization	Yes or No	Question 5 Comment
application to potential instability and cascading conditions. The RCSDT included the phrase “to address” in the proposed definition of “Reliability Directive” to account for (1) potential and (2) actual events leading to an Emergency or Adverse Reliability Impact.” No change made.		
New York Independent System Operator	No	It is not clear the distinction between an Emergency and ARI. We would like to confirm that Since ARI is the impact of an event that results in instability or cascading, that an ARI is a subset of an emergency? Or said differently is an ARI simply instability or cascading? Ultimately, if ARI is a subset of Emergency, then why do we need both in the requirement?
Response: The RCSDT thanks you for your comment; however, the RCSDT believes the definition captures two independent conditions, anticipated and after or post event. The definition of Emergency implies situations where the event is anticipated or currently happening. Additionally, the term “Adverse Reliability Impact” is a currently defined NERC Glossary term; however, the term as it appears in the standard is the revised term, which is NERC Board of Trustee adopted and pending regulatory filing in IRO-014-2: “The impact of an event that results in Bulk Electric System instability or Cascading.” The pending definition covers the application to potential instability and cascading conditions. The RCSDT included the phrase “to address” in the proposed definition of “Reliability Directive” to account for (1) potential impacts of events and (2) actual events leading to an Emergency or Adverse Reliability Impact.” No change made.		
Oncor Electric Delivery	Affirmative	"Oncor requests clarity about what constitutes a “recipient.” For example, if a Transmission Grid Operator performing the functions of a Transmission Operator issues a Reliability Directive to its own field operations personnel to perform an action on behalf of the same entity, does the field operations personnel as the recipient become in affect a “Transmission Operator” subject to R2?"
Response: The term “recipient” in this case is referring to entity-to-entity communication and is inferred by Requirement R2 naming the entities. No change made.		
Constellation Energy	Affirmative	As we commented on Project 2007-03 TOP-001-2, the definition of Reliability

Organization	Yes or No	Question 5 Comment
Commodities Group		Directive is an improvement but the definition must capture the identification concept that is reflected in the Requirement (R1). As a result, when Reliability Directive is used elsewhere, it would be clear that the communication must be identified as a Reliability Directive. We suggest the following revision to the definition and it should follow through to Project 2006-06 IRO-001-3 and Project 2007-03 TOP-001-2, eventually being added to the Reliability Standards Glossary of Terms. <i>“A communication identified as a Reliability Directive by a Reliability Coordinator, Transmission Operator, or Balancing Authority to initiate action by the recipient to address an Emergency or Adverse Reliability Impact.”</i>
Response: The RCSDT thanks you for your comment; however, the suggested improvement is addressed in the requirement COM-002-3, R1 (see below). The definitions should avoid a structure that identifies an action or performance of an entity. The Standard Processes Manual (SPM), “Process for Developing a Defined Term”, Page 22 states in the first paragraph: “Definitions shall not contain statements of performance Requirements.” No change made. “R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time]”		
National Grid	Affirmative	Delete reference to "adverse reliability impact" in R1. The "adverse reliability impact" definition is not clear, is this an actual event or contingency? The words imply it is an actual event which is already covered in the "Directive" definition. If the intent is to apply directives to potential stability or cascading contingencies it should say so.
Response: The RCSDT thanks you for your comment; however, the RCSDT believes the definition captures two independent conditions, anticipated and after or post event. The definition of Emergency implies situations where the event is anticipated or currently happening. Additionally, the term “Adverse Reliability Impact” is a currently defined NERC Glossary term; however, the term as it appears in the standard is the revised term, which is NERC Board of Trustee adopted and pending regulatory filing in IRO-		

Organization	Yes or No	Question 5 Comment
014-2: “The impact of an event that results in Bulk Electric System instability or Cascading.” The pending definition covers the application to potential instability and cascading conditions. The RCSDT included the phrase “to address” in the proposed definition of “Reliability Directive” to account for (1) potential and (2) actual events leading to an Emergency or Adverse Reliability Impact.” No change made.		
Wisconsin Public Service Corp.	Affirmative	The Standards Drafting Team has provided a great deal of clarity regarding Reliability Directives, however we believe BES reliability would be further enhanced if Reliability Directives were still required to be issued in a clear, concise, and definitive manner. Under Emergency conditions, we feel this would enhance communications effectiveness and expedite parties taking necessary actions quickly.
Response: The RCSDT believes the current form of the requirements accomplish this objective. If the issuer is not clear, concise and definitive, it would lead to the issuer having to repeat the process. It is incumbent and beneficial to the issuer to meet this performance without a specific requirement to instruct. Additionally, measuring clear, concise and definitive manner poses significant issues. No change made.		
We Energies	Yes	The definition is acceptable, but as used may imply that all Emergency communications must be Reliability Directives.
Response: The RCSDT thanks you for your comment; however, definitions should avoid a structure that identifies an action or performance of an entity. The Standard Processes Manual (SPM), “Process for Developing a Defined Term”, Page 22 states in the first paragraph: “Definitions shall not contain statements of performance Requirements.” No change made.		
Ingleside Cogeneration LP	Yes	Ingleside Cogeneration agrees that it is important to clearly denote when a directive must be issued. In previous definitions, we believed that imprecise language made it difficult for the BA, RC, or TOP to determine if a gray area situation required a directive or not. With a more precise definition, it will eliminate second guessing by auditors that a directive was necessary because an outcome turned out poorly - even if an Emergency was not declared or an Adverse Reliability Impact did not occur.
Response: Thank you for your comment.		

Organization	Yes or No	Question 5 Comment
ERCOT ISO	Yes	The definition of Reliability Directive appropriately clarifies the importance of knowing the level of importance of any instructions being issued. If there is no room for variance from the specific action required, or if there is no time to further negotiate or discuss the action required, it is important that the instruction be identified as a Reliability Directive and for such instructions to be followed in a timely fashion. Normal operating instructions typically do not rise to this level of urgency and some variation from the words will not result in unmanageable reliability impacts. Also, there typically may be time for addressing the instructions in more than one way.
Response: Thank you for your comment.		
NIPSCO		The question of whether one is in a state of Emergency or Instability, or in an Abnormal Condition can be still be subjective; it may be difficult to provide evidence for an audit.
Response: The responsible entity determines “state of Emergency or instability” and acts accordingly. No change made.		
Pacific Northwest Generating Cooperative	Yes	
MRO NSRF	Yes	
City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Yes	
LG&E and KU Services Company	Yes	
Bonneville Power	Yes	

Organization	Yes or No	Question 5 Comment
Administration		
SPP Standards Review Group	Yes	
Dominion	Yes	
Western Electricity Coordinating Council	Yes	
Southwest Power Pool Regional Entity	Yes	
FirstEnergy	Yes	
MISO Standards Collaborators	Yes	
Florida Municipal Power Agency	Yes	
Global Engineering and Energy Solutions	Yes	
ACES Power Marketing Standards Collaborators	Yes	
Kansas City Power & Light	Yes	
Salt River Project	Yes	
San Diego Gas & Electric	Yes	

Organization	Yes or No	Question 5 Comment
Central Lincoln	Yes	
Shell Energy North America	Yes	
Xcel Energy	Yes	
Independent Electricity System Operator	Yes	
Liberty Electric Power LLC	Yes	
Oncor Electric Delivery Company LLC	Yes	
Consolidated Edison Co. of NY, Inc.	Yes	
City of Jacksonville Beach dba/ Beaches Energy Services	Yes	
Luminant Energy Company LLC	Yes	
Pepco Holdings Inc.	Yes	
Exelon	Yes	
Manitoba Hydro	Yes	
Orange and Rockland Utilities, Inc.	Yes	

Organization	Yes or No	Question 5 Comment
South Carolina Electric and Gas	Yes	
Georgia Transmission Corporation	Yes	
Nebraska Public Power District	Yes	
Georgia System Operations	Yes	
ISO New England	Yes	
City of Vero Beach	Yes	
NV Energy	Yes	
Hydro One Networks Inc.	Yes	
American Transmission Company, LLC	Yes	
Indiana Municipal Power Agency		No comment.

6. Do you have any other comment, not expressed in questions above, for the RC SDT?

Summary Consideration: This question yielded the most comments overall and many are duplicative of previous comments. For those duplicative comments, the RCSDT respectfully directs summary consideration of those comments to the above questions. Several commenters noted these standards are not “results-based” and this is mainly due to the project’s ongoing work. The standard(s), in a way, appear more results-based by not being prescriptive; however, the specific standards do not implement the results-based formatting. There were many comments about aligning the three standards to have the same implementation plan. The RCSDT agrees and aligned all three with the same implementation. Some comments questioned the need to have an authority requirement for the Reliability Coordinator in IRO-001-3, R1 because it appears to be granted under the ERO registration criteria. The ERO criteria does not provide for this authority. Additionally, IRO-001-3 does not limit the Reliability Coordinator’s authority to issuing only Reliability Directives. The Reliability Coordinator has the authority to direct, which could include Reliability Directives (a subset of direction or directing) is the theme carried out in each requirement. Some comments asked about direct, direction, and when an Emergency or Adverse Reliability Impact would be identified. The terms “direct” and “direction” are consistent with the intent of the standard in its authority and “identify” is upon recognition, which is a condition when the Reliability Coordinator would be acting or directing others to act. The requirements do not preclude the Reliability Coordinator from taking action for other situations, even if it is aware of situations beyond its area. A few comments concerned adding a time element to the requirements, such as, preventing events in Real-time; however, the assigned Time Horizons provide for this under Real-time Operations and Same Day Operations.

Comments noted a difference in “shall have” and “shall designate” within the requirements of COM-001-2. The intent of allowing an entity to “designate” allows the entity to designate the Alternative Interpersonal Communication capability providing greater flexibility in meeting the requirement. Additionally, there were comments about testing the Interpersonal Communication capability in addition to the Alternative Interpersonal Communication capability. The RCSDT intentionally omitted testing the Interpersonal Communication capability because routine use is sufficient to demonstrate functionality. The standard COM-001-2 measures have been updated to appropriately reflect the specific requirements and make the evidence examples clearer. There were several concerns about the designating a replacement Alternative Interpersonal Communication capability within two hours. The RCSDT notes the performance is to designate a replacement, not to accomplish the repairs. The reliability need is to designate what the Alternative Interpersonal Communication capability will be, should it be called upon. Commenters raised concerns about most of the VSLs in COM-001-2 being Severe. These VSLs are Severe because there are essential to reliability. By the construction of the requirement, VSLs are binary, which requires the VSLs to be Severe according to NERC VSL Guidelines. Some comments questioned the removal of requirement, R4. This requirement remains enforce until the approval of COM-003-1 under Project 2007-02.

Several commenters noted that COM-002-3 seems to be requiring the “how” to accomplish the communication coordination. The RCSDT emphasizes the requirements state the “what,” rather than “how.” In a basic sense, the “what” is highlighted by R1 by

identifying the communication as a Reliability Directive, next in R2 the recipient responds accordingly, and R3 the issuer confirms the communication. How the process is accomplished is up to the entity.

Some commenters were concerned about the measures and evidence. The measures are examples, and the entity is not limited to the examples provided; including letters of attestation, where appropriate. The RCSDT addressed other document errors, formatting issues, referencing, and mismatch issues raised in the comments. The Effective Date, Compliance, and Data Retention sections have been updated to the most current language used in standards through the standard review process.

Organization	Yes or No	Question 6 Comment
Alberta Electric System Operator	Abstain	IRO-001-3: The Alberta version of IRO-001 will outline limitations to the authority of the RC, that are required by Alberta legislation.
Response: The standard drafting team (SDT) has drafted requirements to address the purpose of the standard, repeated here: To establish the authority of Reliability Coordinators to direct other entities to prevent an Emergency or Adverse Reliability Impacts to the Bulk Electric System. The requirements have been drafted within the context established by the NERC Functional Model V5, and describes interrelationships of the functional entities in accordance with the Functional Model V5. Please address any variations from this structure, which may be required by Alberta legislation, with NERC as the ERO. No change made.		
City Utilities of Springfield, Missouri	Affirmative	City Utilities of Springfield, Missouri supports comments submitted by SPP.
Response: Thank you for your comment.		
United Illuminating Co.	Affirmative	COM-001-2: UI votes Affirmative with the comment that R1 through R9 are requirements in the Planning Horizon not the Real Time Operations horizon. These requirements are scoped to the establishment of communication processes with other entities not with actions taken by operations.
Response: The RCSDT recognizes that, in most instances, the establishment of communications capability and the designation of Alternative Interpersonal Communications capability will have taken place at some time in the past (which could be the operations planning horizon for the present Real-time instance). However, the full reason for such action is to be sure that the communications capability is in place and functional during the Real-time Operations horizon for use in Real-time operating actions. Therefore, the		

Organization	Yes or No	Question 6 Comment
RCSDT has established the applicable time horizon to be the Real-Time Operations horizon. No change made.		
SERC Reliability Corporation	Affirmative	COM-002-3 Comments R2: We recommend that the following phrase (in quotes) be added to R2: Each Balancing Authority, Transmission Operator and Distribution Provider that is the recipient of a Reliability Directive shall repeat, restate, rephrase or recapitulate the Reliability Directive "immediately upon receiving it." As written, there is no limit as to when the entity must repeat it (i.e. they could wait 2 hours) The Standard is not clear as to what each entity is to do when more than one entity receives a Reliability Directive at the same time (e.g. during a RC area teleconference call). For example, is a roll call of receiving entities expected to be held so that they individually can repeat, restate, rephrase or recapitulate the Reliability Directive followed by individual confirmation required in R3?
Response: The requirement aims at being a performance-based requirement, and states a description of “what” communication must take place, but does not prescribe “how” the communication is to be made. Adding the suggested phrase “immediately upon receiving it” introduces the ambiguous term “immediately,” for which there is neither plain meaning nor simple explanation. What must happen is that the recipient must respond in such a way that the issuer may determine whether the message has been properly understood. The RCSDT concludes that the proposed language gives plain meaning. No change made. The question about whether a roll call of receiving entities is expected to be held is asking for prescription of “how” to accomplish what is required. The RCSDT recognizes that there is more than one way to accomplish the confirmation when more than one entity received a Reliability Directive at the same time. What is required is for the recipient to respond in such a way that the issuer may determine whether the message has been properly understood. One way for that to occur would be, as you suggest, for the entities to individually respond. Another way would be for a pre-established protocol or procedure (e.g., roll-call, all-call, etc.) to be in place and used in such cases. The RCSDT has determined that prescribing “how” to ensure that “what” is required has been accomplished is not required and that the individually adopted procedures or protocols could offer many different ways to ensure effectiveness. No change made. The RCSDT concept is that “All Call” compliance is related to having a document that explains how the entity responds. No change made.		

Organization	Yes or No	Question 6 Comment
Alliant Energy Corp. Services, Inc.	Affirmative	COM-002-3: Alliant Energy recommends that the Effective Date be the first day of the second calendar quarter after applicable regulatory approval, to be the same as COM-001-2 and IRO-001-3. In that way all 3 standards would be effective at the same time, making implementation much smoother.
Response: Thank you for your comment. The RCSDT will adjust the standards to have the same implementation date.		
Wisconsin Electric Power Co.	Affirmative	COM-002-3: Since all the Requirements are related to Reliability Directives, is it implied that all “Emergency Communications” are Reliability Directives even if not designated as such per R1? -The M2 measure could be difficult for a recipient such as a Distribution Provider or Generator Operator. A recipient’s phone may not be recorded but an initiator’s always should. If a receiver refused to meet the R2 requirement, an initiator should have an alternative (i.e., repeat the directive and provide potential penalties if recipient refuses to comply). Should the initiator have responsibility for providing the entire 3-way evidence as M3 implies?
Response: The RCSDT would like to highlight that communications is not a defined term in the NERC Glossary of Terms used in Reliability Standards, nor is it defined in this standard. Thus, the plain meaning of communications is intended. The RCSDT has not implied a defined term in the wording of the purpose statement of the standard, nor in the requirements themselves, that any communication is a Reliability Directive unless the issuing functional entity identifies the actions to be taken as a Reliability Directive. Therefore, not all communications during Emergencies will be Reliability Directives. No change made. COM-002, R2: The RCSDT included some examples of how to provide the evidence needed for Measure M2. The examples are not intended to be an all-inclusive list. The RCSDT does point out, though, that dated operator logs could provide such evidence. The RCSDT does not believe that the recipient has the alternative to refuse to perform, as required. However, the RCSDT does bring attention to standard IRO-001-3, which requires entities to comply with directions unless compliance with the direction cannot be physically implemented or unless such actions would violate safety, equipment, regulatory, or statutory requirements. No change made.		

Organization	Yes or No	Question 6 Comment
COM-002 M3: The Measure is correct as written. The issuer only needs the evidence that it confirmed the response was accurate or reissued according to the requirement. Evidence does not necessarily mean the entity must have the entire three-way conversation captured (i.e., recording), but evidence the entity confirmed or reissued according to requirement. No change made.		
Wisconsin Electric Power Marketing	Affirmative	COM-002-3: Since all the Requirements are related to Reliability Directives, is it implied that all “Emergency Communications” are Reliability Directives even if not designated as such per R1. The M2 measure could be difficult for a recipient such as a Distribution Provider or Generator Operator. A recipient’s phone may not be recorded but an initiator’s always should. If a receiver refused to meet the R2 requirement, an initiator should have an alternative. i.e., repeat the directive and provide potential penalties if recipient refuses to comply. Should the initiator have responsibility for providing the entire 3-way evidence as M3 implies?
Response: The RCSDT would like to highlight that communications is not a defined term in the Glossary of Terms used in NERC Reliability Standards, nor is it defined in this standard. Thus, the plain meaning of communications is intended. The RCSDT has not implied in the wording of the purpose statement of the standard, nor in the Requirements statements themselves, that any communication is a Reliability Directive unless the issuing functional entity identifies the actions to be taken as a Reliability Directive. No change made. COM-002, R2: The RCSDT included some examples of how to provide the evidence needed for measure M2. The examples are not intended to be an all-inclusive list. The RCSDT does point out, though, that dated operator logs could provide the evidence. The RCSDT does not believe that the recipient has the alternative to refuse to perform as required. No change made. COM-002 M3: The Measure is correct as written. The issuer only needs the evidence that it confirmed the response was accurate or reissued according to the requirement. Evidence does not necessarily mean the entity must have the entire three-way conversation captured (i.e., recording), but evidence the entity confirmed or reissued according to requirement. No change made.		
Southwest Transmission Cooperative, Inc.	Affirmative	COM-002-3: While COM-002-3 is well written to explain the three-part communications requirements and makes it perfectly clear when a Reliability Directive has been issued, the opening clause leaves the responsible entity open to second guessing on whether they should have issued a Reliability Directive. This

Organization	Yes or No	Question 6 Comment
		problem could be solved by changing the opening clause to “When a Reliability Coordinator, Transmission Operator, or Balancing Authority determines actions need to be executed as a Reliability Directive.” In the second bullet of Requirement R3, we suggest using “Restate” in place of “Reissue.” The responsible entity is not really reissuing the Reliability Directive. They are still in the act of trying to get the Reliability Directive issued and are simply re-communicating it because it was not understood.
Response: The RCSDT believes the offered suggestion does not improve COM-002-3, R1. No change made. COM-002-3, R3: The communications described are not intended to be a once-through process. Effective communications, sometimes referred to as three-part or three-way, often may be effective only after numerous iterations. The RCSDT believes the likely first effort to clarify would be to re-issue the instructions just to determine whether the recipient simply “heard wrong.” Using the word re-state seems to imply that the wording is incorrect in some way or for some other reason needs to be said a different way. The RCSDT believes it is more likely that the issuer is attempting to bet the recipient to understand and therefore believes that reissue is more appropriate. No change made.		
Public Utility District No. 1 of Okanogan County	Affirmative	IRO-001-3: Need to correct language in Data Retention section 1.3. references R3 R4 and M3 and M4. There is no R4 and M4.
Response: The RCSDT agrees and thanks you for your comment. The language has been changed to eliminate R4 and M4 references.		
Sierra Pacific Power Co.	Affirmative	IRO-001-3: R1 appears to be unnecessary due to the authority that is already inherent through the functional model.⁸ Further, the measure for R1 does not properly cover the requirement that the RC “have authority”; rather, it measures whether the RC exercised that authority.

⁸ NERC Functional Model Version 5, (http://www.nerc.com/files/Functional_Model_V5_Final_2009Dec1.pdf)

Organization	Yes or No	Question 6 Comment
Response: The RCSDT agrees that the standard requirements language is consistent with the authority that is inherent in the Functional Model V5. However, the Functional Model V5 does not constitute enforceable requirements for entities to follow. Such requirements are established within the Reliability Standards. The Functional Model V5 provides good guidance for a consistent structure throughout the Reliability Standards. In addition, the Reliability Coordinator's reliability certification is established through Regional Entities and the authority to act is measured. No change made.		
Platte River Power Authority; Portland General Electric Co.; U.S. Army Corps of Engineers	Affirmative	IRO-001-3: Requirement R1 of IRO-001-3, requiring the Reliability Coordinator to have the authority to act or direct actions, appears to be unnecessary because it seems that this authority is granted when the entity is certified as the Reliability Coordinator. Additionally, the associated Measure M1, as worded, does not provide evidence that the Reliability Coordinator has the authority to act or direct other to act, but rather provides evidence that the Reliability Coordinator acted or took action to direct others.
Response: IRO-001-3, R1: The RCSDT agrees that the requirement is consistent with intended functions of a Reliability Coordinator when the entity is recognized as a Reliability Coordinator. The RCSDT has been informed by the ERO that registration criteria do not provide for certification of this authority. In addition, the Reliability Coordinator's reliability certification is established through Regional Entities and the authority to act is measured. No change made.		
National Grid	Negative	- Requiring RCs, TOPs and BAs to state an action as a "reliability directive" complicates communications during a time when response time and clarity are important. If those issuing a directive don't get a repeat back they just need to ask for one. The requirement just needs to define "what" is required not "how." This can be handled by procedures and training. COM-002-3, R1: The requirement states "what" must be done: the action(s) are to be identified as a Reliability Directive. The requirement does not establish "how" the action is to be done. The RCSDT agrees that, under conditions such as you describe, time may be of the essence. Much as in military operations, discussion time is over and action is required when the recipient understands an order has been given.

Organization	Yes or No	Question 6 Comment
		Discussion of disagreement or alternatives may occur later, if and as needed, but no more time can be consumed discussing the directions given. The RCSDT has not prescribed “how” these things must be done, and the RCSDT recognizes there is more than one way. The RCSDT has determined it is appropriate to place the responsibility on the recipient to give a response. The RCSDT agrees that the issuer may ask for a response if one has not been given, but the responsible entity to perform the action is the recipient. The RCSDT agrees that procedures and training are good practices appropriate for this process, but the standard requirements establish what must be done, not how personnel are prepared to do it. No change made. - Delete reference to "adverse reliability impact" from the "Directive" definition. The "adverse reliability impact" definition is not clear, is this an actual event or contingency? The words imply it is an actual event which is already covered in the "Directive" definition. If the intent is to apply directives to potential stability or cascading contingencies it should say so. The RCSDT notes that the term, “Adverse Reliability Impact” is a currently defined NERC Glossary term; however, the term as it appears in the standard is the revised term, which is NERC Board of Trustee adopted and pending regulatory filing in IRO-014-2: “The impact of an event that results in Bulk Electric System instability or Cascading.” The pending definition covers the application to potential instability and cascading conditions. The RCSDT included the phrase “to address” in the proposed definition of “Reliability Directive” to account for (1) potential and (2) actual events leading to an Emergency or Adverse Reliability Impact.” No change made.
Response: See response above.		
SERC Reliability Corporation	Negative	COM-001-2 Comments Definition of Alternative Interpersonal Communication: The proposed definition uses the term "medium."

Organization	Yes or No	Question 6 Comment
		What is the scope of that? Telephony is a "medium", but there is wired, wireless, satellite, etc. Was "medium", intended to differentiate voice, paper, text, email, teletype, or something else? Does the qualifying term "same", when modifying infrastructure mean something like voice versus written? What about situations where the primary telephone system is Voice Over Internet Protocol (VOIP) and it is using the same computer network infrastructure as an email or messaging system. That is the "same infrastructure" but a different "medium." The RCSDT believes that prescribing a device or medium would limit an entity. Please refer to the definition of Interpersonal Communication and Alternative Interpersonal Communication. Medium: the plain meaning of the word medium in noun form is a vehicle for ideas, a means of conveying ideas or information. The RCSDT recognizes there are many differing technologies for accomplishing communications and it is not necessary to prescribe which to use. A common medium is telephony, and the commenter is correct that there are different technological forms of telephony. What is required is that there be a medium in place so that Interpersonal Communication capability exists. No change made. R1 and R2 - We suggest the drafting team look at Standard EOP-008, Requirements R3 and R8 and add appropriate language in Standard COM-001-2, to avoid instantaneous non-compliance for loss of Interpersonal Communications and/or Alternate Interpersonal Communications. The RCSDT reviewed both EOP-008-0 and EOP-008-1, which is subject to future enforcement. In either version, the team believes there is no need to add additional language to the standard. This was not intended by the drafting team. The intent is to give the entity the flexibility in meeting the requirement. A loss of Interpersonal Communication capability is covered by R10, notification of Interpersonal Communication capability failure. No change made. R1 - In later requirements it is proposed that the entity "shall designate an." It is

Organization	Yes or No	Question 6 Comment
		suggested that for consistency and audit ability, this concept be used for R1, R3, R5, R7 and R8. The RCSDT believes the requirements achieve the desired intent of the standard. Each entity listed must “have” an Interpersonal Communication capability and for Alternative Interpersonal Communication capability able to “designate” the alternate. The team established these requirements to provide flexibility to the industry. No change made. In addition, the qualifier of “primary” should be used such that the requirements read: <i>“shall have designated, primary Interpersonal Communications capability with the following entities:”</i> Although it is appropriate that “Alternative” be capitalized since it is used in a defined term (i.e. Alternative Interpersonal Communication) that bounds acceptable alternative methods , we do not see the need to capital “primary.” The term “Interpersonal Communication” is a defined term in this standard. As such, it has a different meaning than “Alternative Interpersonal Communication,” thus there should be no confusing of the two. In addition, the word “primary” purposely does not exist in the requirements since the RCSDT did not intend to create a requirement for redundancy. Redundancy continues to be a good practice, but it is not required by this standard. Only that some entities must have both an Interpersonal Communication capability and a designated Alternative Interpersonal Communication capability. No change made. R9 - The requirement is unclear if the required monthly test is a general functionality test or if there is the expectation of testing the designated Alternative Interpersonal Communications with all of the entities defined in the sub-requirements of R2, R4, and R6. There is no expectation of testing the primary Interpersonal Communications - is this intentional or an oversight? Although functional testing of this should be done as a normal course of business,

Organization	Yes or No	Question 6 Comment
		should an explicit test be required with each entity in the sub-requirements of R1, R3, R5, R7 and R8 to insure, for example, that all the phone numbers are correct? The RCSDT intends each Alternative Interpersonal Communication capability to be verified functional by testing. If an entity has only one such capability, then only one test would be required. You further ask whether the absence of required testing of the “primary” (word is not in the requirement) Interpersonal Communication capability is intentional. The RCSDT intentionally left it out because the communications capability is used routinely and the use is sufficient to demonstrate functionality. With respect to phone numbers, these are procedural matters to be addressed by each individual entity and by including phone numbers it would make the requirement prescriptive. The requirement is to test capability. No change made. R10 - The following scenario seems plausible: The Interpersonal Communications fails and is detected at 14:00 and gets fixed at 14:35. It lasted more than 30 minutes but is fixed. As written the requirement would require the responsible entity to notify entities identified in R1 through R6 by 15:00 (i.e. 60 minutes from detection) even though the problem no longer exists. Is that the expectation? Does COM-001 apply only to primary control centers or back-ups, per EOP-008, as well? Yes, the entity experiencing the failure is required by R10 to notify the entities as identified within the 60-minute time frame. The RCSDT believes these situations would be few in numbers and not overly burdensome to perform. No change made. The RCSDT reviewed both EOP-008-0 and EOP-008-1, which is subject to future enforcement. In either version, the team believes there is no need to add additional language to the standard. No change made. M9 reads “at least on a monthly basis.” We suggest that this be changed to “at least once per calendar month” as written in R9. This change should also be corrected in the VSLs.

Organization	Yes or No	Question 6 Comment
		The RCSDT agrees and has changed the language in COM-001-2, M9 to agree with the language in R9. M8 - We suggest removing the second “that” in the first sentence of the measure. COM-001-2, M8: The RCSDT agrees and the language in M8 has been changed to delete the additional “that”. M10 - We suggest this be revised to coincide with changes made in R10 (deleting impacted and adding as identified in Requirements R1 through R6), therefore M10 should read: <i>“Each Reliability Coordinator, Transmission Operator, and Balancing Authority, shall have and provide upon request evidence that it notified entities as identified in Requirements R1 through R6 within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasted 30 minutes or longer. Evidence could include, but is not limited to dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent evidence. (R10.)”</i> The RCSDT agrees and has changed the language in COM-001-2, M10 to include language consistent with the language in R10. M12 needs to be removed. COM-001-2, M12: The RCSDT agrees that the heading “M12” has no corresponding requirement and was overlooked in format clean-up. The “M12” heading has been removed. We question why the first paragraph of Section 1.3” Data Retention has been included in each of these three standards. We suggest that it should be removed from each standard. The RCSDT thanks you for your comments. The Data Retention language has been updated to be consistent with the Standards Drafting Guidelines.

Organization	Yes or No	Question 6 Comment
Response: See response above.		
Independent Electricity System Operator	Negative	COM-001-2: 1. R1.2 and R2.2: The phrase “within the same Interconnection” is improper; it needs to be removed. RCs between two Interconnections still need to communicate with each other for reliability coordination (e.g. between Quebec and the other RCs in the NPCC region to curtail interchange transactions crossing Interconnection boundary). The SDT’s response that the phrase was added to address the ERCOT situation and citing that ERCOT does not need to communicate with other RCs leaves a reliability gap. Requirement R1 addresses a reliability need for adjacent Reliability Coordinators synchronously connected within the same Interconnection to have Interpersonal Communication capability; however, it does not preclude or limit the Reliability Coordinator from establishing Interpersonal Communication capability with others. The RCSDT does not see where there is a need to communicate with other Reliability Coordinator’s from one interconnection to another. No change made. 2. R3.5 and R4.3: The phrase “synchronously connected within the same Interconnection” is also improper; it needs to be removed. TOPs do communicate with other TOPs including those asynchronously connected and in another Interconnection (e.g. between Quebec and all of its asynchronously interconnected neighbors). The RCSDT has made clarifying changes by adding a Part to R3 and R4 to address asynchronous connections between Transmission Operators and have eliminated the phrase “within the same interconnection.” 3. R4 and R6: not requiring an Alternative Interpersonal Communication capability between the BAs and the DP and GOP can result in a reliability gap. If Interpersonal Communication capability between the BAs and these entities is required to begin with to enable BAs to communicate with these entities (such as operating

Organization	Yes or No	Question 6 Comment
		instructions or Reliability Directives) to ensure reliable operations, then an alternative capability is also needed to ensure this objective is achieved when the primary capability fails. The RCSDT refers the Order No. 693 in Paragraph 508 to clarify the reason the DP and GOP are not required to have Alternative Interpersonal Communication and is as follows: “(1) expands the applicability to include Generator Operators and Distribution Providers and includes Requirements for their telecommunications facilities; (2) identifies specific requirements for telecommunications facilities for use in normal and emergency conditions that reflect the roles of the applicable entities and their impact on Reliable Operation and (3) includes adequate flexibility for compliance with the Reliability Standard, adoption of new technologies and cost-effective solutions.” In addition, R11 requires the DP and GOP to consult with its BA and TOP to determine a mutually agreeable action for restoration. No change made. 4. Measure M3 does not cover the added R3.5 condition (having Interpersonal Communications capability with each adjacent TOP). M3 needs to be revised. The RCSDT thanks you for your comment and has made conforming changes to make to COM-001-2, M3.
Response: See response above.		
Wisconsin Electric Power Marketing; Wisconsin Electric Power Co.	Negative	COM-001-2: Although a great improvement over existing COM-001, and eliminates the data component see comments: -For R5.1 Can the solutions included to meet R1 be included, same R3.2 and R5.2, same R5.3 and R7.2, same R5.4 and R8.1. -For R5.2 Can the solutions included to meet R2 be included, same R4.2 and R6.2. COM-001-2, R5: In a word: Yes. The requirement is to have capability, and that capability does not have to be different from what the entity on the other end has. No change made.

Organization	Yes or No	Question 6 Comment
		-R9 a 2 hour response for a once a month test seems extreme, as would require a secondary Alternate Interpersonal Communications capability. -M9 is reasonable, but should include something about communication actual repair and or time estimates. COM-001-2, R9: The requirement is to “initiate action to repair or designate a replacement Alternative Interpersonal Communication capability...” within two hours. The RCSDT recognizes that many different contracts or other arrangements may exist to address repair. However, the RCSDT finds that entities should know what they have and how to initiate repair and those two hours to do so is reasonable. No change made. COM-001-2, M9: The requirement is to have evidence that either repair was initiated or an Alternative Interpersonal Communication capability was designated within two hours. The RCSDT understands that, in extreme cases, the entity may need to make its initial Alternative Interpersonal Communication capability its Interpersonal Communication capability and then designate another Alternative Interpersonal Communication capability, if the repair times are so long that to continue in that mode for that long would present a reliability risk. Such arrangements, if they exist at all, are very rare. No change made. -R10 The use of R1 through R6 implies notification of both Interpersonal Communications and Alternate Interpersonal Communications failures. Do you notify if you become aware after the link is back up if it was down for GT 30 minutes, and doesn’t address notifying when restored? COM-001-2, R10: The RCSDT thanks you for pointing this out. The RCSDT has modified the language of R10 to refer to R1, R3, and R5, rather than “R1 through R6” since the responsible entities are limited to the RC, the TOP, and the BA in these requirements. Yes, there is no requirement to notify identified entities the Interpersonal Communication have been restored. No change made.

Organization	Yes or No	Question 6 Comment
		-R11 Implies that R8 and R9 are independent and redundant to R5.3, R5.4 and R3.3 and R3.4. Update M9 accordingly. COM-001-2, R11: The RCSDT believes you intended to refer to R7 and R8, rather than R8 and R9. The RCSDT does not believe that the language implies that the communications capability required by R7 and R8 are independent, but they may be. If the entity which is registered as a DP is also registered as a GOP, although unlikely, then the capability could be met by the same medium. Neither does the RCSDT believe that R11 implies that R7 and R8 are redundant to R3.3 and R3.4 or to R5.3 and R5.4. No change made.
Response: See response above.		
Tampa Electric Co.	Negative	COM-001-2: By use of the term “any” in the phrase “a failure of any of its Interpersonal Communication” the standard will actually create a disincentive for redundant communications with DPs and GOPs due to compliance risk. It needs to be limited to primary Interpersonal Communications with its TOP and/or BA.
Response: The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure. The term “Interpersonal Communication” is a defined term in this standard. As such, it has a different meaning than “Alternative Interpersonal Communication,” thus there should be no confusing of the two. In addition, the word “primary” purposely does not exist in the requirements since the RCSDT did not intend to create a requirement for redundancy. Redundancy continues to be a good practice, but it is not required by this standard. Only that some entities must have both an Interpersonal Communication capability and a designated Alternative Interpersonal Communication capability. No change made.		
Cogentrix Energy, Inc.	Negative	COM-001-2:

Organization	Yes or No	Question 6 Comment
		Definition of Alternative Interpersonal Communication: The proposed definition uses the term “medium.” What is the scope of that? Telephony is a “medium” but there is wired, wireless, satellite, etc. Was “medium” intended to differentiate voice, paper, text, email, teletype, or something else? Does the qualifying term “same” when modifying infrastructure mean something like voice versus written? What about situations where the primary telephone system is Voice Over Internet Protocol (VOIP) and it is using the same computer network infrastructure as an email or messaging system. That is the “same infrastructure” but a different “medium” R8 Revision: GOP cannot dictate to the BA or TOP what types of Interpersonal Communication will be used, but they can work with them to establish a common tool. COM-001-2, “Medium”: the plain meaning of the word medium in noun form is a vehicle for ideas, a means of conveying ideas or information. The RCSDT recognizes there are many differing technologies for accomplishing communications, and it is not necessary to prescribe which to use. A common medium is telephony, and the commenter is correct that there are different technological forms of telephony. What is required is that there be a medium in place so that Interpersonal Communication capability exists. Your comment poses compliance questions but does not suggest changes. No change made. COM-001-2, Definition of Alternative Interpersonal Communication: You ask whether the use of the word “same” as a modifier of infrastructure mean something like voice versus written? It could, but is not required to. The RCSDT intends the language to indicate that whatever causes the loss of the Interpersonal Communication capability should not be a common cause of failure of the Alternative Interpersonal Communication capability. Thus, one telephone number could serve as the Interpersonal Communication capability and another telephone

Organization	Yes or No	Question 6 Comment
		number could serve as the Alternative Interpersonal Communication capability, as long as whatever causes the failure of the Interpersonal Communication capability does not automatically cause the failure of the Alternative Interpersonal Communication capability. No change made. R8 Balloting: R8. Each Generator Operator shall have Interpersonal Communications capability with the following entities: R8.1 Balancing Authority R8.2 Transmission Operator R8 Suggestion: <i>R8. Each Generator Operator shall coordinate with the BA and TOP to establish Interpersonal Communications capability as requested by the BA and TOP.</i> The standard establishes requirement for communication capability appropriate to ensure reliability. There is no requirement for it to be different from the Interpersonal Communication capability that its Balancing Authority has with it, nor the Interpersonal Communication capability that its Transmission Operator has with it. Cooperation and coordination is always encouraged and is an excellent practice, but is not required by this standard. Thank you for your suggestion. No change made.
Response: See response above.		
Oncor Electric Delivery	Negative	COM-001-2: Oncor takes the position that contacting all impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer as prescribed in R1 through R6 is not doable within the ERCOT interconnect for a Transmission Operator.

Organization	Yes or No	Question 6 Comment
		The standard establishes requirement for Interpersonal Communication capability between entities for reliability purposes. The RCSDT recognizes that there are many different organizational arrangements and structures within the North American continent. The standard establishes “what” is required, but does not prescribe “how” it must be done. No change made. Oncor takes the position that notification to the RC and BA only is sufficient and that those two entities have the operational functionality to contact within the prescribed time all affected Distribution Providers, Generator Operators, and other Transmission Operators. Oncor also takes the position adding the word “impacted” to R10 will clarify that notification needs to be made only to the entities that are affected by the failure of a communication path. This will also more align with the language in M10." Thank you for your suggestion. The word “impacted” was removed in previous postings. For further clarification, the RCSDT has modified M10 to remove the word “impacted” to be consistent with R10. For additional clarity, the RCSDT also changed the phrase in R10 and M10, “R1 through R6” to “R1, R3, and R5,” to clarify that it applies to the capabilities with the RC, the TOP, and the BA.
Response: See response above.		
National Grid	Negative	COM-001-2: Overly prescriptive, not results-based. R7 & R8 are not necessary. Every entity at a minimum has a contact with a phone as their "Interpersonal Communications capability." Just need to require that every entity has a plan if they lose their primary communication channel ("Interpersonal Communications capability").
Response: The standard establishes requirement for communication capability appropriate to ensure reliability. In addition, R7 and R8 are responsive to FERC Order No. 693. Entities may use the telephone cited in the example as their Interpersonal Communication		

Organization	Yes or No	Question 6 Comment
capability. Requirement R11 as modified addresses the loss of Interpersonal Communication capability. No change made.		
Lincoln Electric System	Negative	COM-001-2: Please clarify whether R10 is intended to address both Interpersonal and Alternative Interpersonal Communications or only Interpersonal Communication. Although R10 identifies only Interpersonal Communication within the requirement, the reference to Requirements R1-R6 appears to include Alternative Interpersonal Communication as well. LES is concerned that if an entity's Interpersonal Communication is fully functional but discovers a failure in its Alternative Interpersonal Communication, the entity would still be required to notify entities per R10.
Response: The RCSDT thanks you for pointing this out. The RCSDT has modified the language of R10 to refer to R1, R3, and R5, rather than "R1 through R6," since the responsible entities are limited to the RC, the TOP, and the BA in these requirements.		
ISO New England, Inc.	Negative	COM-001-2: Please see comments submitted with the project... ISO-NE does not believe COM-001, in its entirety, is a results-based standards and therefore does not support the draft as written. We believe such "requirements" (i.e. capabilities) should be verified through an entity certification process. Additionally, results-based requirements should be the driver to have the capability to achieve them; on other words, there is no other way to reliably dispatch than to have communications facilities (electronic or voice).
Response: Although this is not a results-based standard, the RCSDT believes it is a significant improvement over the current COM-001 standard. The RCSDT will forward your comment to NERC staff for consideration.		
Commonwealth of Massachusetts Department of Public Utilities	Negative	COM-001-2: Primary concern here is with the phrase "within the same interconnection" which appears in R1.2 and R2.2. This removes any standard requirement for adjacent RCs that may not be in the same interconnection from communicating with each other. This constitutes a "gap" in reliability and is a

Organization	Yes or No	Question 6 Comment
		concern.
Response: Requirement R1 addresses a reliability need for adjacent Reliability Coordinators synchronously connected within the same Interconnection to have Interpersonal Communication capability; however, it does not preclude or limit the Reliability Coordinator from establishing Interpersonal Communication capability with others. The RCSDT does not see where there is a need to communicate with other Reliability Coordinator's from one interconnection to another. No change made.		
Detroit Edison Company	Negative	COM-001-2: R9. I believe 2 hours is too short, suggest "within 24 hours." COM-001-2, R9: The requirement is to initiate repair or designate an Alternative Interpersonal Communication capability within two hours. The requirement is NOT to have the repair completed within two hours. The requirement recognizes that the entity may use its Alternative Interpersonal Communication capability now as its Interpersonal Communication capability, and then, if it decides to do so, designate another, if you may, "new" Alternative Interpersonal Communication capability. This is not required, but is an option that the entity can consider. The entity may already have a maintenance and repair agreement in place that will respond and repair the failed capability. No change made. R11. "mutually agreeable time" creates issues. What if TO and BA have differing time frames? Which entity bears the violation if agreement cannot be reached? Alexander Eizans COM-001-2, R11, For, "mutually agreeable time," the "what" is required is to consult and determine a mutually agreeable time and the "How" that is to be done is too prescriptive to be included within a standard because of the great number of possible scenarios, organizational arrangement, and sizes of entities involved. No change made. I am concerned with the evidence listed under the measures (see M6, M7 and M8).

Organization	Yes or No	Question 6 Comment
		Dated equipment specifications and installation documentation is to much. I know this is listed as "could include" but at one point could become "must include." Jeffrey DePriest COM-001-2, M6, M7, and M8, "could include" may some day become "must include": "What" is required is to provide evidence. A list, which could include but is not limited to various forms of evidence is presented for consideration, but the entity may, and is encouraged to do so when it is appropriate, provide other forms of equally appropriate evidence. No change made. R9 define "unsuccessful test." Is it a mechanical failure of equipment or failure of one or more entities to respond to the test? If mechanical failure, does the 2 hour window to initiate repairs mean notification to proper business unit or do repairs have to actually begin (crew investigating). If crews need to be on site 2 hours is too limiting. COM-001-2, R9, define "unsuccessful test": The RCSDT notes that your words are a paraphrase of the actual standard requirement language. In its simple form, a test is unsuccessful when the capability fails to perform as expected. The entity may have an elaborate contract in place with very specific technical specifications within which the capability is to perform. The test may be unsuccessful if it does not meet those technical specifications, although the intent of the standard is for the entities to be able to communicate, usually verbally, with one another so as to operate reliably. The standard does not prescribe the performance expectations for the capability apart from the expectation that communication capability is to exist. The RCSDT recognizes that there may be many variations of service, maintenance, and repair agreement implemented for these communication capabilities. Whatever the agreement provides for initiation of the response and repair is what is required. This standard cannot prescribe all the possible combinations or scenarios. No change made.

Organization	Yes or No	Question 6 Comment
		- R11. Mutual Agreeable time is vague. Barbara Holland COM-001-2, R11, "mutual agreeable time" is too vague: "What" is required is to consult and determine a mutually agreeable time. "How" that is to be done is too prescriptive to be included within a standard because of the great number of possible scenarios, organizational arrangement, and sizes of entities involved. No change made.
Response: See response above.		
Madison Gas and Electric Co.	Negative	COM-001-2: The definition of Interpersonal Communication is: "Any medium that allows two or more individuals to interact, consult, or exchange information." Recommend that the word "any" be removed from Interpersonal Communication and recommend the new definition be "The primary (or designated) medium that allows two or more individuals to interact, consult, or exchange information." The RCSDT appreciates your comment and has made clarifying changes by removing the phrase "any of" in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure. The term "Interpersonal Communication" is a defined term in this standard. As such, it has a different meaning than "Alternative Interpersonal Communication," thus there should be no confusing of the two. In addition, the word "primary" purposely does not exist in the requirements since the RCSDT did not intend to create a requirement for redundancy. Redundancy continues to be a good practice, but it is not required by this standard. Only that some entities must have both an Interpersonal Communication capability and a designated Alternative Interpersonal Communication capability. No change made.

Organization	Yes or No	Question 6 Comment
		R11, Please note that the use of the word “any” as in “Each Distribution Provider and Generator Operator that experiences a failure of any of its Interpersonal Communication capabilities...” will be viewed as meaning every Interpersonal Communication medium that an Entity has or uses. The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure. Recommend R11 be updated to read: <i>“Each Distribution Provider and Generator Operator that experiences a failure of any of its primary (or defined) Interpersonal Communication capabilities with its Transmission Operator or Balancing Authority...”</i> In that way it focuses it down to the communications issues with the TOP or BA. In lieu of “primary” the SDT could state “defined” as long as it is not meant to be “any.” The latter part of R11 states; “...shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability.” This ambiguous statement does not support reliability. Consulting with a TOP or BA does not solve the problem of the lack of Interpersonal Communication capabilities. Recommend this to be “...shall consult with inform their Transmission Operator or Balancing Authority as applicable as to determine a mutually agreeable time to restore the status of the Interpersonal Communication capability.” Thus R11 is recommended to read as: <i>“Each Distribution Provider and Generator Operator that experiences a failure of its primary (or designated) Interpersonal Communication with their Transmission Operator or Balancing Authority shall inform them, as applicable, as to the status of the Interpersonal Communication capability.”</i>

Organization	Yes or No	Question 6 Comment
		This allows for situational awareness and supports the reliability of each system. Additionally, the RCSDT notes that the requirement refers only to Interpersonal Communication capabilities. Adding the phrase “to the primary” is not needed. Please refer to the definitions of Interpersonal Communication and Alternative Interpersonal Communication for clarification. No change made.
Response: See response above.		
New York Independent System Operator	Negative	COM-001-2: The drafting team has complicated the requirements by having different requirements between RC/TOP/BA and other entities such as GOP/LSE/DP. The proposal is for redundancy to be required only between RC/TOP/BA. The requirement should be simplified to require all entities to have plans for loss of primary communication channels. This can include third parties as a communication channel.
Response: The term “Interpersonal Communication” is a defined term in this standard. As such, it has a different meaning than “Alternative Interpersonal Communication,” thus there should be no confusing of the two. In addition, the word “primary” purposely does not exist in the requirements since the RCSDT did not intend to create a requirement for redundancy. Redundancy continues to be a good practice, but it is not required by this standard. Only that some entities must have both an Interpersonal Communication capability and a designated Alternative Interpersonal Communication capability. The DP and GOP are not required to have Alternative Interpersonal Communication; however, R11 addresses the loss of communication capability (plan). No change made.		
Public Utility District No. 1 of Lewis County	Negative	COM-001-2: This standard should be combined with COM-002.
Response: The standard COM-001-2 is capability based (equipment) and COM-002-3 is communication and coordination based. Each fulfills independent concepts. No change made.		
Southwest Transmission	Negative	COM-001-2:

Organization	Yes or No	Question 6 Comment
Cooperative, Inc.		We believe that the VSLs could be written to provide more gradations. For example, if a Transmission Operator or Balancing Authority failed to have Interpersonal Communications capability with a Distribution Provider but had Interpersonal Communications capability with all other required entities, it has met the vast majority of the requirement. Since VSLs are a measure of how much the requirement was missed by the responsible entity, jumping to a Severe VSL does not seem to adequately capture that the responsible entity met the vast majority of the requirement. Requirements R4 and R6 even seem to recognize this by not including Distribution Provider in the list of entities to which the Transmission Operator or Balancing Authority are required to designate Alternate Interpersonal Communications capability.
Response: The RCSDT has applied the VSL to the Severe column because not having Interpersonal Communication capability with any entity is detrimental to reliability. No change made.		
Tennessee Valley Authority	Negative	COM-001-2: We suggest the drafting team look at Standard EOP-008, Requirements R3 and R8 and add appropriate language in Standard COM-001-2, to avoid instantaneous non-compliance for loss of Interpersonal Communications and/or Alternate Interpersonal Communications (R1 and R2).
Response: The RCSDT reviewed both EOP-008-0 and EOP-008-1, which is subject to future enforcement. In either version, the team believes there is no need to add additional language to the standard. No change made. This was not intended by the drafting team. The intent is to give the entity the flexibility in meeting the requirement. A loss of Interpersonal Communication capability is covered by R10, notification of Interpersonal Communication capability failure. No change made.		
Southwest Transmission Cooperative, Inc.	Negative	COM-001-2: We thank the drafting team for its efforts but believe there are still issues that need to be addressed. We thank the drafting team for clarifying that the intent of this

Organization	Yes or No	Question 6 Comment
		standard is not for data exchange in the response to comments. However, we do believe one additional change is necessary to make the intent absolutely clear. The purpose of statement of COM-001-2 still includes the phrase “to exchange Interconnection and operating information.” Since a standard must stand on its own, we believe it is necessary to remove that phrase from the purpose statement to avoid misinterpretations in the future. Auditors and enforcement personnel are not required to understand the development history when enforcing the standard. Furthermore, the purpose is really to enable communications between these functional entities. The SDT agrees and has made a conforming change to the purpose of COM-001. Requirement R11 does not fully address the issue of what is required by Distribution Providers and Generator Operators and introduces new issues. For, “mutually agreeable,” the “what” is required is to consult and determine a mutually agreeable time and the “how” that is to be done is too prescriptive to be included within a standard because of the great number of possible scenarios, organizational arrangement, and sizes of entities involved. No change made. First, while the standard is intended to clarify that the Distribution Provider and Generator Operator do not need backup communications capability, it simply does not. Distribution Providers and Generator Operators are required to have an Interpersonal Communications capability in Requirement R7 and R8 respectively. Unfortunately, the effectiveness of these requirements persists even when the Distribution Provider or Generator Operator experiences a failure of its Interpersonal Communications capability. When Requirement R11 applies, the Distribution Provider or Generator Operator will still be obligated to comply with Requirements R7 and R8 respectively and will, in fact, be in violation of these requirements because the Distribution Provider or Generator Operator no longer has the capability. The RCSDT thanks you for your comment. Requirements R7 and R8 have been revised to account for the failure of Interpersonal Communication capability. The

Organization	Yes or No	Question 6 Comment
		intent of R11 is to require the responsible entity to take action upon the failure of its Interpersonal Communication. Second, capability is used inconsistently between Requirement R7 and R11 which leads to confusion. In Requirement R7, it is singular while in Requirement R11 is plural. It needs to be clear that only the failure of the capability identified in R7 and R8 needs to be reported by the Distribution Provider and Generator Operator respectively. The RCSDT thanks you for your observation. Generally, the singular implies the plural or vice-versa. The RCSDT has corrected R10 and R11 to be consistent with the singular application. Third, if the requirements focused on communications devices rather than capabilities, they would come closer to communicating the intent. Requirement R11 would better complement Requirement R7 and R8 if the focus was on having a communication medium or device. A Generator Operator with an installed communications device or medium still has that device or medium even when it is not functioning properly and could still meet Requirements R7 and R8. However, they don't have the Interpersonal Communications capability if the device is not functioning properly. The RCSDT thanks you for your comment. Requirements R7 and R8 have been revised to account for the failure of Interpersonal Communication capability. The intent of R11 is to require the responsible entity to take action upon the failure of its Interpersonal Communication. We recommend striking "capability" from all of the requirements. It is not clear to us how this helps when a definition for Interpersonal Communications is written already and applies to a communication medium. Furthermore, we think it causes confusion and actually contradicts the intent of the standard. Because Requirements R1, R3, R5, R7 and R8 focus on capability, the responsible entity will be in violation anytime its medium that it uses for the primary capability does not function

Organization	Yes or No	Question 6 Comment
		properly. Whereas if the requirement stated that the responsible entity was to designate a primary communications medium, the responsible entity is not in violation if that medium is not functioning properly. It would be clear that Requirement R2, R4 and R6 are intended to be complementary. The RCSDT believes that prescribing a device or medium would limit an entity; therefore, “capability” is used to avoid being prescriptive and to provide flexibility. This was not intended by the drafting team. The intent is to give the entity the flexibility in meeting the requirement. A loss of Interpersonal Communication capability is covered by R10, notification of Interpersonal Communication capability failure. No change made. Furthermore, it is not clear why Requirements R1, R3, R5, R7 and R8 state that the responsible entity shall “have” when the companion Requirements R2, R4, and R6 state “designate.” Each entity listed must “have” an Interpersonal Communication capability and for Alternative Interpersonal Communication capability able to “designate” the alternate. The team established these requirements to provide flexibility to the industry. No change made. Since Requirement R10 deals with a failure of its Interpersonal Communications capabilities and not Alternate Interpersonal Communications capability, it should only refer to the entities in Requirements R1, R3, and R5. Currently, it includes R1 through R6. The RCSDT thanks you for pointing this out. The RCSDT has modified the language of R10 to refer to R1, R3, and R5, rather than “R1 through R6,” since the responsible entities are limited to the RC, the TOP, and the BA in these requirements.
Response: See response above.		
New York Independent	Negative	COM-002-3: The drafting team added a requirement to identify a Reliability Directive is being initiated during an emergency to track 3-part communication for compliance

Organization	Yes or No	Question 6 Comment
System Operator		purposes. This will change and complicate the communication protocols between normal and emergency operations simply to simplify compliance assessments. The NYISO is asking for clarification that an entity may identify Reliability Directives as a category of communications to be communicated through procedures and training; and will not require a different communication protocol between normal and emergency operations. Affective communications can only be achieved through consistent processes for all conditions. Compliance assessments should be made on when we are in an emergency or not, and not on how the dialogue was initiated.
Response: The RCSDT believes the standard allows for this condition, and the method of implementation is up to the entity. No change made.		
Illinois Municipal Electric Agency	Negative	Illinois Municipal Electric Agency supports and encourages SDT consideration of comments submitted by the SERC OC Standards Review Group.
Response: Thank you for your comment. See response to SERC comments.		
Wisconsin Public Service Corp.	Negative	In COM-002-3, the Standards Drafting Team provided great clarity to the industry and also reduced risk to the BES, by clearly defining Reliability Directives and how the RC, TOP, and BA must utilize them. Unfortunately, they failed to maintain this level of clarity in IRO-001-3, where they state: <i>R2. Each Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider shall comply with its Reliability Coordinator's direction unless compliance with the direction cannot be physically implemented or unless such actions would violate safety, equipment, regulatory or statutory requirements. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i> <i>R3. Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to perform as directed in accordance with Requirement R2. [Violation Risk</i>

Organization	Yes or No	Question 6 Comment
		<i>Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i> The use of “direction” and “directed” essentially makes any request equivalent to a Reliability Directive. In addition, IRO-001-3 as written is largely redundant of COM-002-3. Given this, we recommend that the Standards Drafting Team consider granting the RC authority to issue Reliability Directives by adding this requirement to COM-002-3 and then eliminate IRO-001-3. The RCSDT feels the use of direct and directed is consistent with the purpose and application of those terms in other standards. No change made.
Response: See response above.		
Wisconsin Electric Power Marketing; Wisconsin Electric Power Co.	Negative	IRO-001-03: Although a great improvement over existing IRO-001, see comments: -R2 needs to be clear that it is the Reliability Coordinator’s Reliability Directive that must be complied with not just any Reliability Coordinator’s direction as stated. The RCSDT notes that the intent of the standard is not intended to limit the RC authority to Reliability Directives. The Reliability Coordinator issuing the Reliability Directive is the one, which the recipient must comply. It is assumed that a BA or TOP has a relationship with one, and only one, RC for a given Balancing Area or Transmission Operator Area (some may have multiple, disconnected areas, that are subject to different RCs). No change made. -The M2 measure could be difficult, as the operator would have to have access to documents proving the safety, equipment, regulatory or statutory requirements, which may be the assessment of an individual applying the safety rule. Is the measure requiring a deposition of the individual to be performed for each instance? In the RCSDT’s opinion, the Measure M2 does not contemplate depositions. If an entity cannot comply with a Reliability Directive for one of the stated reasons, it should have documentation, such as an attestation, to support that stated reason

Organization	Yes or No	Question 6 Comment
		available during an audit. No change made. With an assumed data retention of 90 day (voice) or 12 month document retention, the deposition would be unlikely to be acquired prior to the retention period ending. Data retention is a significant issue when the data being recorded is voluminous, supporting a 90-day retention period. No change made. -R3 needs to be clear that it is the inability to perform the Reliability Coordinator's Reliability Directive that must be communicated not just any "Reliability Coordinator's as directed." The RCSDT believes R3 contains the full communication set of "action or direction" and the subset, Reliability Directive, is included; therefore, the respective entity is still required to inform the RC. The RCSDT believes the requirement is clear in regards to Reliability Directives. No change made. -The Data Retention section does not align with the standard: The Reliability Coordinator shall retain its evidence for the most recent 90 calendar days for voice recordings or 12 months for documentation for Requirement R2, Measure M2. R2 and M2 apply to the Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider. There is no R4 and M4. Data retention related to IRO-001-2, R2/M2 was changed to agree with your suggestion. The changes were more involved – several sections were changed, including removing the reference to R4/M4.
Response: See response above.		
SERC Reliability Corporation	Negative	IRO-001-3 Comments We recommend that where the verb "direct/directed" or noun "direction" is used in Purpose, R1, R2 and R3, that it be replaced with the verb "instruct/instructed" or

Organization	Yes or No	Question 6 Comment
		noun "instruction", as appropriate. This would help the industry avoid confusion often referred to as "big D" or "little d" directives. It is noted that the term "Reliability Directive" does that to a great degree but avoiding the verb/noun "direct/direction" would augment the difference. The RCSDT feels the use of “direct” and “directed” is consistent with the purpose and application of those terms in other standards. No change made. R1 - At what point in time is "identified" referring to in "to prevent identified events or"? Is it referring to current or future events? The context of “identified” is when a set of system conditions is recognized that could lead to an Emergency or Adverse Reliability Impact, which may require action. See Standards IRO-008 and IRO-009. No change made. One might assume both since the "Time Horizon" is defined as Real-time Operations, Same Day Operations and Operations Planning, but the requirement may be enhanced if explicitly stated ("to prevent events identified in real-time or in the future or to mitigate the magnitude"). For clarity, the scope of the authority should be limited to the Reliability Coordinator Area (that result in an Emergency or Adverse Reliability Impacts within its Reliability Coordinator Area). As written, it implies the authority should extend outside its RC Area. R2 - We question the phrase, “physically implemented,” and recommend that the intent be clarified in the language. The RCSDT believes there may be conditions where an entity might not be able to physically implement the direction. For example, entities that do not have the right to access certain equipment or cannot manually operate a broken apparatus. We feel the proposed language achieves the intended purpose. No change made. We note the following comment and response posted under Consideration of Comments on Initial Ballot , " Reliability Coordination (Project 2006-06) Date of Initial Ballot: February 25, " March 7, 2011:

Organization	Yes or No	Question 6 Comment
		<i>“IRO-001 R2, R3, and R4 have replaced “Directives with the word direction in lower case (while it appears that “Directives is a subset of “directions). We believe that this muddies the waters and could bring numerous conversations and dialog into scope unnecessarily. The end result is that the RC has the right to issue and use “Directives and anything short of this could just be communications. For example, a number of entities that are Reliability Coordinators also facilitate energy markets. There are many communications related to markets that probably should be out of scope with respect to the standards. Furthermore, it might not be clear what role (e.g. Reliability Coordinator, market operator, etc) the staff at these entities is fulfilling.</i> <i>Response: IRO-001 is written to cover both typical daily operating scenarios and also emergency scenarios. The required performance encompasses issuing and responding to Reliability Directives as well as other directions. The requirement language specifically ties back to Requirement R2 which states that the RC “shall take actions or direct actions, which could include issuing Reliability Directives.” This is the “direction in accordance with Requirement R2 stated in R3 and the “direction in accordance with Requirement R3 stated in R4. We believe the entity comments remain valid and the response provided by the SDT does not address all aspects of the concern.</i> We suggest that the language be changed to “Reliability Directive consistent with COM-002. The word “direction” connects with the language in the R1 (act or direct). Reliability Directives is a subset of “direction.” No change made. R3 - The requirement states the responsible entities shall “inform its RC when unable to perform as directed but it is unclear when the notification needs to take place. Although the term “as soon as practical may seem be un-measurable, as written now there is no time deadline to perform the notification” i.e. it could be 4 hours later after recognition. M2,” need to add the following words “compliance with, physically, unless which

Organization	Yes or No	Question 6 Comment
		were included in R2, therefore M2 should read, <i>“Each Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator and Distribution Provider shall have and provide evidence which may include, but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it complied with its Reliability Coordinator's direction(s) per Requirement R1 unless compliance with the direction per Requirement R1 could not be physically implemented or unless such actions would have violated safety, equipment, regulatory or statutory requirements. In such cases, the Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator or Distribution Provider shall have and provide copies of the safety, equipment, regulatory or statutory requirements as evidence for not complying with the Reliability Coordinator direction. (R2)”</i> The RCSDT thanks you for your comment and has added the word “physically” to the IRO-001-2 Measure M2. Section 1.3, the second bullet; need to add calendar to 12 calendar months The RCSDT appreciates your comments and conforming changes have been made to the Data Retention section.
Response: See response above.		
Dominion Virginia Power; Dominion Resources, Inc.	Negative	IRO-001-3: Dominion does not support the use of “Reliability Coordinator’s direction” in IRO-001-3 and would prefer that the language be changed to “Reliability Directive” consistent with the use in COM-002-3.
Response: The word “direction” connects with the language in the R1 (act or direct). Reliability Directives is a subset of “direction.” The RCSDT feels the use of direct and directed is consistent with the purpose and application of those terms in other standards. No		

Organization	Yes or No	Question 6 Comment
change made.		
Constellation Energy Commodities Group	Negative	IRO-001-3: IRO-001-3 uses the term ‘direct’ in its purpose statement, R1, R2 and R3. To avoid confusion with a Reliability Directive (both for auditors and entities), we suggest the following: To establish the authority of Reliability Coordinators to make requests of other entities to prevent an Emergency or Adverse Reliability Impacts to the Bulk Electric System. <i>R1: Each Reliability Coordinator shall have the authority to act or request others to act (which could include issuing Reliability Directives) to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impacts.</i> <i>R2: Each Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider shall comply with its Reliability Coordinator’s request unless compliance with the request cannot be physically implemented, or unless such actions would violate safety, equipment, regulatory or statutory requirements, or unless the TOP, BA, GOP or DP convey a business reason not to comply with the request but express that they will comply if a Reliability Directive is given.</i> <i>R3: Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to perform as requested in accordance with Requirement R2.</i>
Response: This standard provides for the authority of the RC to act or direct actions, and not request. The RCS DT believes by using the word “request” make the requirement conditional and is not consistent with the purpose of the standard. No change made.		
Tampa Electric Co.	Negative	IRO-001-3: R1 VSL should have the phrase "exercise their authority" inserted between "to" and "take" in the first sentence. Otherwise it could be read that the RC would be in violation of the standard requirement for any event that resulted in an Adverse

Organization	Yes or No	Question 6 Comment
		Reliability Impact whether he issued a Reliability Directive or not.
Response: Thank you for your comment. The RCSDT has added the additional clarifying language.		
Independent Electricity System Operator	Negative	IRO-001-3: The IESO is unable to support this standard as written since Data Retention Section does not reflect the revised requirements. For examples: the Electric Reliability Organization is no longer a responsible entity; the Reliability Coordinator should replace the ERO for keeping data for R1; Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider should replace the Reliability Coordinator for keeping data for R2; and there is no R4/M4.
Response: The RCSDT agrees and has made conforming changes in Data Retention.		
Southwest Transmission Cooperative, Inc.	Negative	IRO-001-3: We thank the drafting team for their efforts but believe this standard needs additional work. We disagree with including “authority” in this standard. FERC Order 693a, paragraph 112, made it clear that the authority of a registered entity is established through the approval of the standards by FERC. Thus, a Reliability Coordinator gets its authority to issue Reliability Directives by having a requirement that states it must issue Reliability Directives approved by the Commission. Please change “shall have authority to act” in Requirement R1 back to “shall act.” Please also remove all other vestiges of authority from the standards including in the purpose, measures and VSLs. Requirement R1 should require the use of Reliability Directives. The requirement compels the Reliability Coordinator “to direct others to act to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impact.” Reliability Directives are necessary to address Adverse Reliability Impacts or Emergencies and

Organization	Yes or No	Question 6 Comment
		trigger the use of three-part communications identified in COM-002-3. The RCSDT believes that other standards (i.e., IRO-009 - R3 & R4, EOP-002 - R1 and R8) address the action of others; and if the term “authority” is omitted, creates a generic requirement. Such as what has been suggested puts the RC in a double jeopardy situation. No change made. The word “direction” connects with the language in the R1 (act or direct). Reliability Directives is a subset of “direction.” No change made. COM-002-3 R1 really compels the Reliability Coordinator to use a Reliability Directive for Emergencies and Adverse Reliability Impacts with the opening clause: “When a Reliability Coordinator, Transmission Operator, or Balancing Authority determines actions need to be executed as a Reliability Directive.” What else could be more important for a Reliability Coordinator to issue a Reliability Directive than for an Emergency or Adverse Reliability Impact? Thus, not requiring the use of Reliability Directives for Adverse Reliability Impacts and Emergencies makes IRO-001-3 R1 and COM-002-3 R1 inconsistent. For clarity and consistency, Requirement R2 and R3 should also be clear that the responsible entities will respond to the Reliability Coordinator’s Reliability Directives. The RCSDT notes that IRO-001-3 addresses direction, which may include a Reliability Directive. The responsible entity receiving the direction, at a minimum, must comply with the RC’s direction, unless the receiver cannot physically implement or unless such actions would violate safety, equipment, regulatory, or statutory requirements. The standard IRO-001-3 is not limited to only actions that are Reliability Directives. On the other hand, the standard COM-002-3 requires the BA, RC, and TOP to identify the communication as a Reliability Directive and to use three-part communication when actions are required to be executed as a Reliability Directive. No change made. Furthermore, this would make the standard consistent with how Reliability Directives are handled by the Transmission Operator in the draft TOP-001-2 standard proposed by the Real-Time Operations drafting team (Project 2007-03). We do not agree with

Organization	Yes or No	Question 6 Comment
		the need to include Distribution Provider in IRO-001-3. The Distribution Provider will likely never receive a Reliability Directive directly from its Reliability Coordinator. More likely, the Reliability Directive will be issued by the Transmission Operator or Balancing Authority depending on if the issue is security or adequacy related. The RCSDT notes that IRO-001-3 is an authority standard, the DP may not likely receive a Reliability Directive from the RC; however, in the case they do, they are required to comply with the requirement. No change made.
Response: See response above.		
Northeast Utilities	Negative	NU contributed in and joins on the comments submitted by NPCC.
Response: Thank you for your comment.		
MidAmerican Energy Co.	Negative	COM-001-2: The definition of Interpersonal Communication is too broad and should be revised to read, <i>"the primary defined communication system used to communicate between NERC defined reliability entities when operating the Bulk Electric System."</i> Examples may include a telephone system as a primary system and an email system as an alternative system. R11 is too broad and should either be deleted or revised to read: <i>"Each Distribution Provider and Generator Operator that experiences a failure of its defined primary Interpersonal Communication capabilities with its Transmission Operator or Balancing Authority..."</i> The RCSDT deliberately avoided the use of primary and secondary mediums and elected to use communications capabilities. As such, R11 applies to Interpersonal Communication capabilities of the DP and GOP. The RCSDT has gone to great lengths

Organization	Yes or No	Question 6 Comment
		to provide some flexibility for those DPs and GOPs with little or no impact on the reliability of the BES. FERC directed NERC to provide for this consideration. Therefore, we use the language as proposed in R11. Mutually agreeable implies that both parties are willing to accept the outcome. It doesn't mean that a DP or GOP must comply with the wishes of its TOP or BA because as you state that could be beyond the control of the DP or GOP. No change made. The use of the word "any" could end up applying to an intercom and not to a primary mode of communication such as telephone system or email system. The RCSDT appreciates your comment and has made clarifying changes by removing the phrase "any of" in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure. The latter part of R11 states; "...shall consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability." This ambiguous statement does not support reliability. Consulting with a TOP or BA does not solve the problem of the lack of Interpersonal Communication capabilities. This statement should be deleted or revised to read: <i>"Each Distribution Provider and Generator Operator that experiences a failure of its defined primary Interpersonal Communication with their Transmission Operator or Balancing Authority shall notify the applicable TOP or BA as to the status of the Interpersonal Communication capability."</i> The RCSDT believes non-compliance is not due solely to the failure of any Interpersonal Communication capability, but must be accompanied by a failure to consult with the applicable Transmission Operator or Balancing Authority to establish mutually agreeable action for restoration. No change made.
Response: See response above.		

Organization	Yes or No	Question 6 Comment
SERC OC Standards Review Group		COM-001-2 Comments Definition of Alternative Interpersonal Communication: The proposed definition uses the term “medium.” What is the scope of that? Telephony is a “medium” but there is wired, wireless, satellite, etc. Was “medium” intended to differentiate voice, paper, text, email, teletype, or something else? Does the qualifying term “same” when modifying infrastructure mean something like voice versus written? What about situations where the primary telephone system is Voice Over Internet Protocol (VOIP) and it is using the same computer network infrastructure as an email or messaging system. That is the “same infrastructure” but a different “medium” R1 and R2 – The RCSDT believes that prescribing a device or medium would limit an entity; therefore, “capability” is used to avoid being prescriptive and to provide flexibility. This was not intended by the drafting team. The intent is to give the entity the flexibility in meeting the requirement. A loss of Interpersonal Communication capability is covered by R10, notification of Interpersonal Communication capability failure. No change made. We suggest the drafting team look at Standard EOP-008, Requirements R3 and R8 and add appropriate language in Standard COM-001-2, to avoid instantaneous non-compliance for loss of Interpersonal Communications and/or alternate Interpersonal communications. The RCSDT reviewed both EOP-008-0 and EOP-008-1, which is subject to future enforcement. In either version, the team believes there is no need to add additional language to the standard. The RCSDT believes that prescribing a device or medium would limit an entity;

Organization	Yes or No	Question 6 Comment
		therefore, “capability” is used to avoid being prescriptive and to provide flexibility. This was not intended by the drafting team. The intent is to give the entity the flexibility in meeting the requirement. A loss of Interpersonal Communication capability is covered by R10, notification of Interpersonal Communication capability failure. No change made. R1 - In later requirements it is proposed that the entity “...shall designate an...” It is suggested that for consistency and audit ability, this concept be used for R1, R3, R5, R7 and R8. In addition, the qualifier of “primary” should be used such that the requirements read: <i>“... shall have designated, primary Interpersonal Communications capability with the following entities:”</i> Although it is appropriate that “Alternative” be capitalized since it is used in a defined term (i.e. Alternative Interpersonal Communication”) that bounds acceptable alternative methods , we do not see the need to capital “primary.” Each entity listed must “have” an Interpersonal Communication capability and for Alternative Interpersonal Communication capability able to “designate” the alternate. The team established these requirements to provide flexibility to the industry. No change made. R9 - The requirement is unclear if the required monthly test is a general functionality test or if there is the expectation of testing the designated Alternative Interpersonal Communications with all of the entities defined in the sub-requirements of R2, R4, and R6. There is no expectation of testing the primary Interpersonal Communications - is this intentional or an oversight? Although functional testing of this should be done as a normal course of business, should an explicit test be required with each entity in the sub-requirements of R1,

Organization	Yes or No	Question 6 Comment
		R3, R5, R7 and R8 to insure, for example, that all the phone numbers are correct? COM-001-2, R9: The requirement is to initiate repair or designate an Alternative Interpersonal Communication capability within two hours. The requirement is not to have the repair completed within two hours. The requirement recognizes that the entity may use its Alternative Interpersonal Communication capability now as its Interpersonal Communication capability, and then, if it decides to do so, designate another, if you may, “new” Alternative Interpersonal Communication capability. This is not required, but is an option that the entity can consider. The entity may already have a maintenance and repair agreement in place that will respond and repair the failed capability. No change made. R10 - The following scenario seems plausible: The Interpersonal Communications fails and is detected at 14:00 and gets fixed at 14:35. It lasted more than 30 minutes but is fixed. As written the requirement would require the responsible entity to notify entities identified in R1 through R6 by 15:00 (i.e. 60 minutes from detection) even though the problem no longer exists. Is that the expectation? The RCSDT proposes that upon detection of failure that continues at least 30 minutes, starts the 60-minute clock. The 30 minutes allows an entity time to restore or determine if they can restore its Interpersonal Communication capability before the clock starts. No change made. Does COM-001 apply only to primary control centers or back-ups, per EOP-008, as well? The RCSDT reviewed both EOP-008-0 and EOP-008-1, which is subject to future enforcement. In either version, the team believes there is no need to add additional language to the standard. No change made. The RCSDT believes that prescribing a device or medium would limit an entity; therefore, “capability” is used to avoid being prescriptive and to provide flexibility. This was not intended by the drafting team. The intent is to give the entity the

Organization	Yes or No	Question 6 Comment
		flexibility in meeting the requirement. A loss of Interpersonal Communication capability is covered by R10, notification of Interpersonal Communication capability failure. No change made. M9 reads <i>“at least on a monthly basis.”</i> We suggest that this be changed to <i>“at least once per calendar month”</i> as written in R9. This change should also be corrected in the VSLs. The RCSDT agrees and the language in M9 has been changed to agree with the language in R9 and the VSL. M8 - We suggest removing the second <i>“that”</i> in the first sentence of the measure. COM-001-2, M8: The RCSDT agrees and the language in M8 has been changed to delete the additional <i>“that.”</i> M10 - We suggest this be revised to coincide with changes made in R10 (deleting impacted and adding as identified in Requirements R1 through R6), therefore M10 should read: <i>“Each Reliability Coordinator, Transmission Operator, and Balancing Authority, shall have and provide upon request evidence that it notified entities as identified in Requirements R1 through R6 within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasted 30 minutes or longer. Evidence could include, but is not limited to dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent evidence. (R10.)”</i> The word <i>“impacted”</i> was removed in previous postings. For further clarification, the RCSDT has modified M10 to remove the word <i>“impacted”</i> to be consistent with R10. For additional clarity, the RCSDT also changed the phrase in R10 and M10, <i>“R1 through R6”</i> to <i>“R1, R3, and R5,”</i> to clarify that it applies to the capabilities with the RC, the TOP and the BA. M12 needs to be removed.

Organization	Yes or No	Question 6 Comment
		The RCSDT appreciates your comment and has deleted Measure M12 that was left in error. We question why the first paragraph of Section 1.3 - Data Retention has been included in each of these three standards. We suggest that it should be removed from each standard. The RCSDT thanks you for your comments. The Data Retention language has been updated to be consistent with the Standards Drafting Guidelines. COM-002-3 Comments R2 - We recommend that the following phrase (in quotes) be added to R2: Each Balancing Authority, Transmission Operator and Distribution Provider that is the recipient of a Reliability Directive shall repeat, restate, rephrase or recapitulate the Reliability Directive “immediately upon receiving it.” As written, there is no limit as to when the entity must repeat it (i.e. they could wait 2 hours)The Standard is not clear as to what each entity is to do when more than one entity receives a Reliability Directive at the same time (e.g. during a RC area teleconference call). For example, is a roll call of receiving entities expected to be held so that they individually can repeat, restate, rephrase or recapitulate the Reliability Directive followed by individual confirmation required in R3? The requirement is aimed at being a performance-based requirement and states a description of “what” communication must take place, but does not prescribe “how” the communication is to be made. Adding the suggested phrase “immediately upon receiving it” introduces the ambiguous term “immediately,” for which there is neither plain meaning nor simple explanation. What must happen is that the recipient must respond in such a way that the issuer may determine whether the message has been properly understood. The RCSDT concludes that the proposed language gives plain meaning. No change made. IRO-001-3 Comments

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		We recommend that where the verb “direct/directed” or noun “direction” is used in Purpose, R1, R2 and R3, that it be replaced with the verb “instruct/instructed” or noun “instruction”, as appropriate. This would help the industry avoid confusion often referred to as “big D” or “little d” directives. It is noted that the term “Reliability Directive” does that to a great degree but avoiding the verb/noun “direct/direction” would augment the difference. The RCSDT feels the use of “direct” and “directed” is consistent with the purpose and application of those terms in other standards. No change made. R1 - At what point in time is “identified” referring to in “...to prevent identified events or...?” Is it referring to current or future events? One might assume both since the “Time Horizon” is defined as Real-time Operations, Same Day Operations and Operations Planning, but the requirement may be enhanced if explicitly stated (“...to prevent events identified in real-time or in the future or to mitigate the magnitude...”). The context of “identified” is when a set of system conditions is recognized that could lead to an Emergency or Adverse Reliability Impact, which may require action. See standards IRO-008 and IRO-009. No change made. For clarity, the scope of the authority should be limited to the Reliability Coordinator Area (“...that result in an Emergency or Adverse Reliability Impacts within its Reliability Coordinator Area”). As written, it implies the authority should extend outside its RC Area. The RCSDT believes that limiting the scope to the RC’s area would be too limiting and not account for potential conditions where an adjacent RC may have lost its wide-area view and requests the assistance of another RC or vice-versa. No change made. R2 - We question the phrase “physically implemented” and recommend that the intent be clarified in the language. The RCSDT believes there may be conditions where an entity may not be able to physically implement the direction. For example, an entity that does not have the

Organization	Yes or No	Question 6 Comment
		right to access certain equipment or cannot manually operate a broken apparatus. We feel the proposed language achieves the intended purpose. No change made. We note the following comment and response posted under Consideration of Comments on Initial Ballot - Reliability Coordination (Project 2006-06) Date of Initial Ballot: February 25 - March 7, 2011: <i>"IRO-001 R2, R3, and R4 have replaced "Directives" with the word direction in lower case (while it appears that "Directives" is a subset of "directions"). We believe that this muddies the waters and could bring numerous conversations and dialog into scope unnecessarily. The end result is that the RC has the right to issue and use "Directives" and anything short of this could just be communications. For example, a number of entities that are Reliability Coordinators also facilitate energy markets. There are many communications related to markets that probably should be out of scope with respect to the standards. Furthermore, it might not be clear what role (e.g., Reliability Coordinator, market operator, etc) the staff at these entities is fulfilling. Response: IRO-001 is written to cover both typical daily operating scenarios and also emergency scenarios. The required performance encompasses issuing and responding to Reliability Directives as well as other directions. The requirement language specifically ties back to Requirement R2 which states that the RC "shall take actions or direct actions, which could include issuing Reliability Directives." This is the "direction in accordance with Requirement R2" stated in R3 and the "direction in accordance with Requirement R3" stated in R4."We believe the entity's comments remain valid and the response provided by the SDT does not address all aspects of the concern.</i> The word "direction" connects with the language in the R1 (act or direct). Reliability Directives is a subset of "direction." No change made. We suggest that the language be changed to "Reliability Directive" consistent with COM-002. R3 - The requirement states the responsible entities shall "inform" its RC when

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		unable to perform as directed but it is unclear when the notification needs to take place. Although the term “as soon as practical” may seem be un-measureable, as written now there is no time deadline to perform the notification - i.e. it could be 4 hours later after recognition. The proposed requirement uses the term “upon recognition.” No change made. M2 - need to add the following words “compliance with, physically, unless” which were included in R2, therefore M2 should read: The RCSDT thanks you for your comment and has added the word “physically” to the IRO-001-2, Measure M2. <i>“Each Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator and Distribution Provider shall have and provide evidence which may include, but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it complied with its Reliability Coordinator’s direction(s) per Requirement R1 unless compliance with the direction per Requirement R1 could not be physically implemented or unless such actions would have violated safety, equipment, regulatory or statutory requirements. In such cases, the Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator or Distribution Provider shall have and provide copies of the safety, equipment, regulatory or statutory requirements as evidence for not complying with the Reliability Coordinator’s direction”</i> (R2) “Section 1.3, the second bullet; need to add calendar to 12 calendar months.” The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Standards Review group only and should not be construed as the position of SERC Reliability Corporation, its board or its officers.” The RCSDT appreciates your comments and conforming changes have been made to the Data Retention section.

Organization	Yes or No	Question 6 Comment
Response: See response above.		
Pacific Northwest Generating Cooperative		The PNGC Comment Group believes COM-002-3, R2, lacks justification for applicability to a Distribution Provider (DP). RCs in the WECC region do not communicate reliability directives to DP only entities. Having this requirement apply to DPs seems to indicate that we will need 24/7 communications capability to record and respond to calls that will never come in order to satisfy the requirement with no improvement to reliability. The SDT's response from the last round of comments: "It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive." Nowhere is this expectation provided for in the written standard. If the issuer of a reliability directive has already called the DP, are they going to then re-issue the reliability directive after the DP calls them back?
Response: In COM-002-3, the DP may or may not receive a Reliability Directive from the RC; however, in the case they do, they are required to comply with the requirement. The measures do not require recordings. Evidence may include things like dated operator logs. No change made.		
Northeast Power Coordinating Council		For COM-001: 1. R1.2 and R2.2: The phrase "within the same Interconnection" is improper; it needs to be removed. RCs between two Interconnections still need to communicate with each other for reliability coordination (e.g. between Quebec and the other RCs in the NPCC region to coordinate reliability issues including curtailing interchange transactions crossing an Interconnection boundary). The SDT's response to industry comments on the previous posting that the phrase was added to address the ERCOT situation (that ERCOT does not need to communicate with other RCs and that such coordination takes place between TOPs) leaves a reliability gap. Requirement R1 addresses a reliability need for adjacent Reliability Coordinators synchronously connected within the same Interconnection to have Interpersonal

Organization	Yes or No	Question 6 Comment
		Communication capability; however, it does not preclude or limit the Reliability Coordinator from establishing Interpersonal Communication capability with others. The RCSDT does not see where there is a need to communicate with other Reliability Coordinator's from one interconnection to another. No change made. 2. R3.5 and R4.3: The phrase "synchronously connected within the same Interconnection" is also improper; it needs to be removed. TOPs do communicate with other TOPs including those asynchronously connected and in another Interconnection (e.g. between Quebec and all of its asynchronously interconnected neighbors). The reason that was used in response to the above comments (coordination among TOPs for DC tie operation) contradicts with the inclusion of this phrase in R3.5 and R4.3. The RCSDT has made clarifying changes by adding Parts to R3 and R4 to address asynchronous connections between Transmission Operators and have eliminated the phrase "within the same interconnection." COM-001-2, R3.5 and R4.3: Use of the phrase "within the same interconnection." The RCSDT recognizes that operating activities occurring inside an interconnection that is not synchronously interconnected with another interconnection cannot cause immediate effects upon that interconnection. Any changes in flow across any asynchronous tie between those interconnections must take place through a coordinated interchange energy scheduling process, except for contingency loss the asynchronous ties. In the case of the latter, there is no other path which can be used to address the loss of the asynchronous tie, nor is any synchronous tie immediately affected. The standard does not require such involved RCs to have Interpersonal Communication capability, but does not preclude it. Any rearrangement of scheduled flows on other asynchronous ties must be done through a pre-existing interchange energy scheduling process. No change made. 3. R4 and R6: Not requiring an Alternative Interpersonal Communication capability between the BAs and the DP and GOP can result in a reliability gap. If Interpersonal Communication capability between the BAs and these entities is required to begin

Organization	Yes or No	Question 6 Comment
		with to enable BAs to communicate with these entities (such as operating instructions or Reliability Directives) to ensure reliable operations, then an alternative capability is also needed to ensure this objective is achieved when the primary capability fails. The RCSDT refers the Order No. 693 in Paragraph 508 to clarify the reason the DP and GOP are not required to have Alternative Interpersonal Communication and is as follows: “(1) expands the applicability to include Generator Operators and Distribution Providers and includes Requirements for their telecommunications facilities; (2) identifies specific requirements for telecommunications facilities for use in normal and Emergency conditions that reflect the roles of the applicable entities and their impact on Reliable Operation and (3) includes adequate flexibility for compliance with the Reliability Standard, adoption of new technologies and cost-effective solutions.” In addition, R11 requires the DP and GOP to consult with its BA and TOP to determine a mutually agreeable action for restoration. No change made. 4. To preclude the possibility of problems arising from having different languages spoken between entities, COM-001-1.1 R4 should remain as it was or those ideas kept in the revised requirement. R4 read: <i>“R4. Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations.”</i> According to the proposed implementation plan for COM-001-2, R4 pertaining to the use of English will remain in effect upon the effective date of COM-001-3. This requirement is being revised and will be included in Standard COM-003-1, Operating Personnel Communications Protocols. COM-001-1.1, R4 will be retired at midnight the day before COM-003-1 becomes effective. No change made.

Organization	Yes or No	Question 6 Comment
		5. Measure M3 does not cover the added R3.5 condition (having Interpersonal Communications capability with each adjacent TOP). M3 needs to be revised. The RCSDT thanks you for your comment and has made conforming changes to make to Measure, M3. For IRO-001: The Data Retention Section does not reflect the revised requirements. As examples: the Electric Reliability Organization is no longer a responsible entity; the Reliability Coordinator should replace the ERO for keeping data for R1. Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider should replace the Reliability Coordinator for keeping data for R2. And, in the Data Retention Section, R4 and M4 are mentioned. However, there are only three requirements with their corresponding measures in the standard.
Response: The RCSDT thanks you for your comment and has made conforming changes to IRO-001-3.		
MRO NSRF		Has the SDT looked at combining COM-002-3 and IRO-001-3 into a single Standard? It would allow Entities a one stop shopping place to refer to issuing and receiving a Reliability Directive. The RCSDT understands some of the benefits with combining the standards; however, at this juncture, it would further delay the progress of the standards. No change made. The definition of Interpersonal Communication is: “Any medium that allows two or more individuals to interact, consult, or exchange information.” As stated in Question 4, the use of the word “any” will bring in mediums that are outside the scope of this Standard. The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying

Organization	Yes or No	Question 6 Comment
		change to indicate the DP and GOP only need to consult with the entity affected by the failure. The NSRF recommends the following: Interpersonal Communication: The primary (or designated) medium that allows two or more individuals to interact, consult, or exchange information. The RCSDT emphasizes the requirement refers only to Interpersonal Communication capabilities. Adding the phrase “to the primary” is not needed. Please refer to the definitions of Interpersonal Communication and Alternative Interpersonal Communication for clarification. No change made. In Standard COM-002-3 the MRO NSRF recommends that the Effective Date be the first day of the second calendar quarter after applicable regulatory approval, to be the same as COM-001-2 and IRO-001-3. In that way all 3 standards would be effective at the same time, making implementation much smoother. The RCSDT thanks you for your comment and has made conforming changes to adjust IRO-001 to be the same as COM-001 and COM-002. The below section will lead to entities hold evidence past the 12 month retention period. This ambiguous wording will force entities to hold data past the 12 month period as stated in the following paragraph, after the below sighting. Recommend that the first paragraph within 1.3 be deleted in its entirety. 1.3. Data Retention The following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit. The RCSDT thanks you for your comments. The Data Retention language has been updated to be consistent with the Standards Drafting Guidelines.

Organization	Yes or No	Question 6 Comment
Response: See response above.		
CCG, CPG, CECD		Comments: IRO-001-3 uses the term ‘direct’ in its purpose statement, R1, R2 and R3. To avoid confusion with a Reliability Directive (both for auditors and entities), we suggest the following: To establish the authority of Reliability Coordinators to make requests of other entities to prevent an Emergency or Adverse Reliability Impacts to the Bulk Electric System. The RCSDT feels the use of “direct” and “directed” is consistent with the purpose and application of those terms in other standards. No change made. R1: Each Reliability Coordinator shall have the authority to act or request others to act (which could include issuing Reliability Directives) to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impacts. The RCSDT feels the use of “direct” and “directed” is consistent with the purpose and application of those terms in other standards. The RCSDT believes by using the word “request” make the requirement conditional and is not consistent with the purpose of the standard. No change made. R2: Each Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider shall comply with its Reliability Coordinator’s request unless compliance with the request cannot be physically implemented, or unless such actions would violate safety, equipment, regulatory or statutory requirements, or unless the TOP, BA, GOP or DP convey a business reason not to comply with the request but express that they will comply if a Reliability Directive is given. The RCSDT feels the use of “direct” and “directed” is consistent with the purpose and application of those terms in other standards. The RCSDT believes by using the word “request” make the requirement conditional and is not consistent with the purpose of the standard. No change made. R3: Each Transmission Operator, Balancing Authority, Generator Operator, and

Organization	Yes or No	Question 6 Comment
		Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to perform as requested in accordance with Requirement R2. The RCSDT feels the use of “direct” and “directed” is consistent with the purpose and application of those terms in other standards. The RCSDT believes by using the word “request” make the requirement conditional and is not consistent with the purpose of the standard. No change made.
Response: See response above.		
LG&E and KU Services Company		COM-001-2 Regarding COM-001-2 and proposed definitions, LG&E and KU Services recommends changing the terms being defined from “Interpersonal Communications” and “Alternative Interpersonal Communication” to “Means for Interpersonal Communication” and “Alternative Means for Interpersonal Communication.” A communication is an exchange of information, not a medium. The medium is simply the means. LG&E and KU Services Company further recommend that each requirement be rewritten with these new defined terms as appropriate and that the word “capabilities” currently following the defined terms be removed from each of the requirements. We suggest the definition for “Means for Interpersonal Communication” be: “A medium utilizing electromagnetic energy that allows two or more individuals to interact, consult or exchange information.” We suggest the definition for “Alternative Means for Interpersonal Communication” be: “Any Means for Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Means for Interpersonal Communications used for day-to-day operation.” The RCSDT thanks you for your comment; however, great lengths were taken in communicating mediums regarding IC and AIC and finds that adding “Means” to the

Organization	Yes or No	Question 6 Comment
		proposed terms being defined diminishes clarity of the definition. No change made. Finally, LG&E and KU Services Company request clarification that the requirements to have in place Interpersonal Communications and Alternative Interpersonal Communications do not establish non-compliance for the unavailability of either medium provided the reporting requirements set forth in the standard are otherwise met. The RCSDT believes a condition of non-compliance will not be created if the entity meets all of the requirements for Interpersonal Communication and Alternative Interpersonal Communication capability. For example, the applicable entity has a failure of the IC and notifies the identified entities and begins using its AIC. No change made. All Proposed Standards LG&E and KU Services Company suggest that the first paragraph in section 1.3 Data Retention be removed from all proposed standards. It states: ...For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit. While LG&E and KU Services Company is confident that the SDT intended to clarify entities' data retention responsibilities, this paragraph could be clarified to indicate that it does not require that any additional evidence be retained and provided beyond that written in the standard's requirements. The RCSDT thanks you for your comments. The Data Retention language has been updated to be consistent with the Standards Drafting Guidelines.
Response: See response above.		
Bonneville Power Administration		BPA supports COM-001-2, COM-002-3 and IRO-001-3 as written and has no comments or concerns at this time.

Organization	Yes or No	Question 6 Comment
Response: Thank you for your comment.		
SPP Standards Review Group		COM-001-2: Requirement 10 is too open ended as written. The measure, M10, indicates that only impacted entities need to be notified. The requirement should be changed to make it consistent with the measure. The requirement would then read: <i>“Each RC, TOP And BA shall notify impacted entities as identified...”</i> Requirements 3 and 5 places the responsibility for establishing Interpersonal Communication capability on the TOP and BA. It is quite conceivable that a TOP or BA may not know all, or newly, registered DPs and GOPs in its respective area. The word “impacted” was removed in previous postings. For further clarification, the RCSDT has modified M10 to remove the word “impacted” to be consistent with R10. For additional clarity, the RCSDT also changed the phrase in R10 and M10, “R1 through R6” to “R1, R3, and R5” to clarify that it applies to the capabilities with the RC, the TOP, and the BA. In Requirements 7 and 8, the DP and GOP, respectively, are in turn responsible for establishing Interpersonal Communication capability. The TOPs/BAs and the DPs/GOPs should not be responsible for this. The DPs and GOPs should be held accountable for requesting that capability of their TOP and BA. The standard establishes requirement for communication capability appropriate to ensure reliability. There is no requirement for it to be different from the Interpersonal Communication capability that its Balancing Authority has with it, nor the Interpersonal Communication capability that its Transmission Operator has with it. Cooperation and coordination is always encouraged and is an excellent practice, but is not required by this standard. Thank you for your suggestion. No change made.

Organization	Yes or No	Question 6 Comment
		Therefore, we suggest adding the following phrase at the end of Requirements 3.3, 3.4, 5.3 and 5.4 - 'that has requested Interpersonal Communications capability.' Then R3.3 would read: <i>"Each Distribution Provider within its Transmission Operator Area that has requested Interpersonal Communications capability."</i> The SDT does not agree that these changes to R3.3, R3.4, R5.3 and R5.4 are necessary. The current R7 and R8 require the DP and the GOP to have this capability. It is not a request. No change made. COM-002-3: Requirement 2/Measure 2: There is an inconsistency between the requirement and the measure. The requirement allows the recipient to repeat, restate, rephrase or recapitulate the directive. Measure 1 only mentions repeating the directive. The RCSDT agrees that M2 needs to match the phrasing used in R2 and has made clarifying changes.
Response: See response above.		
Dominion		COM-001-2; M9 reads <i>"at least on a monthly basis"</i>, Dominion suggests that this be changed to <i>"at least once per calendar month"</i> as written in R2. The RCSDT agrees and the language in M9 has been changed to agree with the language in COM-001-2, R9. M8 Dominion suggests removing the second <i>"that"</i> in the first sentence of the measure. COM-001-2, M8: The RCSDT agrees and the language in M8 has been changed to delete the additional <i>"that."</i> M10 Dominion suggests this be revised to coincide with changes made in R10 (deleting impacted and adding as identified in Requirements R1 through R6),

Organization	Yes or No	Question 6 Comment
		therefore M10 should read: <i>“Each Reliability Coordinator, Transmission Operator, and Balancing Authority, shall have and provide upon request evidence that it notified entities as identified in Requirements R1 through R6 within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasted 30 minutes or longer. Evidence could include, but is not limited to dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent evidence. (R10.)”</i> The RCSDT thanks you for your comment and has made conforming changes to make change “impacted” to “identified” entities. M12 needs to be removed. The RCSDT appreciates your comment and has deleted Measure M12 that was left in error. IRO-001-3; R2 - Dominion questions the phrase “physically implemented” and recommends that the intent be clarified in the language. The RCSDT believes there may be conditions where an entity may not be able to physically implement the direction. For example, an entity that does not have the right to access certain equipment or cannot manually operate a broken apparatus. We feel the proposed language achieves the intended purpose. No change made. Dominion notes the following comment and response posted under Consideration of Comments on Initial Ballot - Reliability Coordination (Project 2006-06) Date of Initial Ballot: February 25 - March 7, 2011:” <i>IRO-001 R2, R3, and R4 have replaced “Directives” with the word direction in lower case (while it appears that “Directives” is a subset of “directions”). We believe that this muddies the waters and could bring numerous conversations and dialog into scope unnecessarily. The end result is that the RC has the right to issue and use</i>

Organization	Yes or No	Question 6 Comment
		<i>“Directives” and anything short of this could just be communications. For example, a number of entities that are Reliability Coordinators also facilitate energy markets. There are many communications related to markets that probably should be out of scope with respect to the standards. Furthermore, it might not be clear what role (e.g., Reliability Coordinator, market operator, etc) the staff at these entities are fulfilling.</i> <i>Response: IRO-001 is written to cover both typical daily operating scenarios and also emergency scenarios. The required performance encompasses issuing and responding to Reliability Directives as well as other directions. The requirement language specifically ties back to Requirement R2 which states that the RC “shall take actions or direct actions, which could include issuing Reliability Directives.” This is the “direction in accordance with Requirement R2” stated in R3 and the “direction in accordance with Requirement R3” stated in R4.”Dominion believes the entity’s comments remain valid and the response provided by the SDT does not address all aspects of the concern.</i> Dominion suggests that the language be changed to “Reliability Directive” consistent with COM-002. The word “direction” connects with the language in the R1 (act or direct). Reliability Directives is a subset of “direction.” No change made. M2 - need to add the following words “compliance with, physically, unless” which were included in R2, therefore M2 should read: <i>“Each Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator and Distribution Provider shall have and provide evidence which may include, but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it complied with its Reliability Coordinator's direction(s) per Requirement R1 unless compliance with the direction per Requirement R1 could not be physically</i>

Organization	Yes or No	Question 6 Comment
		<i>implemented or unless such actions would have violated safety, equipment, regulatory or statutory requirements. In such cases, the Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator or Distribution Provider shall have and provide copies of the safety, equipment, regulatory or statutory requirements as evidence for not complying with the Reliability Coordinator's direction. (R2)"</i> The RCSDT thanks you for your comment and has added the word "physically" to the IRO-001-2 Measure M2. Section 1.3, the second bullet; need to add calendar to 12 calendar months The RCSDT appreciates your comments and conforming changes have been made to the Data Retention section.
Response: See response above.		
FirstEnergy		Definition of Interpersonal Communications. We understand that the team does not want to be prescriptive as far as the specific types of communication mediums since we live in an age of many forms of communication. But in this case it may be helpful to give examples in the definition. An auditor may interpret Interpersonal Communication to strictly include voice-related and two-way conversations. Depending on the circumstances, other mediums may be adequate, such as blast calls or instant messaging. This should be clarified in the definition. COM-001-2. In R9, it should be clear that the 2-hour timeframe is for initiation of corrective action because mitigation may take much longer. We suggest the last sentence of R9 state: "If the test is unsuccessful, the responsible entity shall, within 2 hours, initiate action to repair or designate a replacement Alternative Interpersonal Communications capability.

Organization	Yes or No	Question 6 Comment
		COM-001-2, R9: The requirement is to initiate repair or designate an Alternative Interpersonal Communication capability within two hours. The requirement is NOT to have the repair completed within two hours. The requirement recognizes that the entity may use its Alternative Interpersonal Communication capability now as its Interpersonal Communication capability, and then, if it decides to do so, designate another, if you may, “new” Alternative Interpersonal Communication capability. This is not required, but is an option that the entity can consider. The entity may already have a maintenance and repair agreement in place that will respond and repair the failed capability. No change made. In R10, the phrase “R1 through R6” should state “R1 through R8.” The RCSDT thanks you for your comment; alternatively, the RCSDT has modified the language of R10 to refer to R1, R3, and R5, rather than “R1 through R6,” since the responsible entities are limited to the RC, the TOP, and the BA in these requirements. COM-002-3 In R2, the use of the term recapitulate may not be appropriate. This term means “to summarize” the directive. Three-part communication during emergency situations should assure that the essential details of the directives are understood and a summary may inadvertently leave out important information. The RCSDT carefully considered the use of the term “recapitulate,” and believes it correctly captures the intent. No change made. The effective date of COM-002-3 should be consistent with COM-001-2 and IRO-001-3 and state “the 1st calendar day of the 2nd calendar quarter.” It currently shows the “1st calendar quarter in the standard and implementation plan. The RCSDT thanks you for your comment and has made conforming changes to adjust IRO-001 to be the same as COM-001 and COM-002. IRO-001-3 The third bullet under Data Retention addresses requirement R4 and measure M4

Organization	Yes or No	Question 6 Comment
		neither of which exist in the standard. The RCSDT thanks you for your comment and has made conforming changes. In R1, the word “and” is missing between Generator Operator and Distribution Provider. The RCSDT thanks you for your comment and has made conforming changes to IRO-001, R2. VSL for R2 - “N/A” should be removed from the High VSL - Furthermore, the VSL should include language for instances when the entity cannot meet the RC’s directive as afforded by R2. The RCSDT thanks you for your comment and has made conforming changes to IRO-001, R2 VSL.
Response: See response above.		
MISO Standards Collaborators		The Data Retention Section in IRO-001 does not reflect the revised requirements. For example: the Electric Reliability Organization is no longer a responsible entity; the Reliability Coordinator should replace the ERO for keeping data for R1; Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider should replace the Reliability Coordinator for keeping data for R2; and there is no R4/M4. The RCSDT thanks you for your comment and has made conforming changes. Additional comments associated with COM-002 We are concerned with the use of ‘shall’ in the measurement sections. ‘Shall’ statements should only be used in the Requirements, as these are the only enforceable items in the standard. The measures should not limit how we show compliance. If there are specific issues that the drafting team is proposing to be a requirement, they should be added to the requirements section of the standard. The RCSDT has checked the usage of “shall” in other standards and has found it to be

Organization	Yes or No	Question 6 Comment
		consistent with writing measures. The RCSDT notes the measures are examples and the entity is not limited to those examples. No change made. Measurement M1 should also allow entities to develop procedures that are distributed to and trained on in advance with recipients of directives that meet the requirements for the communication of what constitutes a Reliability Directive. The last sentence in the measurement should be revised to read: <i>“Such evidence could include, but is not limited to, dated and time-stamped voice recordings, dated and time-stamped transcripts of voice recordings, or dated operator logs to show that it identified the action as a Reliability Directive to the recipient or approved procedures that identify what constitutes a Reliability Directive and when Reliability Directives are issued.”</i> The RCSDT believes that M1 does not preclude an entity from developing, having or utilizing procedures as evidence to address Reliability Directives. No change made. (R1) The Data Retention section states; ‘For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.’ It is unclear on how an entity would be expected to provide evidence beyond 3 months when requested if the data retention period and established procedures do not require the evidence to be retained. The SDT should provide examples of what other types of evidence could be expected or the phrase should be removed. The RCSDT thanks you for your comments. The Data Retention language has been updated to be consistent with the Standards Drafting Guidelines.
Response: See response above.		

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Florida Municipal Power Agency		In the definition of Interpersonal Communication, the use of the word “medium” is ambiguous. Suggestions for alternatives: “system”, “channel.” The RCSDT deliberately stayed away from the use of primary and secondary mediums, and prefers to use communications capabilities. Further, the RCSDT has gone to great lengths to provide some flexibility for those DPs and GOPs with little or no impact on the reliability of the BES. FERC directed NERC to provide for this consideration. Therefore, we use the language as proposed in R11. Mutually agreeable implies that both parties are willing to accept the outcome. It doesn’t mean that a DP or GOP must comply with the wishes of its TOP or BA because as you state that could be beyond the control of the DP or GOP. But what transpires in the consultation is a realization of what the situation is, what the impacts to reliability are and a determination of what is amicable to both parties. No change made. COM-001-2, R1 and R3, the phrase: “have Interpersonal Communications capabilities”, what if the communication system fails? Is that an immediate non-compliance (especially R3.3 and R3.4 which do not require a redundant system). Suggest using EOP-008 type of language to allow restoration of failed equipment without non-compliance. The RCSDT reviewed both EOP-008-0 and EOP-008-1, which is subject to future enforcement. In either version, the team believes there is no need to add additional language to the standard. The RCSDT believes that prescribing a device or medium would limit an entity; therefore, “capability” is used to avoid being prescriptive and to provide flexibility. This was not intended by the drafting team. The intent is to give the entity the flexibility in meeting the requirement. A loss of Interpersonal Communication capability is covered by R10, notification of Interpersonal Communication capability failure. No change made.

Organization	Yes or No	Question 6 Comment
		COM-001-2, R9 - "Each ... shall test its Alternative Interpersonal Communications capability", suggest adding the phrase "to each entity for which Alternative Interpersonal Communications is required" to add clarity. In addition, the type of testing is unclear and ambiguous. The RCSDT proposes that R9 correctly identifies and provides clarity for the entities required to have Alternative Interpersonal Communication capability. No change made There is also ambiguity in the terms "direct", "directive", "direction" and "Reliability Directive." The SDT may want to consider using the terms "instruct" and "instruction" in place of "direct", "directive", "direction" to more clearly distinguish from a Reliability Directive. The RCSDT feels the use of "direct" and "directed" is consistent with the purpose and application of those terms in other standards. No change made.
Response: See response above.		
ACES Power Marketing Standards Collaborators		The following comments are regarding IRO-001-3. We disagree with including "authority" in this standard. FERC Order 693a, paragraph 112, made it clear that the authority of a registered entity is established through the approval of the standards by FERC. Thus, a Reliability Coordinator gets its authority to issue Reliability Directives by having a requirement that states it must issue Reliability Directives approved by the Commission. Please change "shall have authority to act" in Requirement R1 back to "shall act." Please also remove all other vestiges of authority from the standards including in the purpose, measures and VSLs. The RCSDT believes that other standards (i.e., IRO-009 - R3 & R4, EOP-002 - R1 & R8) address the action of others and if the term "authority" is omitted, creates a generic requirement such as what has been suggested puts the RC in a double jeopardy

Organization	Yes or No	Question 6 Comment
		situation. No change made. The word “direction” connects with the language in the R1 (act or direct). Reliability Directives is a subset of “direction.” No change made. Requirement R1 should require the use of Reliability Directives. The requirement compels the Reliability Coordinator “to direct others to act to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impact.” Reliability Directives are necessary to address Adverse Reliability Impacts or Emergencies and trigger the use of three-part communications identified in COM-002-3. The RCSDT views R1 as an authority requirement to direct others, which could include a subset of direction called, Reliability Directive. Requirement R2 is the response requirement for the recipient. The judgment the recipient is under is that the recipient must comply with the direction, unless the direction cannot be physically implemented or unless such actions would violate safety, equipment, regulatory or statutory requirements. Requirement R3 is simply requires the recipient to inform the issuer of its inability to perform the direction. No change made. COM-002-3 R1 really compels the Reliability Coordinator to use a Reliability Directive for Emergencies and Adverse Reliability Impacts with the opening clause: “When a Reliability Coordinator, Transmission Operator, or Balancing Authority determines actions need to be executed as a Reliability Directive.” What else could be more important for a Reliability Coordinator to issue a Reliability Directive than for an Emergency or Adverse Reliability Impact? Thus, not requiring the use of Reliability Directives for Adverse Reliability Impacts and Emergencies makes IRO-001-3 R1 and COM-002-3 R1 inconsistent. For clarity and consistency, Requirement R2 and R3 should also be clear that the responsible entities will respond to the Reliability Coordinator’s Reliability Directives.

Organization	Yes or No	Question 6 Comment
		Furthermore, this would make the standard consistent with how Reliability Directives are handled by the Transmission Operator in the draft TOP-001-2 standard proposed by the Real-Time Operations drafting team (Project 2007-03). The RCSDT development of IRO-001-3 R1 states "...which could include issuing Reliability Directives..." and therefore does not preclude its use if it is determined by the RC to use it. There may be instances where the RC discusses operational issues in normal dialogue with entities that do not require the use of Reliability Directive. No change made. The Data Retention section needs to be modified. The first bullet applies to the Electric Reliability Organization and Requirement R1 and Measure M1. The actual requirement and measure apply to the Reliability Coordinator. Furthermore, five calendar years exceeds the audit period of three years for a Reliability Coordinator. The RCSDT thanks you for your comment and has removed this bullet. The second bullet incorrectly applies to the Reliability Coordinator and Requirement R2 and Measure M2. Requirement R2 and Measurement M2 apply to Transmission Operators, Balancing Authorities, Generator Operators and Distribution Providers. The third bullet mentions Requirement R4 and Measurement M4. The RCSDT thanks you for your comment and has made conforming changes. There is no Requirement R4 and Measurement M4 in the standard. The RCSDT thanks you for your comment and has made conforming changes. The VSLs for Requirement R1 are not consistent with the requirement. The VSL states that it is for failure to act while the requirement compels the Reliability Coordinator to have the authority to act. This modifies the requirement which is not allowed under FERC VSL guidelines. The RCSDT thanks you for your comment and will correct the R1 VSL to have the phrase "exercise their authority" inserted between "to" and "take" in the first

Organization	Yes or No	Question 6 Comment
		sentence. The VSLs for Requirement R2 need to include the “unless” clause from the requirement. Otherwise, the VSL implies that the responsible entity violated the requirement for failing to follow the directive even if they could not for one of the reasons listed in the requirement. This again is not consistent with FERC guidelines that state VSLs cannot modify the requirement. The RCSDT did not include the “unless such actions would violate safety, equipment, regulatory or statutory requirements” portion of the requirement in the VSL because if an entity could not perform the directed action, there is no violation. No change made. The following comments pertain to COM-001-2. We recommend striking “capability” from all of the requirements. It is not clear to us how this helps when a definition for Interpersonal Communications is written already and applies to a communication medium. Furthermore, we think it causes confusion and actually contradicts the intent of the standard. Because Requirements R1, R3, R5, R7 and R8 focus on capability, the responsible entity will be in violation anytime its medium that it uses for the primary capability does not function properly. Whereas if the requirement stated that the responsible entity was to designate a primary communications medium, the responsible entity is not in violation if that medium is not functioning properly. It would be clear that Requirement R2, R4 and R6 are intended to be complementary. The RCSDT believes that prescribing a device or medium would limit an entity; therefore, “capability” is used to avoid being prescriptive and to provide flexibility. This was not intended by the drafting team. The intent is to give the entity the flexibility in meeting the requirement. A loss of Interpersonal Communication capability is covered by R10, notification of Interpersonal Communication capability failure. No change made. Furthermore, it is not clear why Requirements R1, R3, R5, R7 and R8 state that the

Organization	Yes or No	Question 6 Comment
		responsible entity shall “have” when the companion Requirements R2, R4, and R6 state “designate.” The RCSDT believes the requirements achieve the desired intent of the standard. Each entity listed must “have” an Interpersonal Communication capability and for Alternative Interpersonal Communication capability able to “designate” the alternate. The team established these requirements to provide flexibility to the industry. No change made. Since Requirement R10 deals with a failure of its Interpersonal Communications capabilities and not Alternate Interpersonal Communications capability, it should only refer to the entities in Requirements R1, R3, and R5. Currently, it includes R1 through R6. COM-001-2, R10: The RCSDT thanks you for pointing this out. The RCSDT has modified the language of R10 to refer to R1, R3, and R5, rather than “R1 through R6,” since the responsible entities are limited to the RC, the TOP, and the BA in these requirements. (COM-001 M1) We suggest changing “physical assets” to “demonstration of physical assets.” Since evidence is provided to the auditor and the auditor takes the evidence with them, providing them evidence that is a “physical asset” would be problematic. We believe that the VSLs could be written to provide more gradations. For example, if a Transmission Operator or Balancing Authority failed to have Interpersonal Communications capability with a Distribution Provider but had Interpersonal Communications capability with all other required entities, it has met the vast majority of the requirement. Since VSLs are a measure of how much the requirement was missed by the responsible entity, jumping to a Severe VSL does not seem to adequately capture that the responsible entity met the vast majority of the requirement. Requirements R4 and R6 even seem to recognize this by not including Distribution Provider in the list of entities to which the Transmission Operator or

Organization	Yes or No	Question 6 Comment
		Balancing Authority are required to designate Alternate Interpersonal Communications capability. The following comments pertain to COM-002-3. The RCSDT believes the Measures address the needed examples of evidence. No change made. While COM-002-3 is well written to explain the three-part communications requirements and makes it perfectly clear when Reliability Directive has been issued, the opening clause leaves the responsible entity open to second guessing on whether they should have issued a Reliability Directive. This problem could be solved by changing the opening clause to: “When a Reliability Coordinator, Transmission Operator, or Balancing Authority determines actions need to be executed as a Reliability Directive.” In the second bullet of Requirement R3, we suggest using “Restate” in place of “Reissue.” The responsible entity is not really reissuing the Reliability Directive. They are still in the act of trying to get the Reliability Directive issued and are simply re-communicating it because it was not understood.
Response: The RCSDT believe the offered suggestion does not improve COM-002-3, R1. No change made.		
Kansas City Power & Light		R9 - considering the reliability of communication systems and System Operator attention may be on more important operational concerns, a 2-hour response to a problem with the alternative means of communication is over sensitive. Allowing for sometime in an operating shift would be more in line, such as 8 hours. COM-001-2, R9: The requirement is to initiate repair or designate an Alternative Interpersonal Communication capability within two hours. The requirement is NOT to have the repair completed within two hours. The requirement recognizes that the entity may use its Alternative Interpersonal Communication capability now as its Interpersonal Communication capability, and then, if it decides to do so, designate

Organization	Yes or No	Question 6 Comment
		another, if you may, “new” Alternative Interpersonal Communication capability. This is not required, but is an option that the entity can consider. The entity may already have a maintenance and repair agreement in place that will respond and repair the failed capability. No change made. Violation Severity Levels for COM-001-2: The VSL’s for requirements R1-R8 and R11 do not recognize the efforts of Entities to meet the requirements. If an Entity failed to establish communications or alternative communications with 1 Entity out of 20 should that be Severe? The RCSDT believes the requirements are essential to reliable operations; however, the requirement is Severe more so because it is a pass-fail requirement, and by definition makes it Severe (binary requirement). No change made. Implementation Plan for COM-001-2: The implementation plan is too aggressive at completing in 6 months after regulatory approvals. Establishing agreements with other RC’s, TOP’s and BA’s for alternative “interpersonal communications” regarding the various types of communications available that meet these requirements will take more than 6 months. Recommend 12 months to allow Entities sufficient time to reach agreements and to establish the communications. The RCSDT believes that six months is adequate considering additional facilities should not have to be built to establish communications with the DP and GOP; similarly, compliance documentation should not impose significant work on the entities’ part. No change made.
Response: See response above.		
Southern Company		We question why the first paragraph of Section 1.3 - Data Retention has been included in each of these three standards. We suggest that it should be removed from each standard. The RCSDT thanks you for your comments. The Data Retention language has been

Organization	Yes or No	Question 6 Comment
		updated to be consistent with the Standards Drafting Guidelines. We suggest the drafting team look at Standard EOP-008, Requirements R3 and R8 and add appropriate language in Standard COM-001-2, to avoid instantaneous non-compliance for loss of Interpersonal Communications and/or alternate Interpersonal communications (R1 and R2). The RCSDT reviewed both EOP-008-0 and EOP-008-1, which is subject to future enforcement. In either version, the team believes there is no need to add additional language to the standard. The RCSDT believes that prescribing a device or medium would limit an entity; therefore, “capability” is used to avoid being prescriptive and to provide flexibility. This was not intended by the drafting team. The intent is to give the entity the flexibility in meeting the requirement. A loss of Interpersonal Communication capability is covered by R10, notification of Interpersonal Communication capability failure. No change made. COM-001-2 Dominion VP: COM-001-2; M9 reads “at least on a monthly basis”, Dominion suggests that this be changed to “at least once per calendar month” as written in R9. This change should also be corrected in the VSLs. The RCSDT agrees and the language in M9 has been changed to agree with the language in R9 and the R9 VSL. M8 - We suggest removing the second “that” in the first sentence of the measure. COM-001-2, M8: The RCSDT agrees and the language in M8 has been changed to delete the additional “that.” M10 - Dominion suggests this be revised to coincide with changes made in R10 (deleting impacted and adding as identified in Requirements R1 through R6), therefore M10 should read:

Organization	Yes or No	Question 6 Comment
		“Each Reliability Coordinator, Transmission Operator, and Balancing Authority, shall have and provide upon request evidence that it notified entities as identified in Requirements R1 through R6 within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasted 30 minutes or longer. Evidence could include, but is not limited to dated operator logs, dated voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent evidence. (R10.)” The word “impacted” was removed in previous postings. For further clarification, the RCSDT has modified M10 to remove the word “impacted” to be consistent with R10. For additional clarity, the RCSDT also changed the phrase in R10 and M10, “R1 through R6” to “R1, R3, and R5,” to clarify that it applies to the capabilities with the RC, the TOP, and the BA. M12 needs to be removed. The RCSDT thanks you for your comment and has made the deletion. Southern: Definition of Alternative Interpersonal Communication: Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communications used for day-to-day operation. Comments: -The proposed definition uses the term “medium.” What is the scope of that? Telephony is a “medium” but there is wired, wireless, satellite, etc. Was “medium” intended to differentiate voice, paper, text, email, teletype, or something else? -Similar to that last question - does the qualifying term “same” when modifying infrastructure mean something like voice versus written? What about situations where the primary telephone system is Voice Over Internet

Organization	Yes or No	Question 6 Comment
		Protocol (VOIP) and it is using the same computer network infrastructure as an email or messaging system. That is the “same infrastructure” but a different “medium” R1 Each Reliability Coordinator shall have Interpersonal Communications capability with the following entities: ...” The RCSDT believes that prescribing a device or medium would limit an entity; therefore, “capability” is used to avoid being prescriptive and to provide flexibility. This was not intended by the drafting team. The intent is to give the entity the flexibility in meeting the requirement. A loss of Interpersonal Communication capability is covered by R10, notification of Interpersonal Communication capability failure. No change made. Comments -In later requirements it is proposed that the entity “...shall designate an...” It is suggested that for consistency and auditability, this concept be used for R1, R3, R5, R7 and R8. Each entity listed must “have” an Interpersonal Communication capability and for Alternative Interpersonal Communication capability able to “designate” the alternate. The team established these requirements to provide flexibility to the industry. No change made. In addition, the qualifier of “primary” should be used such that the requirements read “... shall have designated, primary Interpersonal Communications capability with the following entities:” Although it is appropriate that “Alternative” be capitalized since it is used in a defined term (i.e. Alternative Interpersonal Communication”) that bounds acceptable alternative methods , we do not see the need to capital “primary.” The RCSDT emphasizes the requirement refers only to Interpersonal Communication capabilities. Adding the phrase “to the primary” is not needed. Please refer to the definitions of Interpersonal Communication and Alternative Interpersonal Communication for clarification. No change made.

Organization	Yes or No	Question 6 Comment
		R9 Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall test its Alternative Interpersonal Communications capability at least once per calendar month. Comments -The requirement is unclear if the required monthly test is a general functionality test or if there is the expectation of testing the designated Alternative Interpersonal Communications with all of the entities defined in the subrequirements of R2, R4, and R6. -There is no expectation of testing the primary Interpersonal Communications is this intentional or an oversight? Although functional testing of this should be done as a normal course of business, should an explicit test be required with each entity in the subrequirements of R1, R3, R5, R7 and R8 to insure, for example, that all the phone numbers are correct? The RCSDT intends each Alternative Interpersonal Communication capability to be verified functional by testing. If an entity has only one such capability, then only one test would be required. You further ask whether the absence of required testing of the “primary” (word is not in the requirement) Interpersonal Communication capability is intentional. The RCSDT intentionally left it out because the Communication capability is used routinely and the use is sufficient to demonstrate functionality. With respect to phone numbers, these are procedural matters to be addressed by each individual entity and by including phone numbers it would make the requirement prescriptive. The requirement is to test capability. No change made. R10 Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall notify entities as identified in Requirements R1 through R6 within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer.

Organization	Yes or No	Question 6 Comment
		Comments -The following scenario seems plausible: The Interpersonal Communications fails and is detected at 14:00 and gets fixed at 14:35. It lasted more than 30 minutes but is fixed. As written the requirement would require the responsible entity to notify entities identified in R1 through R6 by 15:00 (i.e. 60 minutes from detection) even though the problem no longer exists. Is that the expectation? The RCSDT proposes that upon detection of failure that continues at least 30 minutes, starts the 60-minute clock. The 30 minutes allows an entity time to restore or determine if it can restore its Interpersonal Communication capability before the clock starts. No change made. General Question -Does COM-001 apply only to primary control centers or back-ups, per EOP-008, as well? The RCSDT reviewed both EOP-008-0 and EOP-008-1, which is subject to future enforcement. In either version, the team believes there is no need to add additional language to the standard. No change made. COM-002-3 Southern R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. Comment It is recommended that the requirement be clarified that the Reliability Directive be identified as such during its delivery. (e.g., "...shall identify the action as a Reliability Directive to the recipient during its delivery.") The RCSDT believes the suggestion is overly prescriptive and limits the ability for an

Organization	Yes or No	Question 6 Comment
		entity to meet the requirement. No change made. R2 Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of a Reliability Directive shall repeat, restate, rephrase or recapitulate the Reliability Directive. Comment -It is recommended that the requirement be clarified that an entity receiving a Reliability Directive repeat, restate, rephrase or recapitulate it immediately upon receiving it. (e.g., "...shall repeat, restate, rephrase or recapitulate the Reliability Directive immediately upon receiving it."). As written, there is not limit as to when the entity must repeat it (i.e. they could wait 2 hours). The proposed requirement uses the term "upon recognition." No change made. General Question -The Standard is not clear as to what each entity is to do when more than one entity receives a Reliability Directive at the same time (e.g. during a RC area teleconference call) . Is, for example, a roll call of receiving entities expected to be held so that they individually can repeat, restate, rephrase or recapitulate the Reliability Directive followed by individual confirmation required in R3? The question about whether a roll call of receiving entities is expected to be held is asking for prescription of "how" to accomplish what is required. The RCSDT recognizes that there is more than one way to accomplish the confirmation when more than one entity received a Reliability Directive at the same time. What is required is for the recipient to respond in such a way that the issuer may determine whether the message has been properly understood. One way for that to occur would be, as you suggest, for the entities to individually respond. Another way would be for a pre-established protocol or procedure (e.g. roll-call, all-call, etc.) to be in place and used in such cases. The RCSDT has determined that prescribing "how" to ensure that "what" is required has been accomplished is not required and that the individually adopted procedures or protocols could offer many different ways to

Organization	Yes or No	Question 6 Comment
		ensure effectiveness. No change made. The RCSDT concept is that “All Call” compliance is related to having a document that explains how the entity responds. No change made. IRO-001-3 Dominion VP: R2 - Dominion questions the phrase “physically implemented” and recommends that the intent be clarified in the language. The RCSDT believes there may be conditions where an entity may not be able to physically implement the direction; for example, an entity that does not have the right to access certain equipment or cannot manually operate a broken apparatus. We feel the proposed language achieves the intended purpose. No change made. Dominion notes the following comment and response posted under Consideration of Comments on Initial Ballot - Reliability Coordination (Project 2006-06) Date of Initial Ballot: February 25 - March 7, 2011: <i>“IRO-001 R2, R3, and R4 have replaced “Directives” with the word direction in lower case (while it appears that “Directives” is a subset of “directions”). We believe that this muddies the waters and could bring numerous conversations and dialog into scope unnecessarily. The end result is that the RC has the right to issue and use “Directives” and anything short of this could just be communications. For example, a number of entities that are Reliability Coordinators also facilitate energy markets. There are many communications related to markets that probably should be out of scope with respect to the standards. Furthermore, it might not be clear what role (e.g., Reliability Coordinator, market operator, etc) the staff at these entities are fulfilling.</i> <i>Response: IRO-001 is written to cover both typical daily operating scenarios and also emergency scenarios. The required performance encompasses issuing and responding to Reliability Directives as well as other directions. The requirement language specifically ties back to Requirement R2 which states that the RC “shall take actions or direct actions, which could include issuing Reliability Directives.” This is the</i>

Organization	Yes or No	Question 6 Comment
		<i>“direction in accordance with Requirement R2” stated in R3 and the “direction in accordance with Requirement R3” stated in R4.”Dominion believes the entity’s comments remain valid and the response provided by the RCSDT does not address all aspects of the concern. Dominion suggests that the language be changed to “Reliability Directive” consistent with COM-002.</i> The word “direction” connects with the language in the R1 (act or direct). Reliability Directives is a subset of “direction.” No change made. M2 - need to add the following words “compliance with, physically, unless” which were included in R2, therefore M2 should read: <i>“Each Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator and Distribution Provider shall have and provide evidence which may include, but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it complied with its Reliability Coordinator’s direction(s) per Requirement R1 unless compliance with the direction per Requirement R1 could not be physically implemented or unless such actions would have violated safety, equipment, regulatory or statutory requirements. In such cases, the Transmission Operator, Balancing Authority, Generator Operator, Interchange Coordinator or Distribution Provider shall have and provide copies of the safety, equipment, regulatory or statutory requirements as evidence for not complying with the Reliability Coordinator’s direction.”</i> The RCSDT thanks you for your comment and has added the word “physically” to the IRO-001-2 Measure, M2. (R2) “Section 1.3, the second bullet; need to add calendar to 12 calendar months Southern General recommendation The RCSDT appreciates your comments and conforming changes have been made to the Data Retention section.

Organization	Yes or No	Question 6 Comment
		-It is recommended that where the verb “direct/directed” or noun “direction” is used in Purpose, R1, R2 and R3, that it be replaced with the verb “instruct/instructed” or noun “instruction”, as appropriate. This would help the industry avoid confusion often referred to as “big D” or “little d” directives. It is noted that the term “Reliability Directive” does that to a great degree but avoiding the verb/noun “direct/direction” would augment the difference. The RCSDT feels the use of direct and directed is consistent with the purpose and application of those terms in other standards. No change made. R1 Each Reliability Coordinator shall have the authority to act or direct others to act (which could include issuing Reliability Directives) to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impacts. Comment -At what point in time is “identified” referring to in “...to prevent identified events or...” Is it referring to current or future events? One might assume both since the “Time Horizon” is defined as Real-time Operations, Same Day Operations and Operations Planning but the requirement may be enhanced if explicitly stated (“...to prevent events identified in real-time or in the future or to mitigate the magnitude...”). The context of “identified” is when a set of system conditions is recognized that could lead to an Emergency or Adverse Reliability Impact, which may require action. See standards IRO-008 and IRO-009. No change made. -For clarity, the scope of the authority should be limited to the Reliability Coordinator Area (“...that result in an Emergency or Adverse Reliability Impacts within its Reliability Coordinator Area”). As written, it implies the authority should extend outside its RC Area. The RCSDT believes that limiting the scope to the RC’s area would be too limiting and not account for potential conditions where an adjacent RC may have lost its wide-

Organization	Yes or No	Question 6 Comment
		area view and requests the assistance of another RC or vice-versa. No change made. R2 Editorial comment - The words “compliance with” are in a different font in the posted version. The RCSDT thanks you for your comment and has corrected the font in IRO-001, R2. R3 Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to perform as directed in accordance with Requirement R2. Comment The requirement states the responsible entities shall “inform” its RC when unable to perform as directed but it is unclear when the notification needs to take place. Although the term “as soon as practical” may seem be un-measurable, as written now there is no time deadline to perform the notification - i.e. it could be 4 hours later after recognition. The proposed requirement uses the term “upon recognition.” No change made.
Response: See response above.		
Central Lincoln		As stated in our prior comments, we continue to have problems with COM-002, R2 and R3 as written. The SDT’s answer (“It is the expectation that an issuer of a Reliability Directive would request a return call by the Distribution Provider operating personnel, then issue the Reliability Directive”) addresses our concern perfectly, and we would agree with such an expectation. Unfortunately, the expressed expectation is not in the proposed standard or even in a proposed guideline for the standard.
Response: The RCSDT believes this is a process or procedure question that should be determined by the entity in how it handles communication with the RC. The standard, as written does, not preclude the entity from having a procedure. No change made.		

Organization	Yes or No	Question 6 Comment
Entergy Services, Inc		Entergy does not agree with including the DP and GOP in this standard. However, if they are to be included and are required to have the communications capability indicated, they should be included in R10. Why would it be important for the TOP to notify the DP that their communications method has failed, but it is not important for the DP to notify the TOP when their communications method has failed? The distinction doesn't seem reasonable or meaningful. The RCSDT stresses that R11 grants the DP and GOP flexibility in determining, in conjunction with its TOP or BA, when its Interpersonal Communication capability must be restored. This would provide allowances for those entities, which have little or no impact on the reliability of the BES while not requiring them to obtain Alternative Interpersonal Communication capabilities. Making the proposed changes would eliminate this flexibility. Removing R11, takes away the RCSDT's effort to include those provisions in the standard. No change made. Additionally, in the draft of COM-002-3 requirement 2 contains the language that the recipient of the directive shall "repeat, restate, rephrase or recapitulate" the directive. Why are so many synonyms of repeat necessary? Repeat or restate should be sufficient to get the point across. The RCSDT used the additional words to facilitate complete understanding. No change.
Response: See response above.		
Independent Electricity System Operator		(1) The proposed implementation plan conflicts with Ontario regulatory practice respecting the effective date of the standard. It is suggested that this conflict be removed by appending to the implementation plan wording, after "applicable regulatory approval" in the Effective Dates Section A5 on P. 4 of the draft standard COM-001, COM-002 and IRO-001, and on P. 2 of COM-001's Implementation Plan and P. 1 of COM-002's and IRO-001's Implementation Plans, to the following effect:", or as otherwise made effective pursuant to the laws applicable to such ERO

Organization	Yes or No	Question 6 Comment
		governmental authorities.” The RCSDT is uncertain where the conflict exists. The standard IRO-001 uses the term “after applicable” and the others “following applicable.” The RCSDT has updated the standards to use the most current effective date language. (2) COM-001: Measure M9: - “monthly basis.” Suggest changing “monthly basis” to “at least once per calendar month” to be consistent the wording in R9. The RCSDT thanks you for your comment and has made the conforming change in the COM-001, Measure M9. (3) IRO-001: Measures M1, M2, M3 - The types of evidence are listed in paragraph form. This is not consistent with presentation style in COM-001-2 Measures, where evidence is listed in bullet format. Suggest using bullet form for consistency. The RCSDT agrees and has made all the Measures bullet form in COM-001-2, but not in COM-002-3 and IRO-001-3. (4) IRO-001, Data Retention Section: i. The retention requirements do not reflect the revised requirements. For example: the Electric Reliability Organization is no longer a responsible entity; the Reliability Coordinator should replace the ERO for keeping data for R1; Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider should replace the Reliability Coordinator for keeping data for R2; and there is no R4/M4. Data retention related to IRO-001-2, R2/M2 was changed to agree with your suggestion. The changes were more involved – several sections were changed, including removing the reference to R4/M4. ii. Section 1.3, second paragraph: “The Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider... shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of

Organization	Yes or No	Question 6 Comment
		time as part of an investigation: "The word "or" between Generator Operator and Distribution Provider should be changed to "and." The RCSDT thanks you for your comment and has made conforming changes.
Response: See response above.		
Hydro-Quebec TransEnergie		For COM-001: R1.2 and R2.2: The phrase "within the same Interconnection" is improper; it needs to be removed. RCs between two Interconnections still need to communicate with each other for reliability coordination (e.g. between Quebec and the other RCs in the NPCC region to coordinate reliability issues including curtailing interchange transactions crossing an Interconnection boundary). The SDT's response to industry comments on the previous posting that the phrase was added to address the ERCOT situation (that ERCOT does not need to communicate with other RCs and that such coordination takes place between TOPs) leaves a reliability gap. Requirement R1 addresses a reliability need for adjacent Reliability Coordinators synchronously connected within the same Interconnection to have Interpersonal Communication capability; however, it does not preclude or limit the Reliability Coordinator from establishing Interpersonal Communication capability with others. The RCSDT does not see where there is a need to communicate with other Reliability Coordinator's from one interconnection to another. No change made. 2. R3.5 and R4.3: The phrase "synchronously connected within the same Interconnection" is also improper; it needs to be removed. TOPs do communicate with other TOPs including those asynchronously connected and in another Interconnection (e.g. between Quebec and all of its asynchronously interconnected neighbors). The reason that was used in response to the above comments (coordination among TOPs for DC tie operation) contradicts with the inclusion of this

Organization	Yes or No	Question 6 Comment
		phrase in R3.5 and R4.3. The RCSDT has made clarifying changes by adding a Part to R3 and R4 to address asynchronous connections between Transmission Operators and have eliminated the phrase “within the same interconnection.” 3. R4 and R6: Not requiring an Alternative Interpersonal Communication capability between the BAs and the DP and GOP can result in a reliability gap. If Interpersonal Communication capability between the BAs and these entities is required to begin with to enable BAs to communicate with these entities (such as operating instructions or Reliability Directives) to ensure reliable operations, then an alternative capability is also needed to ensure this objective is achieved when the primary capability fails. The RCSDT refers the Order No. 693 in Paragraph 508 to clarify the reason the DP and GOP are not required to have Alternative Interpersonal Communication and is as follows: “(1) expands the applicability to include Generator Operators and Distribution Providers and includes Requirements for their telecommunications facilities; (2) identifies specific requirements for telecommunications facilities for use in normal and emergency conditions that reflect the roles of the applicable entities and their impact on Reliable Operation and (3) includes adequate flexibility for compliance with the Reliability Standard, adoption of new technologies and cost-effective solutions.” In addition, R11 requires the DP and GOP to consult with its BA and TOP to determine a mutually agreeable action for restoration. No change made. 4. To preclude the possibility of problems arising from having different languages spoken between entities, COM-001-1.1 R4 should remain as it was or those ideas kept in the revised requirement. R4 read: “R4. Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations.” 5. Measure M3

Organization	Yes or No	Question 6 Comment
		does not cover the added R3.5 condition (having Interpersonal Communications capability with each adjacent TOP). M3 needs to be revised. According to the proposed implementation plan for COM-001-2, R4 pertaining to the use of English will remain in effect upon the effective date of COM-001-3. This requirement is being revised and will be included in Standard COM-003-1, Operating Personnel Communications Protocols. COM-001-1.1, R4 will be retired at midnight the day before COM-003-1 becomes effective. No change made. For IRO-001: The Data Retention Section does not reflect the revised requirements. As examples: the Electric Reliability Organization is no longer a responsible entity; the Reliability Coordinator should replace the ERO for keeping data for R1. The RCSDT thanks you for your comment and has made conforming changes to the Data Retention section. Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider should replace the Reliability Coordinator for keeping data for R2. The RCSDT has made conforming changes by correcting an error in the data retention section And, in the Data Retention Section, R4 and M4 are mentioned. However, there are only three requirements with their corresponding measures in the standard. The RCSDT has made conforming changes by correcting an error in the data retention section
Response: See response above.		
NIPSCO		In IRO-001 R2 an "and" is missing after Generator Operator, and the comma should be removed. Why are there 3 different Effective Dates for this project, each standard being

Organization	Yes or No	Question 6 Comment
		different? To simplify, can't they all be made identical?
Response: The RCSDT thanks you for your comment and has made conforming changes to IRO-001 R2 and the effective dates to the second quarter after regulatory approval.		
Oncor Electric Delivery Company LLC		For COM-001-2 Oncor takes the position that contacting all impacted entities within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer as prescribed in R1 through R6 is not doable within the ERCOT interconnect for a Transmission Operator. Oncor takes the position that notification only to the RC and BA is sufficient and that those two entities have the operational functionality to contact within the prescribed time all affected Distribution Providers, Generator Operators, and other Transmission Operators. The RCSDT proposes that upon detection of failure that continues at least 30 minutes, starts the 60-minute clock. The 30 minutes allows an entity time to restore or determine if they can restore Interpersonal Communication capability before the clock starts. No change made. R10 - Oncor takes the position that the word “impacted” added to R10 will clarify that notification only needs to be made to the entities that are effected by the failure of a communication path. This will also more align with the language in M10. The word “impacted” was removed in previous postings. For further clarification, the RCSDT has modified M10 to remove the word “impacted” to be consistent with R10. For additional clarity, the RCSDT also changed the phrase in R10 and M10, “R1 through R6” to “R1, R3, and R5,” to clarify that it applies to the capabilities with the RC, the TOP, and the BA. For COM-002-3 Oncor request clarity about what constitutes a “recipient.” For example, if a

Organization	Yes or No	Question 6 Comment
		Transmission Grid Operator performing the functions of a Transmission Operator issues a Reliability Directive to its own field operations personnel to perform an action on behalf of the same entity, does the field operations personnel as the recipient become in affect a “Transmission Operator” subject to R2? The term “recipient” in this case is referring to Functional entity to Functional entity communication. No change made.
Response: See response above.		
Consolidated Edison Co. of NY, Inc.		Regarding COM-002 Requirement R1, we recommend that this requirement be reworded as follows: “When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall require that the Reliability Directive be communicated using three-part communications as described in Requirements R2 and R3 of this standard.” The reason for this recommended rewording are threefold: 1. Good operating practice calls for use of three-part communications at all times. The recommended re-write encourages the use of the good operating practice of three-part communications at all times, but does not require it. 2. It is not good operating practice to require that an additional (unnecessary) phrase be used during emergency situations. During emergency situations, it is best to use standard operating protocols so as to limit unnecessary burdens on operating personnel during critical and stressful times. 3. By implementing the proposed new R1 requirement, it would effectively weaken the need for rigorous compliance with any and all directives issued by the RC’s, TO’s or BA’s. The RCSDT respectfully disagrees, the recipient needs clarity when a Reliability Directive is communicated. No change made.

Organization	Yes or No	Question 6 Comment
		Regarding IRO-001 Requirement R1, we recommend that the current requirement R3 be reinstated as the new requirement R1. That is, the new requirement R1 should read as follows: R1. The Reliability Coordinator shall have clear decision-making authority to act and to direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities within its Reliability Coordinator Area to preserve the integrity and reliability of the Bulk Electric System. These actions shall be taken without delay, but no longer than 30 minutes. We do not support any further dilution of Reliability Coordinator authority to enforce Reliability Directives through deletion of the 30-minute maximum response time period. The timely actions in response to any Reliability Coordinator issued Reliability Directives is an essential part of the process. The RCSDT believe these concerns are addressed in other performance-based standards (IRO-008 and IRO-009) that require action and contain timing requirement when addressing IROLs. The omission of TSP, LSE, and PSE does not diminish reliability and brings the standard into conformity with COM-001 and COM-002. No change made.
Response: See response above.		
We Energies		COM-001, Although a great improvement over existing COM-001, and eliminates the data component see comments: -For R5.1 Can the solutions included to meet R1 be included, same R3.2 and R5.2, same R5.3 and R7.2, same R5.4 and R8.1 -For R5.2 Can the solutions included to meet R2 be included, same R4.2 and R6.2 COM-001-2, R5: In a word: Yes. The requirement is to have capability and that capability does not have to be different than the entity on the other end has. No change made.

Organization	Yes or No	Question 6 Comment
		-R9 a 2 hour response for a once a month test seems extreme, as would require a secondary Alternate Interpersonal Communications capability -M9 is reasonable, but should include something about communication actual repair and or time estimates COM-001-2, R9: The requirement is to “initiate action to repair or designate a replacement Alternative Interpersonal Communication capability...” within two hours. The RCSDT recognizes that many different contracts or other arrangements may exist to address repair. However, the RCSDT finds that entities should know what they have and how to initiate repair and those two hours to do so is reasonable. No change made. COM-001-2, M9: The requirement is to have evidence that either repair was initiated or an Alternative Interpersonal Communication capability was designated within two hours. The RCSDT understands that, in extreme cases, the entity may need to make its initial Alternative Interpersonal Communication capability its Interpersonal Communication capability and then designate another Alternative Interpersonal Communication capability if the repair times are so long that to continue in that mode for that long would present a reliability risk. Such arrangements, if they exist at all, are very rare. No change made. -R10 The use of R1 through R6 implies notification of both Interpersonal Communications and Alternate Interpersonal Communications failures. Do you notify if you become aware after the link is back up if it was down for GT 30 minutes, and Doesn't address notifying when restored? COM-001-2, R10: The RCSDT thanks you for pointing this out. The RCSDT has modified the language of R10 to refer to R1, R3, and R5, rather than “R1 through R6,” since the responsible entities are limited to the RC, the TOP, and the BA in these requirements. Yes, there is no requirement to notify identified entities the Interpersonal Communication have been restored.

Organization	Yes or No	Question 6 Comment
		-R11 Implies that R8 and R9 are independent and redundant to R5.3, R5.4 and R3.3 and R3.4. COM-001-2, R11: The RCSDT believes you intended to refer to R7 and R8, rather than R8 and R9. The RCSDT does not believe that the language implies that the communications capability required by R7 and R8 are independent, but they may be. If the entity which is registered as a DP is also registered as a GOP (probably unlikely), then the capability could be met by the same medium. Neither does the RCSDT believe that R11 implies that R7 and R8 are redundant to R3.3 and R3.4 or to R5.3 and R5.4. No change made. R11 is not clear on the purpose of the statement “determine a mutually agreeable time for restoration” this could be driven by forces outside the control any of the entities. I think” provide estimated restoration and actual restoration time and determine mutually agreeable alternative during outage” would be better. The RCSDT notes that R11 does not limit the sources of information used by the DP or GOP in establishing a mutually agreeable action for restoration of its Interpersonal Communication capability with its TOP or BA. That is precisely why R11 is written in this manner. This allows flexibility on the part of the TOP and BA in determining when the Interpersonal Communication capability must be restored. In situations where there is little or no impact to the reliability of the BES, some flexibility could be allowed without requiring the acquisition of Alternative Interpersonal Communication capability. No change made. Update M9 accordingly See comment above concerning R9. COM-002 -Since all the Requirements are related to Reliability Directives, is it implied that all “Emergency Communications” are Reliability Directives even if not designated as such per R1.

Organization	Yes or No	Question 6 Comment
		The RCSDT would like to highlight that communications is not a defined term in the NERC Glossary of Terms used in Reliability Standards ,nor is it defined in this standard. Thus, the plain meaning of communications is intended. The RCSDT has not implied a defined term in the wording of the purpose statement of the standard, nor in the Requirements themselves, that any communication is a Reliability Directive unless the issuing functional entity identifies the actions to be taken as a Reliability Directive. Therefore, not all communications during Emergencies will be Reliability Directives. No change made. COM-002, R2: The RCSDT included some examples of how to provide the evidence needed for Measure M2. The examples are not intended to be an all-inclusive list. The RCSDT does point out, though, that dated operator logs could provide such evidence. The RCSDT does not believe that the recipient has the alternative to refuse to perform as required. However, the RCSDT does bring attention to standard IRO-001-3, which requires entities to comply with directions unless compliance with the direction cannot be physically implemented or unless such actions would violate safety, equipment, regulatory, or statutory requirements. No change made. -The M2 measure could be difficult for a recipient such as a Distribution Provider or Generator Operator. A recipient's phone may not be recorded but an initiator's always should. If a receiver refused to meet the R2 requirement, an initiator should have an alternative. i.e., repeat the directive and provide potential penalties if recipient refuses to comply. Should the initiator have responsibility for providing the entire 3-way evidence as M3 implies? The RCSDT would like to highlight that communications is not a defined term in the NERC Glossary of Terms used in Reliability Standards nor is it defined in this standard. Thus, the plain meaning of communications is intended. The RCSDT has not implied a defined term in the wording of the purpose statement of the standard, nor in the Requirements themselves, that any communication is a Reliability Directive unless the issuing functional entity identifies the actions to be taken as a Reliability Directive. Therefore, not all communications during Emergencies will be

Organization	Yes or No	Question 6 Comment
		Reliability Directives. No change made. COM-002 M3: The Measure is correct as written. The issuer only needs the evidence that it confirmed the response was accurate or reissued according to the requirement. Evidence does not necessarily mean the entity must have the entire three-way conversation captured (i.e., recording), but evidence the entity confirmed or reissued according to requirement. No change made. IRO-001 Although a great improvement over existing IRO-001, see comments: -R2 needs to be clear that it is the Reliability Coordinator's Reliability Directive that must be complied with not just any Reliability Coordinator's direction as stated. -The M2 measure could be difficult, as the operator would have to have access to documents proving the safety, equipment, regulatory or statutory requirements, which may be the assessment of an individual applying the safety rule. Is the measure requiring a deposition of the individual to be performed for each instance? The RCSDT notes that the intent of the standard is not intended to limit the RC authority to issue Reliability Directives. The Reliability Coordinator issuing the Reliability Directive is the one, which the recipient must comply. It is assumed that a BA or TOP has a relationship with one and only one RC for a given Balancing Area or Transmission Operator Area (some may have multiple, disconnected areas, that are subject to different RCs). Still need a way to communicate to mutually agree. No change made. With an assumed data retention of 90 day (voice) or 12 month document retention the deposition would be unlikely to be acquired prior to the retention period ending. Data retention is a significant issue when the data being recorded is voluminous, supporting a 90-day retention period. No change made.

Organization	Yes or No	Question 6 Comment
		-R3 needs to be clear that it is the inability to perform the Reliability Coordinator's Reliability Directive that must be communicated not just any "Reliability Coordinator's as directed." The RCSDT believes there is a misunderstanding about IRO-001, R3. The requirement specifically says "direction" and is in alignment with Requirement R1. Please note a Reliability Directive is a subset of "direction" that the RC may perform in accordance with R1. No change made. -The Data Retention section does not align with the standard: The Reliability Coordinator shall retain its evidence for the most recent 90 calendar days for voice recordings or 12 months for documentation for Requirement R2, Measure M2. The RCSDT thanks you for your comment. The RC has been removed from the measure and replaced with the corresponding R2 responsible entities (BA, DP, GOP, and TOP). R2 and M2 apply to the Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider. There is no R4 and M4. The RCSDT thanks you for your comment and has made conforming changes.
Response: See response above.		
City of Jacksonville Beach dba/ Beaches Energy Services		COM-001-2, R9 - "Each ... shall test its Alternative Interpersonal Communications capability." I would suggest adding the phrase "...to each entity for which Alternative Interpersonal Communications is required." to add clarity.
Response: The RCSDT proposes that R9 correctly identifies and provides clarity for the entities required to have Alternative Interpersonal Communication capability. No change made.		

Organization	Yes or No	Question 6 Comment
Indiana Municipal Power Agency		For R2 in IRO-001-3, the requirement needs to have the entities comply with their Reliability Coordinator's direction received in R1. Currently, requirement 2 directions are not linked back to R1 which means entities would have to comply with all Reliability Coordinator's directions regardless if they are associated with R1. The RCSDT agrees with your comment and believes the requirements does not need a linkage. No change made. For R7 in COM-001-2, IMPA does not believe that every Distribution Provider needs to be included in requirement 7. IMPA recommends stating that requirement 7 only applies to Distribution Providers who own an UFLS or UFLS system. The expectation is that a Distribution Provider that is registered with NERC is obligated to comply. No change made.
Response: See response above.		
Luminant Energy Company LLC		IRO-001-3 R1 is not consistent with the direction taken in COM-002-3 which requires the Reliability Coordinator to identify Reliability Directive as such. The same approach should be taken with IRO-001-3 R1 so that the Reliability Coordinator is required to identify directions that are made to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impacts as such prior to or when issuing the directions. This extra specification is needed to eliminate any possible confusion in areas where the market operator and Reliability Coordinator are the same entity. In these areas, the Reliability Coordinator/market operator routinely gives directions to other entities that are not to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impacts. Without the added clarification the receiving entity may not know the urgency of the situation and may not know to inform the Reliability Coordinator if they are unable to perform as required by R3.

Organization	Yes or No	Question 6 Comment
Response: The RCSDT views R1 as an authority requirement to direct others, which could include a subset of direction called Reliability Directive. Requirement R2 is the response requirement for the recipient. The judgment the recipient is under is that the recipient must comply with the direction, unless the direction cannot be physically implemented or unless such actions would violate safety, equipment, regulatory or statutory requirements. Requirement R3 simply requires the recipient to inform the issuer of its inability to perform the direction. No change made.		
NextEra Energy, Inc.		NextEra has the following additional comments. COM-002-3 The purpose of COM-002-3 is: “To ensure Emergency communications between operating personnel are effective.” This stated purpose is not the same as the specific requirement that three-way communication is used for a Reliability Directive. Thus, NextEra requests that the purpose be revised to read as follows: “To ensure that when a Reliability Directive is given that the Reliability Directive is explicitly stated and three-way communication is used.” The majority of stakeholders did not raise any issues with the purposed statement, and the RCSDT believes the current purpose statement is adequate. No change made. Consolidation of COM-002-3 and IRO-001-3 NextEra notes a continuing area of concern with the somewhat unsynchronized approach taken in the drafting process. Reliability Standards COM-002 and IRO-001 are now on version three, and still there is a somewhat unsynchronized approach being proposed. A clear and consolidated approach seems easily achievable with minimal effort. Thus, as proposed below, NextEra requests that COM-002-3 and IRO-001-3 be combined, which also would appear to allow for the retirement of certain requirements, such as TOP-001-1 R1-4. The standard TOP-001-1, R1 through R4 is under the purview of another team. No

Organization	Yes or No	Question 6 Comment
		change made. NextEra also is concerned that the current approach may have contributed to several significant misstatements in IRO-001-3, R1-3, which use the terms “direct,” “direction” and “directed,” instead of the term Reliability Directive as used in COM-002-3. COM-002-3 and IRO-001-3 indicate that three-way communication only is required when a Reliability Directive is issued. The word “direction” connects with the language in the R1 (act or direct). Reliability Directives is a subset of “direction,” No change made. This begs the question of what are the potentially other, lower classes of directives in IRO-001-3 R1-3? And why do they need to be followed with or without three-way communication? Reliability Directives are identified as such at the time they are issued so the recipient understands the magnitude of the action being directed. No change made. Thus, at a minimum, NextEra requests that the terms direct, direction and directed be deleted from IRO-001-3 R1-3, respectively, and that Reliability Directive be inserted. This change, and other proposed changes, are reflected in NextEra’s overall proposal to combine COM-002-3 and IRO-001-3 into one COM-002-3 standard: {Note: If the term Adverse Reliability Impact is revised as proposed by NextEra, then the term would not need to be stricken. The RCSDT understands some of the benefits with combining the standards; however, at this point, it would further delay the progress of the standards. The word “direction” connects with the language in the R1 (act or direct). Reliability Directives is a subset of “direction.” No change made. <i>R1. Each Reliability Coordinator shall have the authority to act and to issue a Reliability Directive to a Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider within its operating region to prevent identified events that may lead to, or to mitigate the magnitude or duration of, an Emergency.</i>

Organization	Yes or No	Question 6 Comment
		<i>[Violation Risk Factor: High][Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i> <i>R1.1 Each Transmission Operator shall have the authority to act or issue a Reliability Directive to a Balancing Authority, Generator Operator and Distribution Provider within its operating region to prevent identified events that may lead to, or to mitigate the magnitude or duration of, an Emergency. [Violation Risk Factor: High][Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i> <i>R1.2 Each Balancing Authority shall have the authority to act or issue a Reliability Directive to a Generator Operator and Distribution Provider within its balancing region to prevent identified events that may lead to, or to mitigate the magnitude or duration of, an Emergency. [Violation Risk Factor: High][Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i> <i>R2. When a Reliability Coordinator, Transmission Operator or Balancing Authority issues a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time]</i> <i>R2. Each Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider that is the recipient of a Reliability Directive shall repeat, restate, rephrase or recapitulate the Reliability Directive. [Violation Risk Factor: High][Time Horizon: Real-Time]</i> <i>R3. Each Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a Reliability Directive shall either [Violation Risk Factor: High][Time Horizon: Real-Time]:</i> -Confirm that the response from the recipient of the Reliability Directive (in accordance with Requirement R2) was accurate, or -Reissue the Reliability Directive to resolve any misunderstandings.

Organization	Yes or No	Question 6 Comment
		<i>R4. Each Transmission Operator, Balancing Authority, Generator Operator, Distribution Provider shall comply with its Reliability Coordinator's Reliability Directive, unless compliance with the Reliability Directive cannot be physically implemented or unless such actions would violate safety, equipment, regulatory or statutory requirements. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i> <i>R4.1 Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to perform a Reliability Directive in accordance with Requirement R4. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i> <i>R5. Each Balancing Authority, Generator Operator, and Distribution Provider shall comply with its Transmission Operator's Reliability Directive, unless compliance with the Reliability Directive cannot be physically implemented or unless such actions would violate safety, equipment, regulatory or statutory requirements. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i> <i>R5.1. Each Balancing Authority, Generator Operator, and Distribution Provider shall inform its Transmission Operator upon recognition of its inability to perform a Reliability Directive in accordance with Requirement R5. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i> <i>R6. Each Generator Operator or Distribution Provider shall comply with its Balancing Authority's Reliability Directive, unless compliance with the Reliability Directive cannot be physically implemented or unless such actions would violate safety, equipment, regulatory or statutory requirements. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i> <i>R6.1. Each Generator Operator or Distribution Provider shall inform its Balancing Authority upon recognition of its inability to perform a Reliability Directive in</i>

Organization	Yes or No	Question 6 Comment
		<i>accordance with Requirement R6. [Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i> Conclusion Given the importance of having clear and concise Reliability Standards on the issue of directives and three-way communication, until the above concerns raised by NextEra in items 4 through 6 are addressed, NextEra intends to continue to vote “no” on COM-001-2, COM-002-3 and IRO-001-3. The RCSDT thanks you for your comment and believes the revisions made to this set of standards is valuable to the industry and within the scope of the project. No change made.
Response: See response above.		
Manitoba Hydro		COM-001-2-Definition ‘Interpersonal Communication’ - for clarity, the definition should explicitly state that data exchange is not included. The standard COM-001 is for Interpersonal Communication capability, which facilitates the communication (i.e., “... to interact, consult, or exchange information.”) and not the exchange of data which is addressed in IRO-010. No change made. -R9 - for clarity, the wording ‘... within 2 hours’ should be replaced with ‘... within 2 hours of the unsuccessful test’. Conforming change required to M9 as well. The RCSDT proposes that R9 correctly identifies and provides clarity for the entities required to have Alternative Interpersonal Communication capability. No change made. -R10 - for clarity, the wording ‘... as identified in R1 through R6...’ should be replaced with ‘... with which it is required to have Interpersonal Communications capability or Alternative Interpersonal Communication capability...’.

Organization	Yes or No	Question 6 Comment
		The RCSDT has modified the language of R10 to refer to R1, R3, and R5, rather than “R1 through R6,” since the responsible entities are limited to the RC, the TOP, and the BA in these requirements. -M6 - the term ‘Adjacent’ needs to be capitalized in the last sentence of the paragraph as ‘Adjacent Balancing Authority’ is a NERC defined term. The RCSDT thanks you for your comment and recognizes the confusion created by having “Adjacent” start the sentence. This gave the appearance of a defined NERC glossary term. The RCSDT has made conforming measures to eliminate this problem. See changes to COM-001-2, R1.2, R2.2, R3.5, R4.3, R5.5, and R6.3. -M7 - ‘that’ in the first line is repeated The RCSDT thanks you for your comment and has made conforming changes to remove the additional word “that.” -M9 - the wording ‘on a monthly basis’ should be replaced with ‘once per calendar month’ to be consistent with the wording of the R9. The RCSDT agrees and the language in M9 has been changed to agree with the language in R9 and the R9 VSL. -M11 - the words ‘that experiences a failure of any of its Interpersonal Communications capabilities’ should be added after Operator to be consistent with the wording of the Requirement The RCSDT thanks you for your comment and has made the conforming changes to Measure M11. -Compliance - 1.3 bulleted sentences - the term ‘historical data’ should be removed. The term ‘evidence’ is sufficiently descriptive and is consistently used in other requirements The RCSDT thanks you for your comment and has made conforming changes to the Data Retention section.

Organization	Yes or No	Question 6 Comment
		-Data Retention (1.3) - The data retention requirements are too uncertain for two reasons. First, the requirement to “provide other evidence” if the evidence retention period specified is shorter than the time since the last audit introduces uncertainty because a responsible entity has no means of knowing if or when an audit may occur of the relevant standard. Secondly, it is unclear what ‘other evidence’, besides the specified logs, recordings and emails, an entity may be asked to provide to demonstrate it was compliant for the full time period since their last audit. The RCSDT thanks you for your comments. The Data Retention language has been updated to be consistent with the Standards Drafting Guidelines. This comment also applies to COM-002-3 and IRO-001-3. -Data Retention (1.3) - COM-002-3 requires that voice recordings are kept for the most recent 3 calendar months but COM-001-2 requires that they be kept for the most recent 12 calendar months. Manitoba Hydro does not see the reliability benefit of storing voice recordings for longer than 3 months and suggests that voice recordings be removed as evidence for COM-001-2. The RCSDT thanks you for your comment and has provided a retention period of 90 days for voice recordings, if chosen by the entity, as a matter of media storage, and 12 months for all other evidence. Evidence of the availability of Interpersonal Communications and Alternative Interpersonal Communications can be demonstrated using the other forms of evidence listed. The RCSDT thanks you for your comment. The measures provide a significant listing of potential evidence, which allows for compliance flexibility. The measures are examples and the entity is not limited to those examples. No change made.

Organization	Yes or No	Question 6 Comment
		-VSLs (general comment) - for clarity, use for example R1.1 and R1.2 to refer to requirements instead of Part 1.1 and Part 1.2. The RCSDT thanks you for your comment and has made conforming changes to the Data Retention section. -VSLs R4 - a reference to R4.3 is missing The RCSDT thanks you for your comment and has made conforming changes to the VSL section. COM-002-3-Title - to capture the purpose and intent of the standard, the title should be changed to 'Emergency Communications'. The RCSDT believes the title adequately captures the standard's scope. No change made. -R2 - for clarity, the words 'back to the sender' should be added to the end of the sentence The RCSDT believes the current wording clearly identifies the issuer. No change made. -R3 - for clarity, the words 'to the recipient' should be added to both of the bulleted sentences after 'confirm' and 'reissue'. The words 'evident from the response' should be added to the end of the second bullet. The RCSDT believes the current wording is clear as to who is the recipient. No change made. -A question for the drafting team: has it been discussed whether there should be an additional requirement which indicates that the Reliability Coordinator, Transmission Operator and Balancing Authority shouldn't take any action in a Reliability Directive

Organization	Yes or No	Question 6 Comment
		until such time as it has been confirmed accurate by the sender? If so, does the team feel that it's a worthwhile requirement to consider? RCSDT believes having an additional requirement is unnecessary and would be overly prescriptive. No change made. -M2 - the words 'restated, rephrased or recapitulated' should be added after 'repeated' to be consistent with wording of the requirement. The RCSDT thanks you for your comment and has made conforming changes to the Measure, M2 in COM-002. -M3 - the words 'to show' should be deleted from the end of this paragraph. The RCSDT thanks you for your comment and has made conforming changes to the Measure, M3 in COM-002. IRO 001-3-Purpose - the words 'to the Bulk Electric System' already appear in the definitions of Emergency and Adverse Reliability Impact and do not need to be repeated here. The RCSDT thanks you for your comment and has made conforming changes to the Purpose in IRO-001. -Effective Date - the effective date should be changed to the 2nd calendar quarter following BOT approval in jurisdictions not requiring regulatory approval to be consistent with jurisdictions requiring regulatory approval. The RCSDT thanks you for your comment and has made conforming changes to make IRO-001 the same as COM-001 and COM-002. -General comment - There are repeated references to 'identified events'

Organization	Yes or No	Question 6 Comment
		- it is not clear what this is referring to. The context of “identified” is when a set of system conditions is recognized that could lead to an Emergency or Adverse Reliability Impact, which may require action. See standards IRO-008 and IRO-009. No change made. M1 - M1 refers to Adverse Reliability Impacts “within its Reliability Coordinator Area.” The requirement does not refer to ‘within its Reliability Coordinator Area’ - the wording in the measure and in the requirement should be consistent. The RCSDT thanks you for your comment and has made conforming changes to IRO-001, M1 to remove the phrase “within its Reliability Coordinator Area.” M2 - missing the word ‘physically’ when describing that a direction could not be implemented, should be consistent with the wording in the requirement. The RCSDT thanks you for your comment and has made conforming changes to make IRO-001 measure M2. Compliance - the entire section needs to be updated as it refers to requirements and measures that don’t exist. The RCSDT thanks you for your comment and has made conforming changes to make IRO-001 Compliance section 1.3 to remove the invalid references. -VSLs R2 - the reference to ‘fully comply’ is very vague. It is only a violation if the entity does not fall within the exception. The RCSDT thanks you for your comment and has made conforming changes to make IRO-001, R2, High VSL to be more consistent with the R2. - R2 VSL - For clarity, change “RC’s directive” to “Reliability Coordinator’s Reliability Directive.” The RCSDT thanks you for your comment and has made conforming changes to make

Organization	Yes or No	Question 6 Comment
		IRO-001, VSL R2, High VSL.
Response: See response above.		
Great River Energy		In IRO-001-3 "authority" should be removed and the verbiage returned to "shall act." The RCSDT believes that other standards (i.e., IRO-009, R3 & R4 and EOP-002, R1 & R8) address the action of others and if the term "authority" is omitted, creates a generic requirement such as what has been suggested puts the RC in a double jeopardy situation. No change made. In COM-002-3 R2 and in Applicability we suggest removing the Distribution Provider as the RC would not likely give a Reliability Directive to a Distribution Provider. The Reliability Directive would more likely come from the Transmission Operator to the Distribution Provider. The RCSDT believes that other standards (i.e., IRO-009 - R3 & R4, EOP-002 - R1 & R8) address the action of others and if the term "authority" is omitted, creates a generic requirement such as what has been suggested puts the RC in a double jeopardy situation. No change made. In COM-002-3 R3 we "replacing "Reissue" with "Restate." You are not technically reissuing the Reliability Directive. COM-002-3, R3: The communications described are not intended to be a once-through process. Effective communications, sometimes referred to as three-part or three-way, often may be effective only after numerous iterations. The RCSDT believes the likely first effort to clarify would be to re-issue the instructions just to determine whether the recipient simply "heard wrong." Using the word re-state seems to imply that the wording is incorrect in some way or for some other reason needs to be said a different way. The RCSDT believes it is more likely that the issuer is attempting to bet the recipient to understand and therefore believes that reissue is more appropriate. No change made.

Organization	Yes or No	Question 6 Comment
Response: See response above.		
Orange and Rockland Utilities, Inc.		Regarding COM-002 Requirement R1, we recommend that this requirement be reworded as follows: <i>“When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall require that the Reliability Directive be communicated using three-part communications as described in Requirements R2 and R3 of this standard.”</i> The reason for this recommended rewording are threefold: <i>1. Good operating practice calls for use of three-part communications at all times. The recommended re-write encourages the use of the good operating practice of three-part communications at all times, but does not require it.</i> <i>2. It is not good operating practice to require that an additional (unnecessary) phrase be used during emergency situations. During emergency situations, it is best to use standard operating protocols so as to limit unnecessary burdens on operating personnel during critical and stressful times.</i> <i>3. By implementing the proposed new R1 requirement, it would effectively weaken the need for rigorous compliance with any and all directives issued by the RC’s, TO’s or BA’s. Regarding IRO-001 Requirement R1, we recommend that the current requirement R3 be reinstated as the new requirement R1.</i> That is, the new requirement R1 should read as follows: <i>“R1. The Reliability Coordinator shall have clear decision-making authority to act and to direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities within its Reliability Coordinator Area to preserve the integrity and reliability of the Bulk Electric System. These actions shall be taken</i>

Organization	Yes or No	Question 6 Comment
		<i>without delay, but no longer than 30 minutes."</i> We do not support any further dilution of Reliability Coordinator authority to enforce Reliability Directives through deletion of the 30 minute maximum response time period. The timely actions in response to any Reliability Coordinator issued Reliability Directives is an essential part of the process.
Response: The RCSDT development of IRO-001-3 R1 states "...which could include issuing Reliability Directives..." and, therefore, does not preclude its use if it is determined by the RC to use it. There may be instances where the RC discusses operational issues in normal dialogue with entities that do not require the use of Reliability Directive. No change made.		
Niagara Mohawk (dba National Grid)		COM-001-3 - Some requirements are overly prescriptive and not results based. R7 & R8 are not necessary. Every entity at a minimum has a contact with a phone as their "Interpersonal Communications capability." Just need to require that every entity has a plan if they lose their primary communication channel ("Interpersonal Communications capability"). The standard establishes requirement for communication capability appropriate to ensure reliability. There is no requirement for it to be different from the Interpersonal Communication capability that its Balancing Authority has with it nor the Interpersonal Communication capability that its Transmission Operator has with it. Cooperation and coordination is always encouraged and is an excellent practice, but is not required by this standard. Thank you for your suggestion. No change made. COM-002-3 - Requiring RCs, TOPs and BAs to state an action as a "reliability directive" complicates communications during a time when response time and clarity are important. If those issuing a directive don't get a repeat back they just need to ask for one. The requirement just needs to define "what" is required not "how." This

Organization	Yes or No	Question 6 Comment
		can be handled by procedures and training. The requirement is aimed at being a performance-based requirement and states a description of “what” communication must take place, but does not prescribe “how” the communication is to be made. Adding the suggested phrase “immediately upon receiving it” introduces the ambiguous term “immediately” for which there is neither plain meaning nor simple explanation. What must happen is that the recipient must respond in such a way that the issuer may determine whether the message has been properly understood. The RCSDT concludes that the proposed language gives plain meaning. No change made. - Delete reference to "adverse reliability impact" from the "Directive" definition. The "adverse reliability impact" definition is not clear, is this an actual event or contingency? The words imply it is an actual event which is already covered in the "Directive" definition. If the intent is to apply directives to potential stability or cascading contingencies it should say so.
Response: The RCSDT thanks you for your comment; however, the RCSDT believes the definition captures two independent conditions, anticipated and after or post event. The definition of Emergency implies situations where the event is anticipated or currently happening. Likewise, the definition of Adverse Reliability Impact clearly identifies as a potential or actual event in the phrase, “an event that results in.” Both conditions are important to the definition. The RCSDT notes that the term, “Adverse Reliability Impact,” is a currently defined NERC Glossary term. The term as it appears in the standard is the revised term is the NERC Board of Trustee adopted term: The impact of an event that results in Bulk Electric System instability or Cascading. No change made.		
American Electric Power		COM-001-02 R9: A two hour limit to repair or designate a replacement Alternative Interpersonal Communications capability is overly aggressive. COM-001-2, R9: The requirement is to initiate repair or designate an Alternative Interpersonal Communication capability within two hours. The requirement is NOT to have the repair completed within two hours. The requirement recognizes that the

Organization	Yes or No	Question 6 Comment
		entity may use its Alternative Interpersonal Communication capability now as its Interpersonal Communication capability, and then, if it decides to do so, designate another, if you may, “new” Alternative Interpersonal Communication capability. This is not required, but is an option that the entity can consider. The entity may already have a maintenance and repair agreement in place that will respond and repair the failed capability. No change made. COM-002-03 R1: Should this requirement also include references to a manual action? The RCSDT believes adding the word “manual” is unnecessary and overly prescriptive. No change made. COM-002-03 R3:The text “to resolve any misunderstandings” is unnecessary and should be removed. The RCSDT believes this phrase is essential to the process of communications. No change made. COM-002-3 VSL’s: As we have stated on previous projects, all severity levels need to be commensurate with both: a) the degree by which the requirement was violated, and The RCSDT has followed the VSL Guidelines in properly assigning the VSL as binary. No change made. b) by the impact of the violation to the BES. In this case, a single VSL of “Severe” violates both principles. The RCSDT notes the Violation Risk Factors define the potential impact to the BES; whereas, the VSL is how badly an entity violated the requirement. No change made.

Organization	Yes or No	Question 6 Comment
		There needs to be more gradients across the severity levels, and the single VSL of “Severe” incorrectly makes the assumption that the impact to the BES was severe. The RCSDT has followed the VSL Guidelines in properly assigning the VSL as binary. No change made. IRO-001-3 R1, R2, R3: Having this requirement apply to actions and/or directions (which may be different than Reliability Directives) may put the recipient in a position that they are judged on whether or not they acted on communication that was not a Reliability Directive. The RCSDT views R1 as an authority requirement to direct others, which could include a subset of direction called, Reliability Directive. Requirement R2 is the response requirement for the recipient. The judgment the recipient is under is that the recipient must comply with the direction, unless the direction cannot be physically implemented or unless such actions would violate safety, equipment, regulatory or statutory requirements. Requirement R3 is simply requires the recipient to inform the issuer of its inability to perform the direction. No change made. The draft states that the purpose of this standard is “To establish the capability and authority of Reliability Coordinators to direct other entities to prevent an Emergency or Adverse Reliability Impacts to the Bulk Electric System.” The key word used is “direct”, so communications that need to be acted upon should be Reliability Directives only. The addition of any non-defined term is in conflict with the definition and intent of the term Reliability Directive. This could potentially cause confusion, especially at critical times when communication is key.
Response: See response above.		
Georgia Transmission		The following comments are regarding IRO-001-3.

Organization	Yes or No	Question 6 Comment
Corporation		Requirement R1 should require the use of Reliability Directives. The requirement compels the Reliability Coordinator “to direct others to act to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impact.” Reliability Directives are necessary to address Adverse Reliability Impacts or Emergencies and trigger the use of three-part communications identified in COM-002-3. The RCSDT views R1 as an authority requirement to direct others, which could include a subset of direction called, Reliability Directive. Requirement R2 is the response requirement for the recipient. The judgment the recipient is under is that the recipient must comply with the direction, unless the direction cannot be physically implemented or unless such actions would violate safety, equipment, regulatory or statutory requirements. Requirement R3 is simply requires the recipient to inform the issuer of its inability to perform the direction. No change made. COM-002-3 R1 really compels the Reliability Coordinator to use a Reliability Directive for Emergencies and Adverse Reliability Impacts with the opening clause: “When a Reliability Coordinator, Transmission Operator, or Balancing Authority determines actions need to be executed as a Reliability Directive.” What else could be more important for a Reliability Coordinator to issue a Reliability Directive than for an Emergency or Adverse Reliability Impact? Thus, not requiring the use of Reliability Directives for Adverse Reliability Impacts and Emergencies makes IRO-001-3 R1 and COM-002-3 R1 inconsistent. The RCSDT development of IRO-001-3 R1 states “...which could include issuing Reliability Directives...” and, therefore, does not preclude its use if it is determined by the RC to use it. There may be instances where the RC discusses operational issues in normal dialogue with entities that do not require the use of Reliability Directive. No change made. It is recommended that the treatment of Reliability Directives shall be consistent

Organization	Yes or No	Question 6 Comment
		with those being developed for TOP-001-2 as proposed by the Real-Time Operations drafting team (Project 2007-03). The RCSDT is using the term in the same context in this standard as it is in TOP-001-2. No change made. As such, consider using the following language for R2: “Each TOP, BA, and GOP shall comply with each identified Reliability Directive issued and identified as such by its RC, unless such actions would violate safety, equipment, regulatory, or statutory requirements.” The RCSDT is addressing a directive (P487, Order 693) to include the DP in COM-001 and the RCSDT has included the DP in COM-002 and IRO-001 applicability because these standards are related to reliability communications. The RCSDT agrees with the point that communication will most likely be from the BA or TOP; however, the communications may come from the RC. No change made. Accordingly, please consider using the following language for R3: “Each TOP, BA, and GOP shall inform its RC of its inability to perform an identified Reliability Directive issued by that RC.” Again, we do not believe the DP would receive an identified Reliability Directive directly from the RC and the DP applicability should be removed from this standard. The DP is appropriately captured under COM-002 and TOP-001 with respect to Reliability Directives. Accordingly, NERC’s Reliability Functional Model V5 describes and identifies the DP’s relationships with other functional entities to TOP and BA with respect to Real Time. Real Time⁹ 7. Implements voltage reduction and sheds load as directed by the Transmission Operator or Balancing Authority.

⁹ NERC Functional Model Version 5, “Functional Entity – Distribution Provider,” pg 47, (http://www.nerc.com/files/Functional_Model_V5_Final_2009Dec1.pdf)

Organization	Yes or No	Question 6 Comment
		8. Implements system restoration plans as coordinated by the Transmission Operator. 9. Directs Load-Serving Entities to communicate requests for voluntary load curtailment. The following comments are regarding COM-001-2. With respect to the Functional Model V5, please see Page 31, “18. Issues corrective actions and emergency procedures directives (e.g., curtailments or load shedding) to Transmission Operators, Balancing Authorities, Generator Operators, Distribution Providers, and Interchange Coordinators.” No change made. The SDT should include an additional qualifier to Interpersonal Communications within the context of these requirements, for example (operational or dispatch center communications???).. Technically, the air we breathe, as well as other mediums like “any” cell phone, fax lines, and/or email accounts would qualify under this proposed definition of Interpersonal Communication. Assuming at least one employed individual can speak, all entities could demonstrate compliance of this capability at all times, therefore, it is not clear the intent of these requirements are accurately being presented. The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure. It is recommended to include the use of “signed attestation letters” as examples of evidence under M4 and M11 and other measures as appropriate. The RCSDT proposes that R4 and R11 allow for compliance flexibility. A “signed attestation letter” is one form of evidence. The measures are examples and the entity is not limited to those examples. No change made.

Organization	Yes or No	Question 6 Comment
Response: See response above.		
BGE		No comment.
Response: No comment provided.		
Nebraska Public Power District		Comments: COM-001-2: Requirement 10 is too open ended as written. The measure, M10, indicates that only impacted entities need to be notified. The requirement should be changed to make it consistent with the measure. The requirement would then read ‘Each RC, TOP And BA shall notify impacted entities as identified...’ Requirements 3 and 5 place the responsibility for establishing Interpersonal Communication capability on the TOP and BA. It is quite conceivable that a TOP or BA may not know all, or newly, registered DPs and GOPs in its respective area. The word “impacted” was removed in previous postings. For further clarification, the RCSDT has modified M10 to remove the word “impacted” to be consistent with R10. For additional clarity, the RCSDT also changed the phrase in R10 and M10, “R1 through R6” to “R1, R3, and R5,” to clarify that it applies to the capabilities with the RC, the TOP, and the BA. In Requirements 7 and 8, the DP and GOP, respectively, are in turn responsible for establishing Interpersonal Communication capability. The TOPs/BAs and the DPs/GOPs should not be responsible for this. The DPs and GOPs should be held accountable for requesting that capability of their TOP and BA. Therefore, we suggest adding the following phrase at the end of Requirements 3.3, 3.4, 5.3 and 5.4 - ‘that has requested Interpersonal Communications capability.’ Then R3.3 would read ‘Each Distribution Provider within its Transmission Operator Area that has requested Interpersonal Communications capability.’ The standard establishes requirement for communication capability appropriate to

Organization	Yes or No	Question 6 Comment
		ensure reliability. There is no requirement for it to be different from the Interpersonal Communication capability that its Balancing Authority has with it nor the Interpersonal Communication capability that its Transmission Operator has with it. Cooperation and coordination is always encouraged and is an excellent practice, but is not required by this standard. Thank you for your suggestion. No change made. Requirement 9: could be construed to mean that the repair or replacement due to an unsuccessful test should be completed within 2 hours. In any case a rewording of the second sentence of Requirement 9 would make it clear and we would suggest the following: “ The responsible entity shall, within 2 hours of the unsuccessful test, provide notification to the proper authority in order to initiate repair or designate a replacement Alternative Interpersonal Communications capability. “ COM-001-2, R9: The requirement is to initiate repair or designate an Alternative Interpersonal Communication capability within two hours. The requirement is NOT to have the repair completed within two hours. The requirement recognizes that the entity may use its Alternative Interpersonal Communication capability now as its Interpersonal Communication capability; and then, if it decides to do so, designate another, if you may, “new” Alternative Interpersonal Communication capability. This is not required, but is an option that the entity can consider. The entity may already have a maintenance and repair agreement in place that will respond and repair the failed capability. No change made. COM-002-3: Requirement 2/Measure 2: There is an inconsistency between the requirement and the measure. The requirement allows the recipient to repeat, restate, rephrase or recapitulate the directive. Measure 1 [See M2] only mentions repeating the directive. The RCSDT appreciates your observation. The phrases “restate, rephrase or

Organization	Yes or No	Question 6 Comment
		recapitulate,” have been added to Measure, M2. Requirement 3: The second bullet in Requirement 3 appears to require the reissuance of an entire Reliability Directive if only a single point in the directive is not correctly repeated, restated, rephrased or recapitulated. Is this what the SDT intended? Shouldn’t consideration be given for that portion of the directive that was communicated properly? Then only a new, revised directive containing the portion of the original directive that was misunderstood would need to be reissued. The RCSDT’s intention of the requirement is to confirm the communication is confirmed accurate and, if not, any misunderstanding is corrected. The requirement does not limit the entity to reissuing the entire Reliability Directive. So an entity is not precluded from only correcting the portion of the misunderstanding. No change made.
Response: See response above.		
Georgia System Operations		Requirement R1 should require the use of Reliability Directives. The requirement compels the Reliability Coordinator “to direct others to act to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impact.” Reliability Directives are necessary to address Adverse Reliability Impacts or Emergencies and trigger the use of three-part communications identified in COM-002-3. COM-002-3 R1 really compels the Reliability Coordinator to use a Reliability Directive for Emergencies and Adverse Reliability Impacts with the opening clause: “When a Reliability Coordinator, Transmission Operator, or Balancing Authority determines actions need to be executed as a Reliability Directive.” What else could be more important for a Reliability Coordinator to issue a Reliability Directive than for an Emergency or Adverse Reliability Impact? Thus, not requiring the use of Reliability Directives for Adverse Reliability Impacts and Emergencies makes IRO-001-3 R1 and

Organization	Yes or No	Question 6 Comment
		COM-002-3 R1 inconsistent. The RCSDT development of IRO-001-3 R1 states “...which could include issuing Reliability Directives...” and, therefore, does not preclude its use if it is determined by the RC to use it. There may be instances where the RC discusses operational issues in normal dialogue with entities that do not require the use of Reliability Directive. No change made. It is recommended that the treatment of Reliability Directives shall be consistent with those being developed for TOP-001-2 as proposed by the Real-Time Operations drafting team (Project 2007-03). The RCSDT is using the term in the same context in this standard as it is in TOP-001-2. No change made. As such, consider using the following language for R2: “Each TOP, BA, and GOP shall comply with each identified Reliability Directive issued and identified as such by its RC, unless such actions would violate safety, equipment, regulatory, or statutory requirements.” Accordingly, please consider using the following language for R3: “Each TOP, BA, and GOP shall inform its RC of its inability to perform an identified Reliability Directive issued by that RC.” Again, we do not believe the DP would receive an identified Reliability Directive directly from the RC and the DP applicability should be removed from this standard. The DP is appropriately captured under COM-002 and TOP-001 with respect to Reliability Directives. The RCSDT believes the latitude afforded in R2 and R3 allows for normal operational dialogue that may not require the use of Reliability Directive. The RC determines when Reliability Directive is applicable. No change made. With respect to the Functional Model V5, please see Page 31, “18. Issues corrective actions and emergency procedures directives (e.g., curtailments or load shedding) to Transmission Operators, Balancing Authorities, Generator Operators, Distribution

Organization	Yes or No	Question 6 Comment
		Providers, and Interchange Coordinators.” No change made. The RCSDT is addressing a directive (P487, Order 693) to include the DP in COM-001 and the RCSDT has included the DP in COM-002 and IRO-001 applicability because these standards are related to reliability communications. The RCSDT agrees with the point that communication will most likely be from the BA or TOP; however, the communications may come from the RC. No change made. Accordingly, NERC’s Reliability Functional Model V5 describes and identifies the DP’s relationships with other functional entities to TOP and BA with respect to Real Time.¹⁰ 7. Implements voltage reduction and sheds load as directed by the Transmission Operator or Balancing Authority. 8. Implements system restoration plans as coordinated by the Transmission Operator. 9. Directs Load-Serving Entities to communicate requests for voluntary load curtailment. The following comments are regarding COM-001-2. With respect to the Functional Model V5, please see Page 31, “18. Issues corrective actions and emergency procedures directives (e.g., curtailments or load shedding) to Transmission Operators, Balancing Authorities, Generator Operators, Distribution Providers, and Interchange Coordinators.” No change made. The SDT should include an additional qualifier to Interpersonal Communications within the context of these requirements, for example (operational or dispatch center communications???).. Technically, the air we breathe, as well as other mediums like “any” cell phone, fax lines, and/or email accounts would qualify under

¹⁰ NERC Functional Model Version 5, “Functional Entity – Distribution Provider,” pg 47, (http://www.nerc.com/files/Functional_Model_V5_Final_2009Dec1.pdf)

Organization	Yes or No	Question 6 Comment
		this proposed definition of Interpersonal Communication. Assuming at least one employed individual can speak, all entities could demonstrate compliance of this capability at all times, therefore, it is not clear the intent of these requirements are accurately being presented. The RCSDT appreciates your comment and has made clarifying changes by removing the phrase “any of” in COM-001, R11. Additionally, the RCSDT made a clarifying change to indicate the DP and GOP only need to consult with the entity affected by the failure. The RCSDT agrees with your assessment of “medium” and included the term to allow flexibility for an entity to communicate as they determine and demonstrate compliance. Two or more individuals are required for communication to occur where they interact, consult or exchange information. No change made. The RCSDT proposes that R4 allows for compliance flexibility. “Signed attestation letters” could qualify as “equivalent evidence” as stated in M4 and M11. No change made. It is recommended to include the use of “signed attestation letters” as examples of evidence under M4 and M11 and other measures as appropriate. The RCSDT proposes that R4 and R11 allow for compliance flexibility. A “signed attestation letter” is one form of evidence. The measures are examples and the entity is not limited to those examples. No change made.
Response: See response above.		
Ingleside Cogeneration LP		Ingleside Cogeneration LP is concerned that the entity-to-entity organization of the COM Standards is quickly being outdated by voice and video conferencing or one-to-many broadcasts. In addition, email may be a preferred mode of most communications to and from small Generator Operators. It is not clear that these technologies are precluded from consideration by COM-001 and COM-002 - which means that some auditors may believe that they are. This leads to inconsistent application of the compliance criteria, and may discourage the

Organization	Yes or No	Question 6 Comment
		use of some powerful technologies. It appears to us that some technical guidelines would be appropriate to help entities and auditors decide which are applicable under these Standards.
Response: The RCSDT proposes that COM-001-2 and COM-002-3, as written, allows flexibility for an entity to communicate where two or more individuals are required for communication to occur and they interact, consult or exchange information. Compliance is contained in the measures and an entity must determine if their communication method can demonstrate compliance with the requirements. No change made.		
Duke Energy		- COM-001-2 does not specify how much time an entity is allowed to restore failed Interpersonal Communications capability or failed Alternative Interpersonal Communications capability. R1 through R6 require that the RC, TOP and BA have both. R7 and R8 require that DPs and GOPs have Interpersonal Communications capability. An auditor could find an entity non-compliant with these requirements upon failure of either capability. The RCSDT thanks you for your comment. Requirements R7 and R8 have been revised to account for the failure of Interpersonal Communication capability. The intent of R11 is to require the responsible entity to take action upon the failure of its Interpersonal Communication. R9, R10 and R11 specify actions to take upon failure, but do not relieve entities of responsibility under R1 through R8. The RCSDT believes non-compliance is not due solely to the failure of any Interpersonal Communication capability, but must be accompanied by a failure to consult with the applicable Transmission Operator or Balancing Authority to establish mutually agreeable action for restoration. No change made. -COM-001-2 R9, M9 and VSLs - M9 and VSLs should be revised to be consistent with wording of R9 phrase “at least once per calendar month.” The RCSDT agrees with your comments and has aligned M9 and the R9 VSL to the R9

Organization	Yes or No	Question 6 Comment
		to use “once each calendar month.” -COM-001-2 R10, M10 and VSLs - Clarity is needed regarding when the 60-minute clock starts. For example, suppose a failure is detected immediately upon occurrence of the failure. Does the 60-minute clock start immediately, or after the failure has lasted 30 minutes? When does the 60-minute clock start if a failure is detected and the entity is unsure when it occurred? The RCSDT proposes that upon detection of failure that continues at least 30 minutes, starts the 60-minute clock. The 30 minutes allows an entity time to restore or determine if it can restore its Interpersonal Communication capability before the clock starts. No change made. -COM-001-2 R10, M10 and VSLs - If the failure only lasts for 35 minutes, it appears that the RC, TOP or BA is still required to notify entities identified in R1 through R6. Is this the drafting team’s intent? Yes. The clock starts upon detection of failure of at least 30 minutes. No change made. -COM-001-2 R10, M10 and VSLs - Should be revised since the RC, TOP and BA are only required to have Alternative Interpersonal Communications capability with other RCs, TOPs and BAs per R2, R4 and R6. For additional clarity, the RCSDT also changed the phrase in R10 and M10, “R1 through R6” to “R1, R3, and R5,” to clarify that it applies to the capabilities with the RC, the TOP, and the BA. Suggested rewording for R10: <i>“Each Reliability Coordinator, Transmission Operator and Balancing Authority shall notify entities with which it is required to have Alternative Interpersonal Communications capability as identified in R2, R4 and R6 within 60 minutes of the detection of a failure of its Interpersonal Communications capabilities that lasts 30 minutes or longer.”</i>

Organization	Yes or No	Question 6 Comment
		-COM-001-2 M11 and VSL - Replace the word “their” with the word “its.” The RCSDT agrees and has modified M11 and VSL, as you suggested. -COM-001-2 Data Retention - The way Data Retention is being enforced, this whole section could just be reduced to a blanket statement that an entity must be able to provide evidence that it has been in compliance since its last audit. The RCSDT has provided the Data Retention section consistent with the approved Standard Drafting Team Guidelines. No change made. -COM-002-3 R2, M2 and VSL - Replace “and” with “or.” The RCSDT agrees with your comment and modifies R2, M2, and VSL accordingly. Also, the phrase “repeat, restate, rephrase or recapitulate” seems excessive and may be intended to avoid a violation where an entity fails to repeat the Reliability Directive word for word. Suggested rewording: “Each Balancing Authority, Transmission Operator, Generator Operator or Distribution Provider that is the recipient of a Reliability Directive shall repeat the Reliability Directive back to the issuer with sufficient accuracy so that understanding can be confirmed.” The RCSDT believes the term suggested “sufficient accuracy” is subject to interpretation. The RCSDT proposes the terms to allow a recipient to convey the message back to the issuer without a word-for-word requirement as long as the issuer confirms the accuracy of the response or reissues it to resolve any misunderstanding. No change made. -COM-002-3 R3, M3 - Replace “and” with “or.” The RCSDT agrees with your comment and modifies R3, M3, and VSL accordingly. -IRO-001-3 - We believe that the Purpose and the Requirements of this standard should be focused solely on situations where the Reliability Coordinator issues Reliability Directives to prevent an Emergency or Adverse Reliability Impact.

Organization	Yes or No	Question 6 Comment
		The RCSDT development of IRO-001-3 R1 states “...which could include issuing Reliability Directives...” and, therefore, does not preclude its use if it is determined by the RC to use it. There may be instances where the RC discusses operational issues in normal dialogue with entities that do not require the use of Reliability Directive. No change made. IRO-001-3 - The Purpose should be rewritten as follows: “To establish the authority of Reliability Coordinators to issue Reliability Directives to other entities to prevent an Emergency or the impact of an event that results in Bulk Electric System instability or Cascading.” The RCSDT appreciates the suggested rewording; however, the RCSDT development of the IRO-001-3 Purpose Statement allows for instances where the RC discusses operational issues in normal dialogue with entities that do not require the use of Reliability Directive. The requirements of IRO-001-3 allow the RC to issue a Reliability Directive if they determine one should be issued. No change made. -IRO-001-3 - R1 should be rewritten as follows: “Each Reliability Coordinator shall have authority to act or to issue Reliability Directives to others, including but not limited to the Transmission Operator, Balancing Authority and Generator Operator within its Reliability Coordinator Area to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or the impact of an event that results in Bulk Electric System instability or Cascading.” The RCSDT appreciates the suggested rewording; however, the Functional Model V5 addresses the scope of the RC function. No change made. -IRO-001-3 - R2 should be rewritten as follows: <i>“Each Transmission Operator, Balancing Authority, Generator Operator or Distribution Provider shall comply with a Reliability Directive issued by the Reliability Coordinator unless the Reliability Directive cannot be physically implemented or unless such action would violate safety, equipment, regulatory, or statutory requirements.”</i>

Organization	Yes or No	Question 6 Comment
		The RCSDT appreciates the suggested rewording; however, as written R2 allows for normal operational dialogue without having to invoke a Reliability Directive by the RC. No change made. -IRO-001-3 - R3 should be rewritten as follows: “Each Transmission Operator, Balancing Authority, Generator Operator or Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to comply with a Reliability Directive in accordance with Requirement R2. The RCSDT appreciates the suggested rewording; however, as written R2 allows for normal operational dialogue without having to invoke a Reliability Directive by the RC. No change made. -IRO-001-3 Measures and VSLs - Should be revised to conform with the above suggested revisions to requirements.
Response: See response above.		
ISO New England		none
ERCOT ISO		Regarding COM-001-2: We are not clear on the time horizon of requirements for COM-001-2. Based upon the purpose statement, it appears that establishment would be ahead of real time. Wording in the requirements could be construed as maintaining at all times vs. establishing communications. The RCSDT proposes that compliance with requirements of the standard must be demonstrated. The Purpose Statement is not measured. No change made. The timeline for mandatory/effectiveness may not be acceptable to establish communications with DPs if hardware procurement/projects must take place. The RCSDT considered concerns about the implementation of the requirements by DP and GOPs and concluded the requirements are achievable within the

Organization	Yes or No	Question 6 Comment
		implementation period. No change made. Regarding IRO-001-3: We have some concern for the removal of LSE in particular from R2 and R3 from current IRO-001-2 for the ERCOT region. The ERCOT region has QSEs that manage Load Resources. There may be some QSEs that are not registered as a GOP that deploy Load Resources. Per the current LSE JRO, QSEs with Load Resources are registered as LSEs. Not requiring LSEs to deploy Load Resource directives could be perceived as a reliability gap created from the previous version to this version. PSEs could be removed as long as they fall under BA authority. The RCSDT believes the DP is the correct entity because the LSE does not own assets. The definition of LSE is, “The functional entity that secures energy and transmission service (and reliability related services) to serve the electrical demand and energy requirements of its end use customers.” In contrast, the definition of a DP is, “The functional entity that provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer. Additionally, the Functional Model V5 demonstrates this under the Reliability Coordinator, “18. Issues corrective actions and emergency procedures directives (e.g., curtailments or load shedding) to Transmission Operators, Balancing Authorities, Generator Operators, Distribution Providers, and Interchange Coordinators.” No change made. The Data Retention section should be corrected to match the new requirements numbers and elimination of the previous version R1 with ERO. The Version History mentions six requirements retired, but only details five. The RCSDT thanks you for your comments. The Data Retention language has been updated to be consistent with the Standards Drafting Guidelines.
Response: See response above.		

Organization	Yes or No	Question 6 Comment
ReliabilityFirst		Comments on COM-001-2 1. Applicability Section a. RFC recommends adding the Generator Owner to the applicably section of the standard along with corresponding Requirements R8 and R11. ReliabilityFirst believes to maintain system reliability and based on certain business practices in effect, Generator Owners need to be required to have associated Interpersonal Communications with its Balancing Authority and Transmission Operator. The RCSDT considered this situation and have concluded Generator Owners do not operate facilities of the BES. Under the Functional Model V5 Generator Owners have these Relationships with Other Functional Entities. The following is an excerpt from the Functional Model V5 concerning the Generator Owner. No change made. 1. Provides generator information to the Transmission Operator, Reliability Coordinator, Balancing Authority, Transmission Planner, and Resource Planner. 2. Provides unit maintenance schedules and unit retirement plans to the Transmission Operator, Balancing Authority, Transmission Planner, and Resource Planner. 3. Develops an interconnection agreement with Transmission Owner on a facility basis. 4. Receives approval or denial of transmission service request from Transmission Service Provider. 5. Provides reliability related services to Purchasing-Selling Entity pursuant to agreement. 6. Reports the annual maintenance plan to the Reliability Coordinator, Balancing Authority and Transmission Operator. 7. Revises the generation maintenance plans as requested by the Reliability Coordinator.

Organization	Yes or No	Question 6 Comment
		2. Requirement R7 and R8 a. ReliabilityFirst seeks further clarity on why the Distribution Provider and Generator Operator are not required to designate an Alternative Interpersonal Communications capability? Requirements R7 and R8 require the Distribution Providers and Generator Operators to have Interpersonal Communications capability but there is not corresponding requirement to have an Alternative Interpersonal Communications capability. ReliabilityFirst recommends adding two new requirements for the Distribution Provider and Generator Operator to designate an Alternative Interpersonal Communications capability. This will be consistent with how Requirements R1 through R6 are set up. The standard establishes requirement for communication capability appropriate to ensure reliability. In addition, R7 and R8 are responsive to FERC Order No. 693. Entities may use the telephone cited in the example as their Interpersonal Communication capability. Requirement R11, as modified, addresses the loss of Interpersonal Communication capability. No change made. 3. Requirement R9 a. Assuming new requirements for the Distribution Provider and Generator Operator to designate an Alternative Interpersonal Communications capability (based on previous comment) are added to the standard, the Distribution Provider and Generator Operator will need to be added to Requirement R9 to test its Alternative Interpersonal Communications capability at least once per calendar month. The RCSDT thanks you for your comment and believes the DP and GOP only need Interpersonal Communication capability and it meets the respective FERC directive. No change made. 4. Requirement R10 a. Based on the ReliabilityFirst comment submitted for Question 4, ReliabilityFirst

Organization	Yes or No	Question 6 Comment
		believes the Distribution Provider and Generator Operator should be included in Requirement R10. The RCSDT proposes that DP and GOP are included in the requirement. "... shall notify entities..." as identified in R1 through R6. No change made. b. Since Interpersonal Communications capabilities is a very important piece of operating the BES in a reliable manner, ReliabilityFirst believes the timeframe in which an entity is required to notify the entities is too long. ReliabilityFirst recommends the following language for Requirement R10: i. Each Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider and Generator Operator shall notify entities as identified in Requirements R1 through R8 of a failure of its Interpersonal Communications capabilities that lasts 15 minutes or longer. The notification shall be made within 30 minutes of the detection of a failure. The RCSDT proposed the time frame to allow sufficient time for an entity to determine if IC could be restored. No change made. 5. VSLs for Requirement R1 through R8 a. ReliabilityFirst suggest gradating the VSLs for R1 through R8. Listed below is an example of how to grade the VSL for R1. The same type of approach could be used for R2 through R8 as well. i. High VSL- the Reliability Coordinator failed to have Interpersonal Communications capability with one or more of the entities listed in Parts 1.1 or 1.2. ii. Severe VSL - The Reliability Coordinator failed to have Interpersonal Communications capability with one or more of the entities listed in Parts 1.1 and 1.2. The RCSDT has applied the VSL to the Severe column because not having Interpersonal Communication capability with any entity is detrimental to reliability.

Organization	Yes or No	Question 6 Comment
		No change made. 6. VSL for Requirement R9 a. For consistency with the requirement language, ReliabilityFirst recommends adding the words “at least on a monthly basis” to the Lower, Moderate and High VSLs and adding the words “if the test was unsuccessful” to the end of the Lower, Moderate and High VSLs. Listed below is an example of the Lower VSL. i. The responsible entity tested the Alternative Interpersonal Communications capability at least once per calendar month but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communications in more than 2 hours and less than or equal to 4 hours if the test was unsuccessful. The RCSDT notes the requirement requires the entity to perform the test each month. If the test is not performed during each month, there is no other option for gradating the severity of the violation. No change made. 7. VSL for Requirement R10 a. ReliabilityFirst provided alternate language for R10 in the comments listed above. If the alternated language is not incorporated, ReliabilityFirst recommends the following language for the Lower VSL. Similar language could be used for the Moderate, High and Severe VSLs as well. i. The responsible entity failed to notify entities as identified in Requirements R1 through R6 more than 60 minutes but less than or equal to 70 minutes of the detection of a failure of its Interpersonal Communications capabilities. b. If the alternate language for R10, in the comments listed above, is incorporated, ReliabilityFirst recommends the following language for the Lower VSL. Similar language could be used for the Moderate, High and Severe VSLs as well. i. The responsible entity failed to notify entities as identified in Requirements R1

Organization	Yes or No	Question 6 Comment
		through R6 more than 30 minutes but less than or equal to 740 minutes of the detection of a failure of its Interpersonal Communications capabilities c. For Moderate VSL (the VSL after the OR statement), ReliabilityFirst recommends using a percentage rather than the “least one, but not all” statement. For example, if there is say 100 impacted entities and the applicable entity only notify 1, they would only fall under the Moderate. In another scenario there is say 100 impacted entities and the applicable entity only notified 99, they would also fall under the Moderate as well. The use of percentages will help even this out. The RCSDT made conforming changes to the VSLs to address a number of comments and changes to the requirements. 8. VSL for Requirement R11 a. For consistency with the requirement language, ReliabilityFirst recommends the following language: i. The responsible entity that experiences a failure of any of its Interpersonal Communication capabilities failed to consult with their Transmission Operator or Balancing Authority as applicable to determine a mutually agreeable time to restore the Interpersonal Communication capability. Comments on COM-002-3 The RCSDT has made conforming changes to the VSLs due to comments received about the R11. 1. Requirement R1 a. Based on ReliabilityFirst suggested change to the definition of “Reliability Directive” as noted in Question 5, ReliabilityFirst recommends deleting Requirement R1. Based on the suggested definition, any communication initiated, where an action by the recipient is required, is considered a “Reliability Directive.” Thus, there would no longer be a need for responsible entity to identify the action as a

Organization	Yes or No	Question 6 Comment
		“Reliability Directive” to the recipient. In coordination with the RTOSDT work on the TOP family of standards, the RCSDT does not propose that the Reliability Directive definition contain a requirement for action to be taken. Therefore, R1 is retained as a requirement for the “action” to be taken. No change made. 2. VSL for Requirement R3 a. For consistency with the requirement language, ReliabilityFirst recommends the following language: The RCSDT has followed the VSL Guidelines in properly assigning the VSL as binary. No change made. <i>i. The responsible entity issued a Reliability Directive, but failed to confirm that the response from the recipient of the Reliability Directive (in accordance with Requirement R2) was accurate.</i> Comments on IRO-001-3 1. Requirement R1 a. ReliabilityFirst seeks further clarity on why Requirement R1 only requires the Reliability Coordinator to have the “authority to act” rather than requiring the Reliability Coordinator to actually “take action” to prevent identified events that result in an Emergency or Adverse Reliability Impacts. Having the “authority to act” does not inherently require the Reliability Coordinator to take action, if appropriate. The RCSDT proposes that R1 reflects the Purpose of IRO-001-3. No change made. b. ReliabilityFirst seeks further clarity on the language “to prevent identified events.” If the event was already identified, how can the Reliability Coordinator act to prevent it? ReliabilityFirst recommends adding the word “potential” in between the words “prevent” and “identified.” The context of “identified” is when a set of system conditions is recognized that

Organization	Yes or No	Question 6 Comment
		could lead to an Emergency or Adverse Reliability Impact, which may require action. See standards IRO-008 and IRO-009. No change made. 2. Requirement R3 a. There is no time qualifier specified in Requirement R3 dealing with the timeframe in which the applicable entity has to inform its Reliability Coordinator of its inability to perform as directed in accordance with Requirement R2. Without a time qualifier, Requirement R3 is open ended and could cause issues if the applicable entity does not inform its Reliability Coordinator upon recognition of its inability to perform as directed in a timely manner. ReliabilityFirst recommends the following language for Requirement R3: <i>i. Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform its Reliability Coordinator within 30 minutes upon recognition of its inability to perform as directed in accordance with Requirement R2.</i> The RCSDT proposes the term “upon recognition of its inability to perform” does not require a time limit. No change made. The Measure M3, has been updated to include the phrase “upon recognition of its inability” to be consistent with R3. 3. VSL for Requirement R1 a. Requirement R1 requires the Reliability Coordinator to “...have the authority to act” - and the VSL does not reflect this language. ReliabilityFirst had questioned why Requirement R1, does not specifically require the RC to take action or direct actions in a comment submitted under Requirement R1. If the SDT does not change the language in Requirement R1, ReliabilityFirst recommends the following language: <i>i. The Reliability Coordinator failed to have the authority to take action or direct actions, to prevent an identified event that resulted in an Adverse Reliability Impact.</i> The RCSDT made conforming changes to the VSL.

Organization	Yes or No	Question 6 Comment
		4. VSL for Requirement R2 a. For the High VSL, the words “fully comply” are ambiguous and open to interpretation. ReliabilityFirst recommends only having a Severe VSL. b. The Severe VSL states “directive” while Requirement R2 states “direction.” To be consistent, ReliabilityFirst recommends the following language: i. <i>“The Responsible Entity failed to comply with its Reliability Coordinator’s direction”</i> The RCSDT thanks you for your comment and has made conforming changes to the VSL.
Response: See response above.		
City of Vero Beach		In the definition of Interpersonal Communication, the use of the word “medium” is ambiguous. Suggestions for alternatives: “system”, “channel.” The RCSDT proposes the term “medium” to allow entities flexibility on how they communicate and meet compliance with the requirements. No change made. COM-001-2, R1 and R3, the phrase: “have Interpersonal Communications capabilities”, what if the communication system fails? The RCSDT proposes that AIC is in force at that time. No change made. Is that an immediate non-compliance (especially R3.3 and R3.4 which do not require a redundant system). Suggest using EOP-008 type of language to allow restoration of failed equipment without non-compliance. The RCSDT reviewed both EOP-008-0 and EOP-008-1, which is subject to future enforcement. In either version, the team believes there is no need to add additional language to the standard. No change made. The RCSDT believes that prescribing a device or medium would limit an entity; therefore, “capability” is used to avoid being prescriptive and to provide flexibility. This was not intended by the drafting team. The intent is to give the entity the

Organization	Yes or No	Question 6 Comment
		flexibility in meeting the requirement. A loss of Interpersonal Communication capability is covered by R10, notification of Interpersonal Communication capability failure. No change made. COM-001-2, R9 - "Each ... shall test its Alternative Interpersonal Communications capability", suggest adding the phrase "to each entity for which Alternative Interpersonal Communications is required" to add clarity. In addition, the type of testing is unclear and ambiguous. The RCSDT proposes that R9 correctly identifies and provides clarity for the entities required to have Alternative Interpersonal Communication capability. No change made. There is also ambiguity in the terms "direct", "directive", "direction" and "Reliability Directive." The SDT may want to consider using the terms "instruct" and "instruction" in place of "direct," "directive," or "direction" to more clearly distinguish from a Reliability Directive. The RCSDT feels the use of direct and directed is consistent with the purpose and application of those terms in other standards and is consistent with previous postings. No change made.
Response: See response above.		
NV Energy		The meaning of R9 is open to some interpretation. It states that if the monthly test is unsuccessful, the entity shall "initiate action to repair or designate a replacement" AIC within 2 hours. The meaning of this is unclear in several ways: First, does "initiate action" apply to the remainder of the sentence or just to the "repair" option? Second, what constitutes initiation of action? Is it the intent of the SDT that the alternate interpersonal communications be

Organization	Yes or No	Question 6 Comment
		restored within a 2-hour limit? If so, the words do not clearly state that, and it seems an impossible task to ensure no more than 2-hr outage to an alternate communications medium. I am voting affirmative under the interpretation that one must only "initiate" the repair or "initiate" the designation of a replacement option within this tight 2-hour limit.
Response: The requirement is to initiate repair or designate an Alternative Interpersonal Communication capability within two hours. The requirement is NOT to have the repair completed within two hours. The requirement recognizes that the entity may use its Alternative Interpersonal Communication capability now as its Interpersonal Communication capability; and then, if it decides to do so, designate another, if you may, "new" Alternative Interpersonal Communication capability. This is not required, but is an option that the entity can consider. The entity may already have a maintenance and repair agreement in place that will respond and repair the failed capability. No change made.		
Midwest Independent Transmission System Operator		COM-001-2, R2 and R6: MISO requests clarification as to whether the designation of Interpersonal Communications and Alternative Interpersonal Communications methods by Responsible Entities must be formally documented and/or agreed upon with those entities with which communications capability must be established. The RCSDT has provided flexibility to the responsible entity with regard to implementation and compliance. Please note that Interpersonal Communication is a "shall have" and Alternative Interpersonal Communication capability is "designate." Please refer to the Measures for suitable evidence, which may be used to support compliance with the requirement. No change made. COM-001-2, R9: MISO suggests that the designation of Alternative Interpersonal Communications methods should not require formal documentation and may be agreed upon (when necessary) informally with those entities with which communications capability must be established in the event of an unsuccessful test of its Alternative Interpersonal

Organization	Yes or No	Question 6 Comment
		Communications capability. The RCSDT has provided flexibility to the responsible entity with regard to implementation and compliance. Please note that Interpersonal Communication is a “shall have” and Alternative Interpersonal Communication capability is “designate.” Please refer to the Measures for suitable evidence, which may be used to support compliance with the requirement. No change made. COM-001-2, Requirement R10: MISO requests clarification as to whether “impacted entities” refers to those entities with which the Responsible Entity must have Interpersonal Communications and Alternative Interpersonal Communications capability. Further, MISO requests clarification as to whether the notification required by R10 must be made using the Alternative Interpersonal Communications method selected by the Responsible Entity. The word “impacted” was removed in previous postings. For further clarification, the RCSDT has modified M10 to remove the word “impacted” to be consistent with R10. For additional clarity, the RCSDT also changed the phrase in R10 and M10, “R1 through R6” to “R1, R3, and R5,” to clarify that it applies to the capabilities with the RC, the TOP, and the BA. With respect to the method used by the Responsible Entity, the standard does not provide the “how” or any prescriptive method for accomplishing the requirement. No change made. COM-002-3, R1 - R3: MISO respectfully submits that, while it appreciates the distinction in responsibilities proposed in the new COM-002-3 and acknowledges that such distinction is beneficial, these requirements increase compliance risk and potential penalty liability without attendant benefit to the reliability of the Bulk Electric System. MISO respectfully suggests that Requirements 2 and 3 be converted into sub-requirements

Organization	Yes or No	Question 6 Comment
		as follows: <i>R1. When a Reliability Coordinator, Transmission Operator or Balancing Authority requires actions to be executed as a Reliability Directive, the Reliability Coordinator, Transmission Operator or Balancing Authority shall identify the action as a Reliability Directive to the recipient. [Violation Risk Factor: High][Time Horizon: Real-Time]</i> <i>R1.1. When the Reliability Coordinator, Transmission Operator or Balancing Authority identifies a stated action as a Reliability Directive, the receiving Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider shall repeat, restate, rephrase or recapitulate the Reliability Directive to the issuing Reliability Coordinator, Transmission Operator or Balancing Authority. [Violation Risk Factor: High][Time Horizon: Real-Time]</i> <i>R1.2. When the Reliability Coordinator, Transmission Operator, and Balancing Authority that issues a Reliability Directive receives a response from the receiving Balancing Authority, Transmission Operator, Generator Operator, and Distribution Provider, it shall then either [Violation Risk Factor: High][Time Horizon: Real-Time]:</i> -Confirm that the response from the recipient of the Reliability Directive (in accordance with Requirement R2) was accurate, or -Reissue the Reliability Directive to resolve any misunderstandings. The RCSDT contends the requirements in the proposed standard have been constructed in accordance with standard development guidelines to have only one performance per requirement. The suggested change places three independent actions within one requirement. No change made.
Response: See response above.		
Texas Reliability Entity		(1) There are numerous errors in the Mapping Document in referencing the current version of the standard and requirement. Specifically, referencing IRO-001-2 where it appears that the document should reference standard IRO-001-3. In addition, the

Organization	Yes or No	Question 6 Comment
		notes on page 2 of COM-002-3 are incorrect. The RCSDT thanks you for your comments and has made conforming corrections. (2) In the VRF/VSL Justification document, there are numerous errors in referring to standard versions and requirements. The RCSDT thanks you for your comments and has made conforming corrections. (3) In IRO-001-3, R1 - What is an “identified event,” and who “identifies” an event that requires compliance with this requirement R1? An RC may choose not to “identify” an event, such as a limit violation, and run the risk of causing or exacerbating an emergency. If the RC does not “identify” the event, it may become an actual event and then fall within the standard. The context of “identified” is when a set of system conditions are recognized that could lead to an Emergency or Adverse Reliability Impact, which may require action. See standards IRO-008 and IRO-009. The RC named in R1 is the entity that identifies the even that requires compliance. No change made. (4) In the VSL for IRO-001-3, R1, there should be language in the VSL to capture the term “Emergency,” which was added in the Requirement. The High VSL for R2 needs to be fixed. The RCSDT thanks you for your comments and has made conforming corrections. The “N/A” in R2 of COM-002-3 was removed. (5) In IRO-001-3, R1, remove the “s” in the phrase “Adverse Reliability Impacts.” The RCSDT thanks you for your comments and has made conforming corrections. (6) Referring to the Implementation Plan for IRO-001 - There is a different list in the Implementation Plan (R2, R4, R5, R6, R7, R9) than the Revision History of the Standard (R2, R4, R5, R6, R8). Where is the retirement of R1 shown? The RCSDT thanks you for your comments and has made conforming corrections. (7) Referring to COM-001-2: Measure 7, the word “that” is inadvertently repeated in

Organization	Yes or No	Question 6 Comment
		the first sentence. COM-001-2, M8: The RCSDT agrees and the language in Measure M8 has been changed to delete the additional “that.” (8) In COM-001-2, Measure 9, is “at least on a monthly basis” to be interpreted differently than “at least once per calendar month” as stated in the requirement? The RCSDT thanks you for your comments and has made conforming corrections to Measure M9 and the R9 VSL. (9) In COM-001-2, there is a “Measure 12” bullet that should be removed. The RCSDT thanks you for your comments and has made conforming corrections. (10) Referring to COM-002-3: Electronic directives (which may be issued over many different types of electronic communication channels) are increasingly necessary to manage the modern, dynamic Bulk Power System (generation and transmission) on a real-time basis. The effective use of electronic directives is undermined by this proposed Standard in its current form. This draft standard, in conjunction with other standards that refer to directives, appears to require that directives (at least Reliability Directives) be given verbally. The failure of the NERC standards to address electronic directives may cause significant manpower issues for BAs with large portfolios of generation to manage. The RCSDT proposes that COM-001-2 and COM-002-3, as written, allows flexibility for an entity to communicate where two or more individuals are required for communication to occur and they interact, consult or exchange information. Compliance is contained in the Measures and an entity must determine if its communication method can demonstrate compliance with the requirements. No change made. (11) In the VSL for COM-001-2 R4, a reference to Part 4.3 should be added. The RCSDT thanks you for your comments and has made conforming corrections.

Organization	Yes or No	Question 6 Comment
		(12) In IRO-001-3, Part 1.3 Data Retention, the reference in the first bullet to “Electric reliability Organization” is incorrect. We think it should say “Reliability Coordinator” instead. The other references to entities and to Requirements in this Part 1.3 also appear to be incorrect and need to be updated and corrected. <i>The RCSDT thanks you for your comment and has made conforming changes.</i> (13) Referring to COM-001-2, the prior version of this standard included Requirement R5: “Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have written operating instructions and procedures to enable continued operation of the system during the loss of telecommunications facilities.” This Requirement has been removed from the present draft of COM-001-2. <i>The RCSDT removed this requirement because it did not have a reliability benefit. No change made.</i> The mapping document seems to suggest that this Requirement was moved to EOP-008, but it is not there. We are concerned that removal of this Requirement will result in a reduction in the level of BES reliability and introduce a potential reliability gap. <i>As stated in the Implementation Plan, the RCSDT proposes retiring COM-001-1, R5 as it is redundant with EOP-008-0, R1 as well as replacement EOP-008-1, R1. No change made.</i>
Response: See response above.		
Hydro One Networks Inc.		(1) The proposed implementation plan conflicts with Ontario regulatory practice respecting the effective date of the standard. It is suggested that this conflict be removed by appending to the implementation plan wording, after “applicable regulatory approval” in the Effective Dates Section A5 on P. 4 of the draft standard

Organization	Yes or No	Question 6 Comment
		COM-001, COM-002 and IRO-001, and on P. 2 of COM-001's Implementation Plan and P. 1 of COM-002's and IRO-001's Implementation Plans, to the following effect:", or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities." The RCSDT is uncertain where the conflict exists. The standard IRO-001 uses the term "after applicable" and the others "following applicable." The RCSDT has updated the standards to use the most current effective date language. (2) COM-001: Measure M9: - "monthly basis." Suggest changing "monthly basis" to "at least once per calendar month" to be consistent the wording in R9. The RCSDT thanks you for your comment and has made conforming changes the Measure M9 and the R9 VSL. (3) IRO-001: Measures M1, M2, M3 - The types of evidence are listed in paragraph form. This is not consistent with presentation style in COM-001-2 Measures, where evidence is listed in bullet format. Suggest using bullet form for consistency. The RCSDT appreciates your comments and has made all the Measures bullet form in COM-001-2, but not in COM-002-3 and IRO-001-3. (4) IRO-001, Data Retention Section: i. The retention requirements do not reflect the revised requirements. For example: the Electric Reliability Organization is no longer a responsible entity; the Reliability Coordinator should replace the ERO for keeping data for R1; Transmission Operator, Balancing Authority, Generator Operator and Distribution Provider should replace the Reliability Coordinator for keeping data for R2; and there is no R4/M4. ii. Section 1.3, second paragraph: "The Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider... shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to

Organization	Yes or No	Question 6 Comment
		retain specific evidence for a longer period of time as part of an investigation.” The word “or” between Generator Operator and Distribution Provider should be changed to “and.” The RCSDT thanks you for your comment and has made conforming changes to the Data Retention section.
Response: See response above.		
New York Independent System Operator		COM-001 The drafting team has complicated the requirements by having different requirements between RC/TOP/BA and other entities such as GOP/LSE/DP. The proposal is for redundancy to be required only between RC/TOP/BA. The requirement should be simplified to require all identified entities to have plans for loss of primary communication channels. This could include third parties as a communication channel. The RCSDT refers the Order No. 693 in Paragraph 508 to clarify the reason the DP and GOP are not required to have Alternative Interpersonal Communication and is as follows: “(1) expands the applicability to include Generator Operators and Distribution Providers and includes Requirements for their telecommunications facilities; (2) identifies specific requirements for telecommunications facilities for use in normal and emergency conditions that reflect the roles of the applicable entities and their impact on Reliable Operation and (3) includes adequate flexibility for compliance with the Reliability Standard, adoption of new technologies and cost-effective solutions.” In addition, R11 requires the DP and GOP to consult with its BA and TOP to determine a mutually agreeable action for restoration. No change made. COM-002 The drafting team added a requirement to identify a Reliability Directive is being initiated during an emergency to track 3-part communication for compliance

Organization	Yes or No	Question 6 Comment
		purposes. This will change and complicate the communication protocols between normal and emergency operations simply to simplify compliance assessments. The NYISO is asking for clarification that an entity may identify Reliability Directives as a category of communications to be communicated through procedures and training; and will not require a different communication protocol between normal and emergency operations. Affective communications can only be achieved through consistent processes for all conditions. Compliance assessments should be made on when we are in an emergency or not, and not on how the dialogue was initiated. The RCSDT believes the standard allows for this condition, and the method of implementation is up to the entity. No change made.
Response: See response above.		

END OF REPORT

Standard Development Roadmap

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed:

1. Draft SAR Version 1 posted January 15, 2007
2. Draft SAR Version 1 Comment Period ended February 14, 2007
3. Draft SAR Version 2 and comment responses on SAR version 1 posted March 19, 2007
4. Draft Version 2 SAR comment period ended April 17, 2007
5. SAR version 2 and comment responses for SAR version 2 accepted by SC and SDT appointed in June 2007.
6. First posting of revised standards on August 5, 2008 with comment period closed on September 16, 2008.
7. Draft Version 2 of standards and response to comments September 16, 2008–May 26, 2009.
8. Second posting of revised standards on July 10, 2009 with comment period closed on August 9, 2009.
9. RC SDT coordinated with OPCP SDT and RTO SDT on definitions relating to directives and three part communication and Draft Version 3 of standards and response to comments August 9–November 20, 2009.
10. Third posting of revised standards on January 4, 2010 with comment period closed on February 3, 2010.
11. Initial Ballot conducted February 25 through March 7, 2011.
12. Draft version 5 of the standard and response to comments March 7, 2011 - January 9, 2012.
13. Fifth posting of revised standards on January 9, 2012 with comment period closed on February 9, 2012.
14. Successive ballot conducted January 30 through February 9, 2011.
15. Draft version 6 of the standard and response to comments February 9, 2011 – June 5, 2012.
16. Recirculation ballot conducted June 27 through July 6, 2012.

Proposed Action Plan and Description of Current Draft:

The SDT began working on revisions to the standards in August 2007. Following the initial ballot the project was subdivided with some standards moving forward ahead of others. Proposed modifications to IRO-001-2 were subdivided into two phases – with the first phase the recommended retirement of Requirement R7 as a conforming change associated with approval of

IRO-014-2. IRO-001-3 is the second phase and includes more extensive edits to the standard. The current posting contains revisions based on stakeholder comments on the initial ballot. The team is posting for a successive ballot.

Future Development Plan:

Anticipated Actions	Anticipated Date
1. Post standards for a successive ballot.	January-February 2012
2. Respond to comments on Successive ballot	March - April 2012
3. Standards posted for recirculation ballot	June 2012
4. Standards to be sent to BOT for approval.	August 2012
5. Standards filed with regulatory authorities.	October 2012

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

The RC SDT proposes the following new definition:

Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator, or Balancing Authority where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact.

This defined term is contained in draft COM-002-3 and IRO-001-3.

As a reference, we have included the existing definition of Emergency and the BOT approved definition of Adverse Reliability Impact:¹

Emergency: Any abnormal system condition that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System.

Adverse Reliability Impact: The impact of an event that results in Bulk Electric System instability or Cascading.

¹ This definition was approved by the NERC Board of Trustees on August 4, 2011. Filing with regulatory authorities is pending.

A. Introduction

1. **Title: Reliability Coordination – Responsibilities and Authorities**
2. **Number:** IRO-001-3
3. **Purpose:** To establish the authority of Reliability Coordinators to direct other entities to prevent an Emergency or Adverse Reliability Impacts to the Bulk Electric System.
4. **Applicability**
 - 4.1. Reliability Coordinator
 - 4.2. Transmission Operator
 - 4.3. Balancing Authority
 - 4.4. Generator Operator
 - 4.5. Distribution Provider
5. **Effective Date:** The first day of the second calendar quarter beyond the date that this standard is approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standard becomes effective on the first day of the first calendar quarter beyond the date this standard is approved by the NERC Board of Trustees, or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities.

B. Requirements

- R1.** Each Reliability Coordinator shall have the authority to act or direct others to act (which could include issuing Reliability Directives) to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impact. *[Violation Risk Factor: High][Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*
- R2.** Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall comply with its Reliability Coordinator's direction unless compliance with the direction cannot be physically implemented or unless such actions would violate safety, equipment, regulatory, or statutory requirements. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*
- R3.** Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to perform as directed in accordance with Requirement R2. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

C. Measures

- M1.** Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or

equivalent documentation, that will be used to determine that it had the authority to take action or direct action, which could have included issuing Reliability Directives, to prevent identified events or mitigate the magnitude or duration of actual events that resulted in an Emergency or Adverse Reliability Impact within its Reliability Coordinator Area. (R1.)

- M2.** Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall have and provide evidence which may include, but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it complied with its Reliability Coordinator's direction, unless the direction could not be physically implemented, or such actions would have violated safety, equipment, regulatory or statutory requirements. In such cases, the Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider shall have and provide copies of the safety, equipment, regulatory, or statutory requirements as evidence for not complying with the Reliability Coordinator's direction. (R2.)
- M3.** Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall have and provide evidence which may include, but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it informed the Reliability Coordinator of its inability to perform as directed in accordance with Requirement R2. (R3.)

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

The Regional Entity shall serve as the Compliance Enforcement Authority (CEA) unless the applicable entity is owned, operated, or controlled by the Regional Entity. In such cases, the ERO or a Regional Entity approved by FERC or other applicable governmental authority shall serve as the CEA.

1.2. Compliance Monitoring and Enforcement Processes:

Compliance Audit

Self-Certification

Spot Checking

Compliance Investigation

Self-Reporting

Complaint

1.3. Data Retention

The following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances

where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.

The Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- The Reliability Coordinator for Requirement R1, Measure M1 shall retain voice recordings for the most recent 90 calendar days or documentation for the most recent 12 calendar months.
- The Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider shall retain for Requirements R2 and R3, Measures M2 and M3 shall retain voice recordings for the most recent 90 calendar days or documentation for the most recent 12 calendar months.

If a Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider is found non-compliant, it shall keep information related to the non-compliance until mitigation is complete and approved or for the time specified above, whichever is longer.

The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

1.4. Additional Compliance Information

None.

2. Violation Severity Levels

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	N/A	N/A	N/A	The Reliability Coordinator failed to take action or direct actions, to prevent an identified event that resulted in an Emergency or Adverse Reliability Impact. OR The Reliability Coordinator failed to take action or direct actions to mitigate the magnitude or duration of an event that resulted in an Emergency or Adverse Reliability Impact.
R2	N/A	N/A	N/A	The Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider did not comply with the Reliability Coordinator's direction, and compliance with the direction could have been physically implemented and such actions would not have violated safety, equipment, regulatory, or statutory requirements.
R3	N/A	N/A	N/A	The Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider failed to inform its Reliability Coordinator upon recognition of its inability to perform as directed.

E. Regional Variances

None identified.

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
1	April 4, 2007	Approved by FERC — Effective Date	New
1	May 19, 2011	Replaced Levels of Noncompliance with FERC-approved VSLs	VSL Order
2	To be determined	Retired Requirement R7 to eliminate redundancy with IRO-014-2, Requirement R1.	Project 2006-06
3	TBD	Revised in accordance with SAR for Project 2006-06, Reliability Coordination (RC SDT). Revised the standard and retired six requirements (R1, R2, R4, R5, R6, and R9). Requirement R3 becomes the new R1 and R8 becomes the new R2 and R3.	Project 2006-06

Standard Development Roadmap

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed:

1. Draft SAR Version 1 posted January 15, 2007
2. Draft SAR Version 1 Comment Period ended February 14, 2007
3. Draft SAR Version 2 and comment responses on SAR version 1 posted March 19, 2007
4. Draft Version 2 SAR comment period ended April 17, 2007
5. SAR version 2 and comment responses for SAR version 2 accepted by SC and SDT appointed in June 2007.
6. First posting of revised standards on August 5, 2008 with comment period closed on September 16, 2008.
7. Draft Version 2 of standards and response to comments September 16, 2008–May 26, 2009.
8. Second posting of revised standards on July 10, 2009 with comment period closed on August 9, 2009.
9. RC SDT coordinated with OPCP SDT and RTO SDT on definitions relating to directives and three part communication and Draft Version 3 of standards and response to comments August 9–November 20, 2009.
10. Third posting of revised standards on January 4, 2010 with comment period closed on February 3, 2010.
11. Initial Ballot conducted February 25 through March 7, 2011.
12. Draft version 5 of the standard and response to comments March 7, 2011 - January 9, 2012.
13. Fifth posting of revised standards on January 9, 2012 with comment period closed on February 9, 2012.
14. Successive ballot conducted January 30 through February 9, 2011.
15. Draft version 6 of the standard and response to comments February 9, 2011 – MONTH DAY June 5, 2012.
16. Recirculation ballot conducted MONTH XX through MONTH XX June 27 through July 6, 2012.

Proposed Action Plan and Description of Current Draft:

The SDT began working on revisions to the standards in August 2007. Following the initial ballot the project was subdivided with some standards moving forward ahead of others. Proposed modifications to IRO-001-2 were subdivided into two phases – with the first phase the recommended retirement of Requirement R7 as a conforming change associated with approval of IRO-014-2. IRO-001-3 is the second phase and includes more extensive edits to the standard. The current posting contains revisions based on stakeholder comments on the initial ballot. The team is posting for a successive ballot.

Future Development Plan:

Anticipated Actions	Anticipated Date
1. Post ~~standards~~ <u>Standards</u> for a successive ballot.	January-February 2012
2. Respond to comments on Successive ballot	March - April 2012
3. Standards posted for recirculation ballot	~~June~~ <u>May</u> 2012
4. Standards to be sent to BOT for approval.	~~August~~ <u>June</u> 2012
5. Standards filed with regulatory authorities.	~~October~~ <u>August</u> 2012

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

The RC SDT proposes the following new definition:

Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator,¹ or Balancing Authority where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact.

This defined term is contained in draft COM-002-3 and IRO-001-3.

As a reference, we have included the existing definition of Emergency and the BOT approved definition of Adverse Reliability Impact:^{1,2}

Emergency: Any abnormal system condition that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System.

Adverse Reliability Impact: The impact of an event that results in Bulk Electric System instability or Cascading.

¹ This definition was approved by the NERC Board of Trustees on August 4, 2011. Filing with regulatory authorities is pending.

² ~~This definition was approved by the NERC Board of Trustees on August 4, 2011. Filing with regulatory authorities is pending.~~

A. Introduction

1. **Title:** Reliability Coordination – Responsibilities and Authorities
2. **Number:** IRO-001-3
3. **Purpose:** To establish the authority of Reliability Coordinators to direct other entities to prevent an Emergency or Adverse Reliability Impacts to the Bulk Electric System.
4. **Applicability**
 - 4.1. Reliability Coordinator
 - 4.2. Transmission Operator
 - 4.3. Balancing Authority
 - 4.4. Generator Operator
 - 4.5. Distribution Provider
5. **Effective Date:** The first day of the second calendar quarter beyond the date that this standard is approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standard becomes effective on the first day of the second calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter beyond the date this standard is approved by the NERC Board of Trustees, or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities.

B. Requirements

- R1. Each Reliability Coordinator shall have the authority to act or direct others to act (which could include issuing Reliability Directives) to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impact. ~~Impacts.~~ *[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*
- R2. Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall comply with its Reliability Coordinator's direction unless compliance with the direction cannot be physically implemented or unless such actions would violate safety, equipment, regulatory, or statutory requirements. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*
- R3. Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to perform as directed in accordance with Requirement R2. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]*

C. Measures

- M1. –Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it had ~~has~~ the authority to take action or direct action, which could have included issuing Reliability Directives, ~~Directive(s),~~ to prevent identified events or mitigate the magnitude or duration of actual events that resulted

~~in an Emergency or caused~~ Adverse Reliability ~~Impact~~Impacts within its Reliability Coordinator Area. (R1.)

- M2.** Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall have and provide evidence which may include, but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it complied with its Reliability Coordinator's direction, ~~(s)~~ unless the direction could not be physically implemented, or such actions would have violated safety, equipment, regulatory or statutory requirements. In such cases, the Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider shall have and provide copies of the safety, equipment, regulatory, or statutory requirements as evidence for not complying with the Reliability Coordinator's direction. (R2.)
- M3.** Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall have and provide evidence which may include, but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it informed the Reliability Coordinator of its inability to perform as directed in accordance with Requirement R2. (R3.) ~~(R3)~~

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

~~The For entities that do not work for the~~ Regional Entity, ~~the Regional Entity~~ shall serve as the Compliance Enforcement Authority (CEA) unless the applicable entity is owned, operated, or controlled by the-

~~For Reliability Coordinators that work for their~~ Regional Entity. In such cases, the ERO or a Regional Entity approved by ~~the ERO and~~ FERC or other applicable governmental ~~authority~~authorities shall serve as the CEA. ~~Compliance Enforcement Authority.~~

1.2. Compliance Monitoring and Enforcement Processes:

Compliance Audit

Self-Certification

Spot Checking

Compliance ~~Violation~~ Investigation

Self-Reporting

Complaint

1.3. Data Retention

The following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.

The Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation:

- ~~o The Electric reliability Organization shall retain its evidence for 5 calendar years for Requirement R1, Measure M1.~~
 - o The Reliability Coordinator ~~for Requirement R1, Measure M1 shall~~ retain ~~voice recordings its evidence~~ for the most recent 90 calendar days ~~or for voice recordings or 12 months for~~ documentation for the most recent 12 calendar months ~~Requirement R2, Measure M2.~~
 - o The Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider shall retain for Requirements R2 and R3, Measures M2 and M3 shall retain voice recordings its evidence for the most recent 90 calendar days ~~for voice recordings or 12 calendar months for~~ documentation for the most recent 12 calendar months. ~~Requirements R3 and R4, Measures M3 and M4.~~
- If a Reliability Coordinator, Transmission Operator, Balancing Authority, Generator Operator, or Distribution Provider is found non-compliant, it shall keep information related to the non-compliance until mitigation is complete and approved or for the time specified above, whichever is longer. ~~notified by the Compliance Enforcement Authority that the evidence is no longer needed.~~
- The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

1.4. Additional Compliance Information

None.

2. Violation Severity Levels

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	N/A	N/A	N/A	The Reliability Coordinator failed to take action or direct actions, to prevent an identified event that resulted in an <u>Emergency or</u> Adverse Reliability Impact. OR The Reliability Coordinator failed to take action or direct actions to mitigate the magnitude or duration of an event that resulted in an <u>Emergency or</u> Adverse Reliability Impact.
R2	N/A	N/A	~~N/A/N/A The responsible entity initiated the action directed by the RC, but failed to fully comply with the RC's directive.~~	The <u>Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider</u>~~responsible entity~~ did not comply with the Reliability Coordinator's <u>direction, and compliance with the direction could have been physically implemented and such actions would not have violated safety, equipment, regulatory, or statutory requirements</u>~~directive~~.
R3	N/A	N/A	N/A	<u>The Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider</u>~~The responsible entity~~ failed to inform its Reliability Coordinator upon recognition of its inability to perform as directed.

E. Regional Variances

None identified.

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
1	April 4, 2007	Approved by FERC — Effective Date	New
1	May 19, 2011	Replaced Levels of Noncompliance with FERC-approved VSLs	VSL Order
2	To be determined	Retired Requirement R7 to eliminate redundancy with IRO-014-2, Requirement R1.	Project 2006-06
3	TBD	Revised in accordance with SAR for ~~Project 2006-066~~ , Reliability Coordination ~~(RC SDT)~~ ; Revised the standard and retired six requirements (~~R1~~ , R2, R4, R5, R6, and ~~R9~~). <u>Requirement R3 becomes the new R1 and R8 becomes the new R2 and R3.</u>	Project 2006-06

Implementation Plan and Mapping Document

IRO-001-3 Reliability Coordination – Responsibilities and Authorities

Requested Approval

The RC SDT requests the approval of IRO-001-3 – Reliability Coordination – Responsibilities and Authorities.

Requested Retirement

The RC SDT request the retirement of standard IRO-001-2 – Responsibilities and Authorities, Requirements R1 and R2, and the associated sub-requirements.

Prerequisite Approvals

None.

Defined Terms in the NERC Glossary

The RC SDT proposes the following new definition:

Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact.

Conforming Changes to Requirements in Already Approved Standards

None.

Revision Summary

The RC SDT is proposing the following revisions. Requirement, R1 will be retired because it is addressed in the NERC Rules of Procedure, Section 501 and 503. Requirements, R2 and R5 are proposed for retirement. Requirement, R3 will become the new Requirement R1, the authority to act and direct others to act, which may include Reliability Directives. Requirement, R4 is proposed for retirement because it is redundant with the NERC Rules of Procedure, Section 501 and 508. Requirement, R6 is proposed for retirement because PER-003-0 provides the necessary reliability replacement with no gap in reliability. Requirement, R7 is proposed for retirement because IRO-014-2, R1 provides the necessary reliability replacement with no gap in reliability. Requirement, R8 is proposed for replacement by the new IRO-001-3, Requirement R2 and R3. Requirements, R9 is proposed for retirement because it is redundant with other requirements and it is covered under the Reliability Coordinator's Standard of Conduct.

Applicable Entities

- Reliability Coordinator
- Balancing Authority
- Transmission Operator Generator Operator
- Distribution Provider

Effective Dates

The first day of the second calendar quarter beyond the date that this standard is approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standard becomes effective on the first day of the first calendar quarter beyond the date this standard is approved by the NERC Board of Trustees, or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities.

New or Revised Standard

IRO-001-3 In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the second calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees adoption.

Standard for Retirement

IRO-001-2 Midnight of the day immediately prior to the Effective Date of IRO-001-3 in the particular Jurisdiction in which the new standard is becoming effective.

Implementation Plan for Definition

Reliability Directive: Entities shall use this definition when implementing the standard IRO-001-3, which uses this defined term.

Revisions or Retirements to Already Approved Standards

The following tables identify the sections of approved standards that shall be retired or revised when this standard becomes effective. If the drafting team is recommending the retirement or revision of a requirement, that text is [blue](#).

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R1. Each Regional Reliability Organization, subregion, or interregional coordinating group shall establish one or more Reliability Coordinators to continuously assess transmission reliability and coordinate emergency operations among the operating entities within the region and across the regional boundaries. <i>[Violation Risk Factor: High]</i>	The RC SDT proposes retiring the requirement as it is addressed in the NERC Rules of Procedure, March 15, 2012: Section 503, 2 (2.1) “Regional Entities shall verify that all Reliability Coordinators, Balancing Authorities, and Transmission Operators meet the Registration requirements of Section 501(1.4).” Section 501 (1.4) “1.4 For all geographical or electrical areas of the Bulk Power System, the Registration process shall ensure that (1) no areas are lacking any entities to perform the duties and tasks identified in and required by the Reliability Standards to the fullest extent practical, and (2) there is no unnecessary duplication of such coverage or of required oversight of such coverage. In particular the process shall: 1.4.1 Ensure that all areas are under the oversight of one and

Already Approved Standard	Proposed Replacement Requirement(s)
	only one Reliability Coordinator. 1.4.2 Ensure that all Balancing Authorities and Transmission Operator entities¹ are under the responsibility of one and only one Reliability Coordinator. 1.4.3 Ensure that all transmission Facilities of the Bulk Power System are the responsibility and under the control of one and only one Transmission Planner, Planning Authority, and Transmission Operator. 1.4.4 Ensure that all loads and generators are under the responsibility and control of one and only one Balancing Authority.”
Notes:	
IRO-001-1 R2. The Reliability Coordinator shall comply with a regional reliability plan approved by the NERC Operating Committee. <i>[Violation Risk Factor: High]</i> R5. The Reliability Coordinator shall list within its reliability plan all entities to which the Reliability Coordinator has delegated required tasks. <i>[Violation Risk Factor: Lower]</i>	None – The RC SDT proposes retiring the requirements.
Notes: The RC SDT proposes retiring R2 and R5 as the regional reliability plan is a “how” document that shows how a Reliability	

¹ Some organizations perform the listed functions (e.g., Balancing Authority, Transmission Operator) over areas that transcend the Footprints of more than one Reliability Coordinator. Such organizations will have multiple Registrations, with each such Registration corresponding to that portion of the organization’s overall area that is within the Footprint of a particular Reliability Coordinator.

Already Approved Standard	Proposed Replacement Requirement(s)
Coordinator will comply with all other NERC Standards, making this requirement redundant.	
IRO-001-1 R3. The Reliability Coordinator shall have clear decision-making authority to act and direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities and Purchasing-Selling Entities within its Reliability Coordinator Area to preserve the integrity and reliability of the Bulk Electric System. These actions shall be taken without delay, but no longer than 30 minutes. <i>[Violation Risk Factor: High]</i>	IRO-001-3 R1. Each Reliability Coordinator shall take have the authority to actions or direct others to actions (which could include issuing Reliability Directives) to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or Adverse Reliability Impacts. <i>[Violation Risk Factor: High][Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i>
Notes: The RC SDT is proposing that the last sentence of R3 be retired. The timing of RC response to events varies based on system conditions. The specific timing criteria for responses to IROLs are contained in other standards (e.g., TOP-007, R2). This will add clarity and measurability to the standard. The last part of the second sentence should be removed as it is implicit in IRO-001-1, R1, which states that the Reliability Coordination will act or direct actions to mitigate issues. Additionally, stakeholders indicated issues with the ability to measure compliance with the phrase, “without intentional delay” and this was removed.	
IRO-001-1 R4. Reliability Coordinators that delegate tasks to other entities shall have formal operating agreements with each entity to which tasks are delegated. The Reliability Coordinator shall verify that all delegated tasks are understood, communicated, and addressed within its Reliability Coordinator Area. All responsibilities for complying with NERC and regional standards applicable to Reliability	None – The RC SDT proposes retiring the requirement. RC SDT contends that original IRO-001-1, R4 is redundant with NERC Rules of Procedure, Section 500 (March 15, 2012) and should be retired from the standard. (Section 501)

Already Approved Standard	Proposed Replacement Requirement(s)
Coordinators shall remain with the Reliability Coordinator. <i>[Violation Risk Factor: Medium]</i>	“The purpose of the Organization Registration Program is to clearly identify those entities that are responsible for compliance with the FERC approved Reliability Standards. Organizations that are registered are included on the NERC Compliance Registry (NCR) and are responsible for knowing the content of and for complying with all applicable Reliability Standards.” (Section 508) Provisions Relating to Coordinated Functional Registration (CFR) Entities In addition to registering as an entity responsible for all functions that it performs itself, multiple entities may each register using a CFR for one or more Reliability Standard(s) and/or for one or more Requirements/sub-Requirements within particular Reliability Standard(s) applicable to a specific function. The CFR submission must include a written agreement that governs itself and clearly specifies the entities’ respective compliance responsibilities. The Registration of the CFR is the complete Registration for each entity. Additionally, each entity shall take full compliance responsibility for those Reliability Standards and/or Requirements/sub-Requirements it has registered for in the CFR. Neither NERC nor the Regional Entity shall be parties to any such agreement, nor shall NERC or the Regional Entity have responsibility for reviewing or approving any such agreement, other than to verify that the agreement provides for an allocation or assignment of responsibilities consistent with the CFR.

Already Approved Standard	Proposed Replacement Requirement(s)
Notes: Section 508 addresses written agreements.	
IRO-001-1 R6. The Reliability Coordinator shall verify that all delegated tasks are carried out by NERC-certified Reliability Coordinator operating personnel. <i>[Violation Risk Factor: Medium]</i>	None – The RC SDT proposes retiring the requirement because it is covered by PER-003-0, R1. PER-003-0 R1. Each Transmission Operator, Balancing Authority, and Reliability Coordinator shall staff all operating positions that meet both of the following criteria with personnel that are NERC certified for the applicable functions: R1.1. Positions that have the primary responsibility, either directly or through communications with others, for the real-time operation of the interconnected Bulk Electric System. R1.2. Positions directly responsible for complying with NERC standards.
Notes: The RC SDT recommends retiring IRO-001-1, R6 as it is redundant with PER-003-0, R1, R1.1., and R1.2.	
IRO-001-1 R7. The Reliability Coordinator shall have clear, comprehensive coordination agreements with adjacent Reliability Coordinators to ensure that System Operating Limit (SOL) or Interconnection Reliability Operating Limit (IROL) violation mitigation requiring actions in adjacent Reliability	None – The RC SDT proposes retiring the requirement because it is covered by IRO-014-2, R1. IRO-014-2 R1. Each Reliability Coordinator shall have Operating Procedures, Operating Processes, or Operating Plans for activities that require

Already Approved Standard	Proposed Replacement Requirement(s)
Coordinator Areas are coordinated. <i>[Violation Risk Factor: High]</i>	notification, exchange of information or coordination of actions that may impact other Reliability Coordinator Areas to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following: <i>[Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning]</i>
Notes: The RC SDT proposes retiring the retirement of IRO-001-1, R7 as this is redundant with IRO-014-1 R1.	
IRO-001-1 R8: Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities shall comply with Reliability Coordinator directives unless such actions would violate safety, equipment, or regulatory or statutory requirements. Under these circumstances, the Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, or Purchasing-Selling Entity shall immediately inform the Reliability Coordinator of the inability to perform the directive so that the Reliability Coordinator may implement alternate remedial actions. <i>[Violation Risk Factor: High]</i>	IRO-001-3 R2. Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall comply with its Reliability Coordinator’s direction unless compliance with the direction cannot be physically implemented or unless such actions would violate safety, equipment, regulatory or statutory requirements. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i> R3. Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to perform as directed in accordance with Requirement R2. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i>
Notes: The RC SDT added the Distribution Provider per FERC Order 693. The RC SDT proposes the replacement of IRO-001-1, R8 with two requirements IRO-001-3, R2, and R3. The Distribution Provider was added as an applicable entity per FERC Order 693.	

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R9. The Reliability Coordinator shall act in the interests of reliability for the overall Reliability Coordinator Area and the Interconnection before the interests of any other entity. <i>[Violation Risk Factor: High]</i>	None – Retire requirement because it is redundant.
Notes: The RC SDT proposes retiring this requirement. All Reliability Coordinator Standard Requirements are developed so that the Reliability Coordinator shall act in the interest of reliability for the RC Area and the Interconnection. Section 6 of the NERC Standard Development Procedure states that NERC develops and maintains Reliability Standards. Equity issues are covered under the Reliability Coordinator Standards of Conduct.	

Functions that Must Comply with the Requirements in the Standards

Standard	Functions that Must Comply With the Requirements							
	Reliability Coordinator	Balancing Authority	Distribution Provider	Transmission Operator	Transmission Service Provider	Purchasing Selling Entity	Generator Operator	Load Serving Entity
IRO-001-2	X	X	X	X			X	

Implementation Plan and Mapping Document

~~for IRO-001-3 – Reliability Coordination~~ – Responsibilities and Authorities

~~Approvals Requested~~ Approval

The RC SDT requests the approval of IRO-001-3 – Reliability Coordination – Responsibilities and Authorities.

Requested Retirement

The RC SDT request the retirement of standard IRO-001-2 – Responsibilities and Authorities, Requirements R1 and R2, and the associated sub-requirements.

Prerequisite Approvals

- None.

Defined Terms in the NERC Glossary

The RC SDT proposes the following new definition:

Reliability Directive: A communication initiated by a Reliability Coordinator, Transmission Operator or Balancing Authority where action by the recipient is necessary to address an Emergency or Adverse Reliability Impact.

Conforming Changes to Requirements in Already Approved Standards

- None.

Revision Summary

The RC SDT is proposing the following revisions. Requirement, R1 will be retired because it is addressed in the NERC Rules of Procedure, Section 501 and 503. Requirements, R2 and R5 are proposed for retirement. Requirement, R3 will become the new Requirement R1, the authority to act and direct others to act, which may include Reliability Directives. Requirement, R4 is proposed for retirement because it is redundant with the NERC Rules of Procedure, Section 501 and 508. Requirement, R6 is proposed for retirement because PER-003-0 provides the necessary reliability replacement with no gap in reliability. Requirement, R7 is proposed for retirement because IRO-014-2, R1 provides the necessary reliability replacement with no gap in reliability. Requirement, R8 is proposed for replacement by the new IRO-001-3, Requirement R2 and R3. Requirements, R9 is proposed for retirement because it is redundant with other requirements and it is covered under the Reliability Coordinator's Standard of Conduct.

Applicable Entities

- Reliability Coordinator
- Balancing Authority
- Transmission Operator Generator Operator
- Distribution Provider
- ~~The RC SDT revised the standard and is proposing retiring six requirements (R2, R4, R5, R6, R7 and R9). Changes were made to eliminate redundancies between standards (existing and proposed), to align with NERC's Rules of Procedure and to address issues in FERC Order 693.~~

Effective Dates

~~The first day of the second calendar quarter beyond the date that this standard is approved by applicable regulatory authorities, or in~~ those jurisdictions where regulatory approval is not required, ~~the standard becomes~~ IRO-001-3 shall become effective on the first day of the second calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter beyond the date this standard is approved by the NERC ~~After~~ Board of Trustees, or as otherwise made effective pursuant to approval.

Retirements

~~IRO-001-2 should be retired at midnight of the day immediately prior to the laws applicable to such ERO governmental authorities. Effective Date of IRO-001-3 in the particular jurisdiction in which the new standard is becoming effective.~~

New or Revised Standard

<u>IRO-001-3</u>	<u>In those jurisdictions where regulatory approval is required, this standard shall become effective on the first day of the second calendar quarter after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective on the first day of the first calendar quarter after Board of Trustees adoption.</u>

Standard for Retirement

<u>IRO-001-2</u>	<u>Midnight of the day immediately prior to the Effective Date of IRO-001-3 in the particular Jurisdiction in which the new standard is becoming effective.</u>

Implementation Plan for Definition

Reliability Directive: Entities shall use this definition when implementing the standard IRO-001-3, which uses this defined term.

Revisions or Retirements to Already Approved Standards

The following tables identify the sections of approved standards that shall be retired or revised when this standard becomes effective. ~~is implemented~~. If the drafting team is recommending the retirement or revision of a requirement, that text is blue.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R1. Each Regional Reliability Organization, subregion, or interregional coordinating group shall establish one or more Reliability Coordinators to continuously assess transmission reliability and coordinate emergency operations among the operating entities within the region and across the regional boundaries. <i>[Violation Risk Factor: High]</i>	<u>The RC SDT proposes retiring the</u>~~This~~ requirement ~~was retired~~ as it is addressed in the NERC Rules of Procedure, <u>March 15, 2012:</u> Section 503, ~~item 2~~ <u>(2.1)</u>: “Regional ~~Entities~~ <u>entities</u> shall verify that all <u>Reliability Coordinators, Balancing Authorities,</u>~~balancing authorities~~ and <u>Transmission Operators</u> meet the Registration requirements of <u>Section 501(1.4).</u>” <u>Section 501 (1.4)</u> <u>“1.4 For all geographical or electrical areas of the Bulk Power System, the Registration process shall ensure that (1) no areas are lacking any entities to perform the duties and tasks identified in and required by the Reliability Standards to the fullest extent practical, and (2) there is no unnecessary duplication of such coverage or of required oversight of such coverage. In particular the process shall:</u> <u>1.4.1 Ensure that all areas are under the oversight of one and only one Reliability Coordinator.</u> <u>1.4.2 Ensure that all Balancing Authorities and Transmission Operator ~~entities~~¹~~transmission operators~~ are under the responsibility of <u>one and only one Reliability Coordinator</u>, ~~a reliability coordinator~~”</u> <u>1.4.3 Ensure that all transmission Facilities of the Bulk Power</u>

¹ Some organizations perform the listed functions (e.g., Balancing Authority, Transmission Operator) over areas that transcend the Footprints of more than one Reliability Coordinator. Such organizations will have multiple Registrations, with each such Registration corresponding to that portion of the organization’s overall area that is within the Footprint of a particular Reliability Coordinator.

	<u>System are the responsibility and under the control of one and only one Transmission Planner, Planning Authority, and Transmission Operator.</u> <u>1.4.4 Ensure that all loads and generators are under the responsibility and control of one and only one Balancing Authority.”</u>~~R1.~~—

Notes:

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R2. - The Reliability Coordinator shall comply with a regional reliability plan approved by the NERC Operating Committee. <i>[Violation Risk Factor: High]</i> R5. -The Reliability Coordinator shall list within its reliability plan all entities to which the Reliability Coordinator has delegated required tasks. <i>[Violation Risk Factor: Lower]</i>	~~IRO-001-2~~ None – The RC SDT proposes retiring ~~the~~these requirements.

Notes: The RC SDT proposes retiring R2 and R5 as the regional reliability plan is a “how” document that shows how a Reliability Coordinator ~~an RC~~ will comply with all other NERC Standards, making this requirement redundant.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R3. The Reliability Coordinator shall have clear decision-making authority to act and direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities and Purchasing-Selling Entities within its Reliability Coordinator Area to preserve the integrity and reliability of the Bulk Electric System. These actions shall be taken without delay, but no	~~IRO-001-32~~ R1. ~~—~~Each Reliability Coordinator shall take have the authority to actions or direct others to actions (which could include issuing Reliability Directives) ~~by Transmission Operators, Balancing Authorities, Generator Operators, and Distribution Providers within its Reliability Coordinator Area~~ to prevent identified events or mitigate the magnitude or duration of actual events that result in an Emergency or ~~-Adverse~~

longer than 30 minutes. *[Violation Risk Factor: High]*

Reliability Impacts. *[Violation Risk Factor: High]***[Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]**

Notes:

- The RC SDT is proposing that the last sentence of R3 be retired. The timing of RC response to events varies based on system conditions. The specific timing criteria for responses to IROLs are contained in other standards (e.g., TOP-007, R2).
- ~~The Distribution Provider was added as an applicable entity per FERC Order 693. This will add clarity and measurability to the standard. The last part of the second sentence should be removed as it is implicit in IRO-001-1, R1, which states that the Reliability Coordination will act or direct actions to mitigate issues. Additionally, stakeholders indicated issues with the ability to measure compliance with the phrase, “without intentional delay” and this was removed.~~

Already Approved Standard

Proposed Replacement Requirement(s)

IRO-001-1

R4. Reliability Coordinators that delegate tasks to other entities shall have formal operating agreements with each entity to which tasks are delegated. The Reliability Coordinator shall verify that all delegated tasks are understood, communicated, and addressed within its Reliability Coordinator Area. All responsibilities for complying with NERC and regional standards applicable to Reliability Coordinators shall remain with the Reliability Coordinator. *[Violation Risk Factor: Medium]*

~~IRO-001-2~~

None – ~~The RC SDT proposes retiring~~ retire the requirement.

RC SDT ~~contends~~proposes that original IRO-001-1, R4 is redundant with NERC Rules of Procedure, ~~Section~~section 500 *(March 15, 2012)* and should be retired from the standard.

~~(–Section 501)–~~states:

“The purpose of the ~~Organization Registration Program~~ is compliance registry ~~will be~~ to clearly identify those entities that are responsible for compliance with the FERC approved Reliability Standards~~reliability standards~~. Organizations that are registered are included~~listed~~ on the NERC Compliance Registry (NCR) and are~~registry will be~~ responsible for knowing the content of and for complying with all applicable Reliability Standards~~the NERC reliability standards~~.”

(Section 508)

Provisions Relating to Coordinated Functional Registration (CFR) Entities

In addition to registering as an entity responsible for all functions that it performs itself, multiple Also, section 507, item 2 addresses written agreements;

Joint registration pursuant to written agreement.

~~“Where a JRO and any of its members or related entities may each register using a CFR agree, in writing, upon a division of compliance responsibility among them~~ for one or more Reliability Standard(s) reliability standard(s) applicable to a particular function, and/or for one or more Requirements/sub-Requirements requirements within particular Reliability Standard reliability standard(s) applicable to a specific), both the JRO and such member(s) or related entity(ies) shall register as an organization responsible for that function. The CFR submission JRO and its member(s) or related entity(ies) must ~~include~~ have a written agreement that governs itself and clearly specifies the entities’ their respective compliance responsibilities. The Registration, which shall be submitted as part of the CFR is the complete Registration for each entity. Additionally, each entity shall take full compliance responsibility for those Reliability Standards and/or Requirements/sub-Requirements it has registered for in the CFR. joint registration. Neither NERC nor the Regional Entity regional entity shall be parties to any such agreement, ~~between a JRO and its member or related entity(ies),~~ nor shall NERC or the Regional Entity regional entity have responsibility for reviewing or approving any such agreement, other than to verify that the agreement provides for an allocation or assignment of responsibilities -consistent with the CFR. joint registration.”

Notes: Section 508 addresses written agreements The RC SDT recommends the retirement of IRO-001-1 R4.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R6.- The Reliability Coordinator shall verify that all delegated tasks are carried out by NERC-certified Reliability Coordinator operating personnel. <i>[Violation Risk Factor: Medium]</i>	~~IRO-001-2~~ None – <u>The RC SDT proposes retiring the</u>~~retire~~ requirement because it is <u>covered by PER-003-0, R1.</u>~~redundant with:~~ PER-003-0 R1. Each Transmission Operator, Balancing Authority, and Reliability Coordinator shall staff all operating positions that meet both of the following criteria with personnel that are NERC certified for the applicable functions: R1.1. Positions that have the primary responsibility, either directly or through communications with others, for the real-time operation of the interconnected Bulk Electric System. R1.2. Positions directly responsible for complying with NERC standards.

Notes: The RC SDT recommends retiring IRO-001-1, R6 as it is redundant with PER-003-0, R1, R1.1., and R1.2.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R7.- The Reliability Coordinator shall have clear, comprehensive coordination agreements with adjacent Reliability Coordinators to ensure that System Operating Limit (SOL) or Interconnection Reliability Operating Limit (IROL) violation mitigation requiring actions in adjacent Reliability Coordinator Areas are coordinated. <i>[Violation Risk Factor: High]</i>	~~IRO-001-2~~ None – <u>The RC SDT proposes retiring the</u> requirement ~~should be retired~~ because it is <u>covered by IRO-014-2, R1.</u>~~redundant with:~~ IRO-014-2 R1. Each Reliability Coordinator shall have Operating Procedures, Operating Processes, or Operating Plans for activities that require notification, exchange of information or coordination of actions that may impact other Reliability

	Coordinator Areas to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address the following: <i>[Violation Risk Factor: Medium] [Time Horizon: Same Day Operations and Operations Planning]</i>
Notes: The RC SDT ~~proposes retiring~~ <u>recommends</u> the retirement of IRO-001-1, R7 as this is redundant with IRO-014-1 R1.	
Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R8: Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities shall comply with Reliability Coordinator directives unless such actions would violate safety, equipment, or regulatory or statutory requirements. Under these circumstances, the Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, or Purchasing-Selling Entity shall immediately inform the Reliability Coordinator of the inability to perform the directive so that the Reliability Coordinator may implement alternate remedial actions. <i>[Violation Risk Factor: High]</i>	IRO-001-~~3~~2 R2. _____ Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall comply with its Reliability Coordinator's direction ~~in accordance with Requirement R2~~ unless compliance with ~~the direction in accordance with Requirement R2~~ the direction cannot be physically implemented or unless such actions would violate safety, equipment, regulatory or statutory requirements. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i> R3. R4. Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform its Reliability Coordinator upon recognition of its inability to perform as directed in accordance with Requirement R2. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations, Same Day Operations and Operations Planning]</i>
Notes: The RC SDT added the Distribution Provider per FERC Order 693 ~~and added the blue text shown in the requirements above.~~ The RC SDT proposes the replacement of IRO-001-1, R8 with two requirements IRO-001- <u>3, R2, and 2</u> , R3, ~~and R4.~~ ~~This will add clarity and measurability to the standard.~~	

The Distribution Provider last part of the second sentence should be removed as it is implicit in R1, which states that the Reliability Coordination will act or direct actions to mitigate issues. Stakeholders indicated issues with the ability to measure compliance with the phrase, “without intentional delay” and this was added as an applicable entity per FERC Order 693. removed.

Relating to First Energy’s comment in FERC Order 693, the requirements address both personnel safety and equipment. There is no reference to a chain of command in the requirements. The standard is written such that decision-making authority rests with the Reliability Coordinator. No further revisions to the standard are required.

Already Approved Standard	Proposed Replacement Requirement(s)
IRO-001-1 R9. The Reliability Coordinator shall act in the interests of reliability for the overall Reliability Coordinator Area and the Interconnection before the interests of any other entity. <i>[Violation Risk Factor: High]</i>	~~IRO-001-2~~ None – ~~Retire~~ retire the requirement <u>because it is</u> redundant.
Notes: The RC SDT proposes retiring this requirement. All Reliability Coordinator Standard Requirements are developed so that the Reliability Coordinator shall act in the interest of reliability for the RC Area and the Interconnection. Section 6 of the NERC Standard Development Procedure states that NERC develops and maintains Reliability Standards. Equity issues are covered under the Reliability Coordinator Standards of Conduct.	

Functions that Must Comply with the Requirements in the Standards

Standard	Functions that Must Comply With the Requirements							
	Reliability Coordinator	Balancing Authority	Distribution Provider	Transmission Operator	Transmission Service Provider	Purchasing Selling Entity	Generator Operator	Load Serving Entity
IRO-001-2	X	X	X	X			X	

Violation Risk Factor and Violation Severity Level Justifications

IRO-001-3 – Reliability Coordination – Responsibilities and Authorities

Violation Risk Factor and Violation Severity Level Justifications

This document provides the drafting team's justification for assignment of violation risk factors (VRFs) and violation severity levels (VSLs) for each requirement in: IRO-001-3 – Reliability Coordination – Responsibilities and Authorities

Each primary requirement is assigned a VRF and a set of one or more VSLs. These elements support the determination of an initial value range for the Base Penalty Amount regarding violations of requirements in FERC-approved Reliability Standards, as defined in the ERO Sanction Guidelines.

The Reliability Coordination Standard Drafting Team (SDT) applied the following NERC criteria and FERC Guidelines when proposing VRFs and VSL for the requirements under this project.

NERC Criteria – Violation Risk Factors

High Risk Requirement

A requirement that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.

Medium Risk Requirement

A requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or

restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.

Lower Risk Requirement

A requirement that is administrative in nature and a requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system; or, a requirement that is administrative in nature and a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. A planning requirement that is administrative in nature.

FERC Violation Risk Factor Guidelines

The SDT also considered consistency with the FERC Violation Risk Factor Guidelines for setting VRFs:¹

Guideline 1 – Consistency with the Conclusions of the Final Blackout Report

The Commission seeks to ensure that Violation Risk Factors assigned to Requirements of Reliability Standards in these identified areas appropriately reflect their historical critical impact on the reliability of the Bulk-Power System.

In the VSL Order, FERC listed critical areas (from the Final Blackout Report) where violations could severely affect the reliability of the Bulk-Power System:²

- Emergency operations
- Vegetation management
- Operator personnel training
- Protection systems and their coordination
- Operating tools and backup facilities
- Reactive power and voltage control
- System modeling and data exchange
- Communication protocol and facilities
- Requirements to determine equipment ratings
- Synchronized data recorders

¹ North American Electric Reliability Corp., 119 FERC ¶ 61,145, order on reh'g and compliance filing, 120 FERC ¶ 61,145 (2007) ("VRF Rehearing Order").

² Id. at footnote 15.

- Clearer criteria for operationally critical facilities
- Appropriate use of transmission loading relief

Guideline 2 – Consistency within a Reliability Standard

The Commission expects a rational connection between the sub-Requirement Violation Risk Factor assignments and the main Requirement Violation Risk Factor assignment.

Guideline 3 – Consistency among Reliability Standards

The Commission expects the assignment of Violation Risk Factors corresponding to Requirements that address similar reliability goals in different Reliability Standards would be treated comparably.

Guideline 4 – Consistency with NERC’s Definition of the Violation Risk Factor Level

Guideline (4) was developed to evaluate whether the assignment of a particular Violation Risk Factor level conforms to NERC’s definition of that risk level.

Guideline 5 – Treatment of Requirements that Co-mingle More Than One Obligation

Where a single Requirement co-mingles a higher risk reliability objective and a lesser risk reliability objective, the VRF assignment for such Requirements must not be watered down to reflect the lower risk level associated with the less important objective of the Reliability Standard.

The following discussion addresses how the SDT considered FERC’s VRF Guidelines 2 through 5. The team did not address Guideline 1 directly because of an apparent conflict between Guidelines 1 and 4. Whereas Guideline 1 identifies a list of topics that encompass nearly all topics within NERC’s Reliability Standards and implies that these requirements should be assigned a “High” VRF, Guideline 4 directs assignment of VRFs based on the impact of a specific requirement to the reliability of the system. The SDT believes that Guideline 4 is reflective of the intent of VRFs in the first instance and therefore concentrated its approach on the reliability impact of the requirements.

There are three requirements in IRO-001-3. None of the requirements were assigned a “Lower” VRF. Requirements R1, R2, and R3 are assigned a “High” VRF because this standard’s purpose is to establish the authority of Reliability Coordinators to direct other entities to prevent an Emergency or Adverse Reliability Impact.

NERC Criteria – Violation Severity Levels

Violation Severity Levels (VSLs) define the degree to which compliance with a requirement was not achieved. Each requirement must have at least one VSL. While it is preferable to have four VSLs for each requirement, some requirements do not have multiple “degrees” of noncompliant performance, and may have only one, two, or three VSLs.

Violation severity levels should be based on the guidelines shown in the table below:

Lower	Moderate	High	Severe
Missing a minor element (or a small percentage) of the required performance The performance or product measured has significant value as it almost meets the full intent of the requirement.	Missing at least one significant element (or a moderate percentage) of the required performance. The performance or product measured still has significant value in meeting the intent of the requirement.	Missing more than one significant element (or is missing a high percentage) of the required performance or is missing a single vital component. The performance or product has limited value in meeting the intent of the requirement.	Missing most or all of the significant elements (or a significant percentage) of the required performance. The performance measured does not meet the intent of the requirement or the product delivered cannot be used in meeting the intent of the requirement.

FERC Order of Violation Severity Levels

FERC's VSL guidelines are presented below, followed by an analysis of whether the VSLs proposed for each requirement in the standard meet the FERC Guidelines for assessing VSLs:

Guideline 1 – Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance

Compare the VSLs to any prior levels of non-compliance and avoid significant changes that may encourage a lower level of compliance than was required when levels of non-compliance were used.

Guideline 2 – Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties

A violation of a "binary" type requirement must be a "Severe" VSL.

Do not use ambiguous terms such as "minor" and "significant" to describe noncompliant performance.

Guideline 3 – Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement

VSLs should not expand on what is required in the requirement.

Guideline 4 – Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations

... unless otherwise stated in the requirement, each instance of non-compliance with a requirement is a separate violation. Section 4 of the Sanction Guidelines states that assessing penalties on a per violation per day basis is the “default” for penalty calculations.

VRF and VSL Justifications

VRF Justifications – IRO-001-3, R1	
Proposed VRF	High
NERC VRF Discussion	
FERC VRF G1 Discussion	Guideline 1- Consistency w/ Blackout Report: N/A
FERC VRF G2 Discussion	Guideline 2- Consistency within a Reliability Standard: The requirement has no sub-requirements; only one VRF was assigned so there is no conflict
FERC VRF G3 Discussion	Guideline 3- Consistency among Reliability Standards: There is a similar requirement (Requirement R1) in EOP-002-2.1 that is assigned a High VRF. The requirements are viewed as similar since they both refer to having responsibility to act to ensure reliability.
FERC VRF G4 Discussion	Guideline 4- Consistency with NERC Definitions of VRFs: Failure to act, direct actions or issue Reliability Directives may directly affect the electrical state or the capability of the bulk power system and may lead to bulk power system instability, separation, or cascading failures. Therefore, this requirement is assigned a High VRF.
FERC VRF G5 Discussion	Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation: The requirement contains only one objective; therefore, only one VRF was assigned.

Proposed VSLs for IRO-001-3, R1				
R#	Lower	Moderate	High	Severe
R1	N/A	N/A	N/A	The Reliability Coordinator failed to exercise its authority to take action or direct actions, to prevent an identified event that resulted in an Emergency or Adverse Reliability Impact. OR The Reliability Coordinator failed to exercise its authority to take action or direct actions to mitigate the magnitude or duration of an event that resulted in an Emergency or Adverse Reliability Impact.
VSL Justifications – IRO-001-3, R1				
NERC VSL Guidelines			Meets NERC’s VSL guidelines - Severe: The performance or product measured does not substantively meet the intent of the requirement.	
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance			The proposed requirement is comparable to approved EOP-002-2, Requirement. That is a binary requirement and thus, the VSL in the proposed standard is assigned a Severe VSL.	
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language			Guideline 2a: N/A Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.	

FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is based on a single violation and not cumulative violations.

VRF Justifications – IRO-001-3, R2	
Proposed VRF	High
NERC VRF Discussion	
FERC VRF G1 Discussion	Guideline 1- Consistency w/ Blackout Report: N/A
FERC VRF G2 Discussion	Guideline 2- Consistency within a Reliability Standard: The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
FERC VRF G3 Discussion	Guideline 3- Consistency among Reliability Standards: There is a similar requirement (Requirement R3) in TOP-001-1 that is assigned a High VRF. The requirements are viewed as similar since they both refer to the complying with directives unless the following the directive would violate safety, equipment, regulatory or statutory requirements.
FERC VRF G4 Discussion	Guideline 4- Consistency with NERC Definitions of VRFs: Failure to comply with a reliability directive could lead to bulk power system instability, separation, or cascading failures. Therefore, this requirement is assigned a High VRF.
FERC VRF G5	Guideline 5- Treatment of Requirements that Co-mingle More than One

VRF Justifications – IRO-001-3, R2	
Proposed VRF	High
Discussion	Obligation: The requirement contains only one objective; therefore, only one VRF was assigned.

Proposed VSLs for IRO-001-3, R2				
R#	Lower	Moderate	High	Severe
R7	N/A	N/A	N/A	The responsible entity did not comply with the Reliability Coordinator's direction, unless compliance with the direction could not be physically implemented or unless such actions would have violated safety, equipment, regulatory, or statutory requirements.
VSL Justifications – IRO-001-3, R2				
NERC VSL Guidelines			Meets NERC's VSL guidelines - Severe: The performance or product measured does not substantively meet the intent of the requirement.	
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance			The proposed requirement is comparable to approved TOP-001-1, Requirement R3. That VSL is binary but the SDT notes that there are two possible levels of violation for this requirement. The two conditions are that 1) the responsible entity did not comply (severe) or 2) the responsible initiated action but did not fully comply (high). Thus, the VSL in the proposed standard does not lower the level of compliance currently required by setting VSLs that are less punitive than those already proposed.	
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties			Guideline 2a: N/A Guideline 2b:	

Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.
FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is based on a single violation and not cumulative violations

VRF Justifications – IRO-001-3, R3	
Proposed VRF	High
NERC VRF Discussion	
FERC VRF G1 Discussion	Guideline 1- Consistency w/ Blackout Report: N/A
FERC VRF G2 Discussion	Guideline 2- Consistency within a Reliability Standard: The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
FERC VRF G3	Guideline 3- Consistency among Reliability Standards:

VRF Justifications – IRO-001-3, R3	
Proposed VRF	High
Discussion	There is a similar requirement (Requirement R3) in TOP-001-1 that is assigned a High VRF. The requirements are viewed as similar since they both refer to informing the Reliability Coordinator when a directive cannot be performed.
FERC VRF G4 Discussion	Guideline 4- Consistency with NERC Definitions of VRFs: Failure to inform the Reliability Coordinator of the inability to perform a reliability directive would prevent the Reliability Coordinator from developing an alternative solution to the reliability concern. This could lead to directly affect the electrical state or the capability of the bulk power system and will not lead to bulk power system instability, separation, or cascading failures.
FERC VRF G5 Discussion	Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation: The requirement contains only one objective; therefore, only one VRF was assigned.

Proposed VSLs for IRO-001-3, R3				
R#	Lower	Moderate	High	Severe
R7	N/A	N/A	N/A	The responsible entity failed to inform its Reliability Coordinator upon recognition of its inability to perform as directed.
VSL Justifications – IRO-001-3, R3				
NERC VSL Guidelines			Meets NERC’s VSL guidelines - Severe: The performance or product measured does not substantively meet the intent of the requirement.	
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level			The proposed requirement is comparable to approved TOP-001-1, Requirement R3. That VSL is binary and the proposed VSL is also binary. Thus, the VSL in the proposed standard does not lower the level of compliance currently required by setting VSLs that are less punitive than those already proposed.	

of Compliance	
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	Guideline 2a: N/A Guideline 2b: The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.
FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is based on a single violation and not cumulative violations.

Violation Risk Factor and Violation Severity Level

Justifications Assignments

IRO-001-3 – Reliability Coordination – Responsibilities and Authorities

Violation Risk Factor and Violation Severity Level Justifications

This document provides the drafting team's justification for assignment of violation risk factors (VRFs) and violation severity levels (VSLs) for each requirement in: IRO-001-3 – Reliability Coordination – Responsibilities and Authorities.

Each primary requirement is assigned a VRF and a set of one or more VSLs. These elements support the determination of an initial value range for the Base Penalty Amount regarding violations of requirements in FERC-approved Reliability Standards, as defined in the ERO Sanction Guidelines.

Justification for Assignment of Violation Risk Factors in IRO-001-3:

The Reliability Coordination Standard Drafting Team (SDT) applied the following NERC criteria and FERC Guidelines when proposing VRFs and VSL for the requirements under this project. ~~in COM-001-2:~~

NERC Criteria – Violation Risk Factors

High Risk Requirement

A requirement that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.

Medium Risk Requirement

A requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk

electric system instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.

Lower Risk Requirement

A requirement that is administrative in nature and a requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system; or, a requirement that is administrative in nature and a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. A planning requirement that is administrative in nature.

FERC Violation Risk Factor Guidelines

The SDT also considered consistency with the FERC Violation Risk Factor Guidelines for setting VRFs:¹²

Guideline (1 ~~→~~) — Consistency with the Conclusions of the Final Blackout Report

The Commission seeks to ensure that Violation Risk Factors assigned to Requirements of Reliability Standards in these identified areas appropriately reflect their historical critical impact on the reliability of the Bulk-Power System.

———In the VSL Order, FERC listed critical areas (from the Final Blackout Report) where violations could severely affect the reliability of the Bulk-Power System:³⁴

- Emergency operations
- Vegetation management
- Operator personnel training
- Protection systems and their coordination
- Operating tools and backup facilities
- Reactive power and voltage control
- System modeling and data exchange

¹ [North American Electric Reliability Corp., 119 FERC ¶ 61,145, order on reh'g and compliance filing, 120 FERC ¶ 61,145 \(2007\) \("VRF Rehearing Order"\)](#).

² [North American Electric Reliability Corp., 119 FERC ¶ 61,145, order on reh'g and compliance filing, 120 FERC ¶ 61,145 \(2007\) \("VRF Rehearing Order"\)](#).

³ [Id. at footnote 15.](#)

⁴ [Id. at footnote 15.](#)

- Communication protocol and facilities
- Requirements to determine equipment ratings
- Synchronized data recorders
- Clearer criteria for operationally critical facilities
- Appropriate use of transmission loading relief.

Guideline (2) — Consistency within a Reliability Standard

The Commission expects a rational connection between the sub-Requirement Violation Risk Factor assignments and the main Requirement Violation Risk Factor assignment.

Guideline (3) — Consistency among Reliability Standards

The Commission expects the assignment of Violation Risk Factors corresponding to Requirements that address similar reliability goals in different Reliability Standards would be treated comparably.

Guideline (4) — Consistency with NERC’s Definition of the Violation Risk Factor Level

Guideline (4) was developed to evaluate whether the assignment of a particular Violation Risk Factor level conforms to NERC’s definition of that risk level.

Guideline (5) — Treatment of Requirements that Co-mingle More Than One Obligation

Where a single Requirement co-mingles a higher risk reliability objective and a lesser risk reliability objective, the VRF assignment for such Requirements must not be watered down to reflect the lower risk level associated with the less important objective of the Reliability Standard.

The following discussion addresses how the SDT considered FERC’s VRF Guidelines 2 through 5. The team did not address Guideline 1 directly because of an apparent conflict between Guidelines 1 and 4. Whereas Guideline 1 identifies a list of topics that encompass nearly all topics within NERC’s Reliability Standards and implies that these requirements should be assigned a “High” VRF, Guideline 4 directs assignment of VRFs based on the impact of a specific requirement to the reliability of the system. The SDT believes that Guideline 4 is reflective of the intent of VRFs in the first instance and therefore concentrated its approach on the reliability impact of the requirements.

There are three requirements in IRO-001-3. None of the requirements were assigned a “Lower” VRF. Requirements R1, R2, and R3 are assigned a “High” VRF because this standard’s purpose is to establish the authority of Reliability Coordinators to direct other entities to prevent an Emergency or Adverse Reliability Impact, and all were assigned a “High” VRF.

NERC Criteria – Violation Severity Levels

Violation Severity Levels (VSLs) define the degree to which compliance with a VRF for IRO-001-2, Requirement R1:

- ~~FERC's Guideline 2 — Consistency within a Reliability Standard. The requirement was not achieved. Each has no sub-requirements; only one VRF was assigned so there is no conflict.~~
- ~~FERC's Guideline 3 — Consistency among Reliability Standards. There is a similar requirement must have at least one VSL. While it is preferable (Requirement R1) in EOP-002-2.1 that is assigned a High VRF. The requirements are viewed as similar since they both refer to having responsibility to have four VSLs for each requirement, some requirements do not have multiple "degrees" act to ensure reliability.~~
- ~~FERC's Guideline 4 — Consistency with NERC's Definition of noncompliant performance, a VRF. Failure to act, direct actions or issue Reliability Directives may directly affect the electrical state or the capability of the bulk power system and may have lead to bulk power system instability, separation, or cascading failures. Therefore, this requirement is assigned a High VRF.~~
- ~~FERC's Guideline 5 — Treatment of Requirements that Co-mingle More Than One Objective. IRO-001-2, Requirement R2 contains only one, two, or three VSLs, objective, therefore only one VRF was assigned.~~

VRF for IRO-001-2, Requirement R2:

- ~~FERC's Guideline 2 — Consistency within a Reliability Standard. The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.~~
- ~~FERC's Guideline 3 — Consistency among Reliability Standards. There is a similar requirement (Requirement R3) in TOP-001-1 that is assigned a High VRF. The requirements are viewed as similar since they both refer to the complying with directives unless the following the directive would violate safety, equipment, regulatory or statutory requirements.~~
- ~~FERC's Guideline 4 — Consistency with NERC's Definition of a VRF. Failure to comply with a reliability directive could lead to bulk power system instability, separation, or cascading failures. Therefore, this requirement is assigned a High VRF.~~
- ~~FERC's Guideline 5 — Treatment of Requirements that Co-mingle More Than One Objective. IRO-001-2 Requirement R3 contains only one objective, therefore only one VRF was assigned.~~

VRF for IRO-001-2, Requirement R3:

- ~~FERC's Guideline 2—Consistency within a Reliability Standard. The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.~~
- ~~FERC's Guideline 3—Consistency among Reliability Standards. There is a similar requirement (Requirement R3) in TOP-001-1 that is assigned a High VRF. The requirements are viewed as similar since they both refer to informing the Reliability Coordinator when a directive can not be performed.~~
- ~~FERC's Guideline 4—Consistency with NERC's Definition of a VRF. Failure to inform the Reliability Coordinator of the inability to perform a reliability directive would prevent the Reliability Coordinator from developing an alternative solution to the reliability concern. This could lead to directly affect the electrical state or the capability of the bulk power system and will not lead to bulk power system instability, separation, or cascading failures.~~
- ~~FERC's Guideline 5—Treatment of Requirements that Co-mingle More Than One Objective. TOP-003-2, Requirement R4 has only one objective, therefore only one VRF was assigned.~~

Justification for Assignment of Violation severity levels should be Severity Levels for IRO-001-3:

~~In developing the VSLs for the TOP standard, the SDT anticipated the evidence that would be reviewed during an audit, and developed its VSLs based on the~~ **guidelines shown in the table below**~~noncompliance an auditor may find during a typical audit. The SDT based its assignment of VSLs on the following NERC criteria:~~

Lower	Moderate	High	Severe
Missing a minor element (or a small percentage) of the required performance The performance or product measured has significant value as it almost meets the full intent of the requirement.	Missing at least one significant element (or a moderate percentage) of the required performance. The performance or product measured still has significant value in meeting the intent of the requirement.	Missing more than one significant element (or is missing a high percentage) of the required performance or is missing a single vital component. The performance or product has limited value in meeting the intent of the requirement.	Missing most or all of the significant elements (or a significant percentage) of the required performance. The performance measured does not meet the intent of the requirement or the product delivered cannot be used in meeting the intent of the requirement.

FERC Order of Violation Severity Levels

FERC’s VSL guidelines are presented below, followed by an analysis of whether the VSLs proposed for each requirement in ~~the standard~~**IRO-001-3** meet the FERC Guidelines for assessing VSLs:

Guideline 1 ~~–~~ Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance

Compare the VSLs to any prior levels of non-compliance and avoid significant changes that may encourage a lower level of compliance than was required when levels of non-compliance were used.

Guideline 2 ~~–~~ Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties

A violation of a “binary” type requirement must be a “Severe” VSL.

Do not use ambiguous terms such as “minor” and “significant” to describe noncompliant performance.

Guideline 3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement

VSLs should not expand on what is required in the requirement.

Guideline 4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations

. . . unless otherwise stated in the requirement, each instance of non-compliance with a requirement is a separate violation. Section 4 of the Sanction Guidelines states that assessing penalties on a per violation per day basis is the “default” for penalty calculations.

VRF and VSL Justifications

VSLs for IRO-001-3 Requirement R1:

<u>VRF Justifications – IRO-001-3, R1</u>					
<u>Proposed VRF</u>		<u>High</u>			
<u>NERC VRF Discussion</u>					
<u>FERC VRF G1 Discussion</u>		<u>Guideline 1- Consistency w/ Blackout Report:</u> <u>N/A</u>			
<u>FERC VRF G2 Discussion</u>		<u>Guideline 2- Consistency within a Reliability Standard:</u> <u>The requirement has no sub-requirements; only one VRF was assigned so there is no conflict</u>			
<u>FERC VRF G3 Discussion</u>	<u>Compliance with NERC's VSL Guidelines</u>	<u>3- Consistency among Reliability Standards:</u> <u>There is a similar requirement (Requirement R1) in EOP-002-2. that is assigned a High VRF. The</u>	<u>Guideline 2</u> <u>Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties</u> <u>Guideline 2a: The Single Violation Severity Level Assignment Category for</u>	<u>Guideline 3</u> <u>Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</u>	<u>Guideline 4</u> <u>Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</u>

<u>VRF Justifications – IRO-001-3, R1</u>					
<u>Proposed VRF</u>		<u>High</u>			
		<u>requirements are viewed as similar since they both refer to having responsibility to act to ensure reliability.</u> Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	"Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language		
<u>FERC VRF G4 Discussion</u> <u>R1.</u>	Meets NERC's VSL guidelines— Severe: The performance or product measured does not substantively meet the	The proposed requirement is comparable to approved EOP-002-2, Requirement. That is a binary requirement and thus, the VSL in the proposed standard is	The proposed VSL does not use any ambiguous terminology; thereby supporting uniformity and consistency in the determination	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.	The VSL is based on a single violation and not cumulative violations.

<u>VRF Justifications – IRO-001-3, R1</u>					
<u>Proposed VRF</u>		<u>High</u>			
	intent of the requirement.	assigned a Severe VSL. <u>Guideline 4- Consistency with NERC Definitions of VRFs:</u> <u>Failure to act, direct actions or issue Reliability Directives may directly affect the electrical state or the capability of the bulk power system and may lead to bulk power system instability, separation, or cascading failures.</u> <u>Therefore, this requirement is assigned a High</u>	<u>of similar penalties for similar violations.</u>		

<u>VRF Justifications – IRO-001-3, R1</u>					
<u>Proposed VRF</u>		<u>High</u>			
		<u>VRF.</u>			
<u>FERC VRF G5 Discussion</u>		<u>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</u> <u>The requirement contains only one objective; therefore, only one VRF was assigned.</u>			

VSLs for IRO-001-2 Requirement R2:

<u>Proposed VSLs for IRO-001-3, R1</u>				
<u>R#</u>	<u>Lower</u>	<u>Moderate</u>	<u>High</u>	<u>Severe</u>
<u>R1</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>The Reliability Coordinator failed to exercise its authority to take action or direct actions, to prevent an identified event that resulted in an Emergency or Adverse Reliability Impact.</u> <u>OR</u> <u>The Reliability Coordinator failed to exercise its authority to take action or direct actions to mitigate the magnitude or duration of an event that resulted in an Emergency or Adverse Reliability Impact.</u>
<u>VSL Justifications – IRO-001-3, R1</u>				

<u>NERC VSL Guidelines</u>		<u>Meets NERC's VSL guidelines - Severe: The performance or product measured does not substantively meet the intent of the requirement.</u>			
<u>FERC VSL G1</u> <u>Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</u>		<u>The proposed requirement is comparable to approved EOP-002-2, Requirement. That is a binary requirement and thus, the VSL in the proposed standard is assigned a Severe VSL.</u>			
R#	Compliance with NERC's VSL Guidelines	Guideline-1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	<u>FERC VSL G2</u> Guideline-2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for	<u>2a:3</u> <u>N/A</u> <u>Guideline 2b:</u> <u>Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</u> <u>The proposed VSL does not use any ambiguous terminology, thereby</u>	Guideline-4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations

			"Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	<u>supporting uniformity and consistency in the determination of similar penalties for similar violations.</u>	
R2	~~Meets NERC's VSL guidelines—Severe: The performance or product measured does not substantively meet the intent of the requirement.~~	~~The proposed requirement is comparable to approved TOP- 001-1, Requirement R3. That VSL is binary but the RCSDT notes that there are two possible levels of violation for this requirement. The two conditions are that 1) the responsible entity did not comply (severe) or 2) the responsible initiated action~~	~~The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.~~ <u>FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding</u>	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.	~~The VSL is based on a single violation and not cumulative violations.~~

		but did not fully comply (high). Thus, the VSL in the proposed standard does not lower the level of compliance currently required by setting VSLs that are less punitive than those already proposed.	<u>Requirement</u>		
<u>FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</u>		<u>The VSL is based on a single violation and not cumulative violations.</u>			

VSLs for IRO-001-2 Requirement R3:

<u>VRF Justifications – IRO-001-3, R2</u>					
<u>Proposed VRF</u>	<u>High</u>				
<u>NERC VRF Discussion</u>					
<u>FERC VRF G1 Discussion</u>	<u>Guideline 1- Consistency w/ Blackout Report:</u> <u>N/A</u>				
<u>R#</u>	<u>Compliance with NERC's VSL Guidelines</u>	<u>FERC VRF G2 Discussion</u> <u>Guideline 1</u> Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	<u>-</u> Violation Severity Level Assignments Should Ensure Uniformity and <u>within a Reliability Standard</u> in the Determination of Penalties <u>The requirement has no sub-requirements; only one VRF was assigned so</u>	<u>Guideline 3</u> Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	<u>Guideline 4</u> Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations

<u>VRF Justifications – IRO-001-3, R2</u>					
<u>Proposed VRF</u>	<u>High</u>				
			<u>there is no conflict.</u><u>Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent</u> <u>Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</u>		
<u>R3.</u>	<u>Meets NERC's VSL guidelines— Severe: The performance or product measured does not substantively meet the intent of the requirement.</u>	<u>FERC VRF G3 Discussion</u><u>The proposed requirement is comparable to approved TOP-001-1, Requirement R3. That VSL is binary and the proposed VSL is also binary. Thus, the VSL in the proposed standard</u>	<u>Guideline 3- Consistency among Reliability Standards:</u> <u>There is a similar requirement (Requirement R3) in TOP-001-1 that is assigned a High VRF. The</u>	<u>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.</u>	<u>The VSL is based on a single violation and not cumulative violations.</u>

<u>VRF Justifications – IRO-001-3, R2</u>					
<u>Proposed VRF</u>	<u>High</u>				
		does not lower the level of compliance currently required by setting VSLs that are less punitive than those already proposed.	requirements are viewed as similar since they both refer to the complying with directives unless the following the directive would violate safety, equipment, regulatory or statutory requirements. The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.		
<u>FERC VRF</u>	<u>Guideline 4- Consistency with NERC Definitions of</u>				

<u>VRF Justifications – IRO-001-3, R2</u>	
<u>Proposed VRF</u>	<u>High</u>
<u>G4 Discussion</u>	<u>VRFs:</u> <u>Failure to comply with a reliability directive could lead to bulk power system instability, separation, or cascading failures. Therefore, this requirement is assigned a High VRF.</u>
<u>FERC VRF G5 Discussion</u>	<u>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</u> <u>The requirement contains only one objective; therefore, only one VRF was assigned.</u>

<u>Proposed VSLs for IRO-001-3, R2</u>				
<u>R#</u>	<u>Lower</u>	<u>Moderate</u>	<u>High</u>	<u>Severe</u>
<u>R7</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>The responsible entity did not comply with the Reliability Coordinator’s direction, unless compliance with the direction could not be physically implemented or unless such actions would have violated safety, equipment, regulatory, or statutory requirements.</u>

<u>VSL Justifications – IRO-001-3, R2</u>	
<u>NERC VSL Guidelines</u>	<u>Meets NERC’s VSL guidelines - Severe: The performance or product measured does not substantively meet the intent of the requirement.</u>
<u>FERC VSL G1</u> <u>Violation Severity Level</u> <u>Assignments Should Not Have</u> <u>the Unintended Consequence</u> <u>of Lowering the Current Level</u> <u>of Compliance</u>	<u>The proposed requirement is comparable to approved TOP-001-1, Requirement R3. That VSL is binary but the SDT notes that there are two possible levels of violation for this requirement. The two conditions are that 1) the responsible entity did not comply (severe) or 2) the responsible initiated action but did not fully comply (high). Thus, the VSL in the proposed standard does not lower the level of compliance currently required by setting VSLs that are less punitive than those already proposed.</u>
<u>FERC VSL G2</u> <u>Violation Severity Level</u> <u>Assignments Should Ensure</u> <u>Uniformity and Consistency in</u> <u>the Determination of Penalties</u> <u>Guideline 2a: The Single</u> <u>Violation Severity Level</u> <u>Assignment Category for</u> <u>"Binary" Requirements Is Not</u> <u>Consistent</u> <u>Guideline 2b: Violation Severity</u> <u>Level Assignments that Contain</u>	<u>Guideline 2a:</u> <u>N/A</u> <u>Guideline 2b:</u> <u>The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.</u>

<u>Ambiguous Language</u>	
<u>FERC VSL G3</u> <u>Violation Severity Level</u> <u>Assignment Should Be</u> <u>Consistent with the</u> <u>Corresponding Requirement</u>	<u>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.</u>
<u>FERC VSL G4</u> <u>Violation Severity Level</u> <u>Assignment Should Be Based</u> <u>on A Single Violation, Not on A</u> <u>Cumulative Number of</u> <u>Violations</u>	<u>The VSL is based on a single violation and not cumulative violations</u>

<u>VRF Justifications – IRO-001-3, R3</u>	
<u>Proposed VRF</u>	<u>High</u>
<u>NERC VRF Discussion</u>	
<u>FERC VRF G1 Discussion</u>	<u>Guideline 1- Consistency w/ Blackout Report:</u> <u>N/A</u>

VRF Justifications – IRO-001-3, R3

<u>Proposed VRF</u>	<u>High</u>
<u>FERC VRF G2 Discussion</u>	<u>Guideline 2- Consistency within a Reliability Standard:</u> <u>The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.</u>
<u>FERC VRF G3 Discussion</u>	<u>Guideline 3- Consistency among Reliability Standards:</u> <u>There is a similar requirement (Requirement R3) in TOP-001-1 that is assigned a High VRF. The requirements are viewed as similar since they both refer to informing the Reliability Coordinator when a directive cannot be performed.</u>
<u>FERC VRF G4 Discussion</u>	<u>Guideline 4- Consistency with NERC Definitions of VRFs:</u> <u>Failure to inform the Reliability Coordinator of the inability to perform a reliability directive would prevent the Reliability Coordinator from developing an alternative solution to the reliability concern. This could lead to directly affect the electrical state or the capability of the bulk power system and will not lead to bulk power system instability, separation, or cascading failures.</u>
<u>FERC VRF G5 Discussion</u>	<u>Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation:</u> <u>The requirement contains only one objective; therefore, only one VRF was assigned.</u>

<u>Proposed VSLs for IRO-001-3, R3</u>				
<u>R#</u>	<u>Lower</u>	<u>Moderate</u>	<u>High</u>	<u>Severe</u>
<u>R7</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>The responsible entity failed to inform its Reliability Coordinator upon recognition of its inability to perform as directed.</u>
<u>VSL Justifications – IRO-001-3, R3</u>				
<u>NERC VSL Guidelines</u>			<u>Meets NERC’s VSL guidelines - Severe: The performance or product measured does not substantively meet the intent of the requirement.</u>	
<u>FERC VSL G1</u> <u>Violation Severity Level</u> <u>Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance</u>			<u>The proposed requirement is comparable to approved TOP-001-1, Requirement R3. That VSL is binary and the proposed VSL is also binary. Thus, the VSL in the proposed standard does not lower the level of compliance currently required by setting VSLs that are less punitive than those already proposed.</u>	
<u>FERC VSL G2</u> <u>Violation Severity Level</u> <u>Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties</u> <u>Guideline 2a: The Single Violation Severity Level Assignment Category for</u>			<u>Guideline 2a:</u> <u>N/A</u> <u>Guideline 2b:</u> <u>The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the</u>	

<u>"Binary" Requirements Is Not Consistent</u> <u>Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language</u>	<u>determination of similar penalties for similar violations.</u>
<u>FERC VSL G3</u> <u>Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement</u>	<u>The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.</u>
<u>FERC VSL G4</u> <u>Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations</u>	<u>The VSL is based on a single violation and not cumulative violations.</u>

Standards Announcement

Project 2006-06 Reliability Coordination

Ballot Window Extended for COM-001-2 – Successive Ballot and Non-Binding Poll

Extended

The ballot window for the successive ballot of COM-001-2 and a non-binding poll of the associated VRF/VSLs will be **extended one day at a time until a quorum is achieved**.

Instructions

Members of the ballot pools associated with this project may log in and submit their vote for the Standards and opinion in the non-binding polls of the associated VRFs and VSLs by clicking [here](#).

Next Steps

The drafting team will consider all comments received for COM-001-2 during the formal comment and ballot period and, if needed, make revisions to the standard. If the comments do not show the need for significant revisions, the standard will proceed to a recirculation ballot.

Background

The Reliability Coordination Standards Drafting Team was tasked with 1) ensuring that the reliability-related requirements applicable to the Reliability Coordinator are clear, measureable, unique, and enforceable; 2) ensuring that this set of requirements is sufficient to maintain reliability of the Bulk Electric System; 3) revising the group of standards based on FERC Order 693.

During the course of this project, the Reliability Coordination Standards Drafting Team incorporated changes due to the work of the IROL Standards Drafting Team. Two standards from the original Standards Authorization Request (PER-004 and PRC-001) were moved to other projects due to the scope overlap. In addition, the scope of Project 2006-06 was expanded to incorporate directives from FERC Order 693 associated with standard IRO-003-2.

Additional information is available on the [project page](#).

Standards Development Process

The [Standards Processes Manual](#) contains all the procedures governing the standards development process. The success of the NERC standards development process depends on stakeholder participation. We extend our thanks to all those who participate.

*For more information or assistance, please contact Monica Benson,
Standards Process Administrator, at monica.benson@nerc.net or at 404-446-2560.*

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Standards Announcement

Project 2006-06 Reliability Coordination

Ballot Windows Open through 8 p.m. Friday, July 6, 2012

Successive and Non-Binding Poll: COM-001-2

Recirculation and Non-Binding Polls: COM-002-3 and IRO-001-3

Now Available

A successive ballot for COM-001-2 and a non-binding poll of the associated VRF/VSLs and recirculation ballots for COM-002-3 and IRO-001-3 and non-binding polls for the associated VRF/VSLs are open through **8 p.m. Eastern on Friday, July 6, 2012.**

Instructions

Members of the ballot pools associated with this project may log in and submit their vote for the Standards and opinion in the non-binding polls of the associated VRFs and VSLs by clicking [here](#).

Voters can submit their comments via the [electronic comment form](#).

Next Steps

The drafting team will consider all comments received for COM-001-2 during the formal comment and ballot period and, if needed, make revisions to the standard. If the comments do not show the need for significant revisions, the standard will proceed to a recirculation ballot.

Background

The Reliability Coordination Standards Drafting Team was tasked with 1) ensuring that the reliability-related requirements applicable to the Reliability Coordinator are clear, measureable, unique, and enforceable; 2) ensuring that this set of requirements is sufficient to maintain reliability of the Bulk Electric System; 3) revising the group of standards based on FERC Order 693.

During the course of this project, the Reliability Coordination Standards Drafting Team incorporated changes due to the work of the IROL Standards Drafting Team. Two standards from the original Standards Authorization Request (PER-004 and PRC-001) were moved to other projects due to the scope overlap. In addition, the scope of Project 2006-06 was expanded to incorporate directives from FERC Order 693 associated with standard IRO-003-2.

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Standards Announcement

Project 2006-06 Reliability Coordination

Formal Comment Period: June 7-July 6, 2012

Upcoming:	June 27 – July 6, 2012
Successive and Non-Binding Poll:	COM-001-2
Recirculation and Non-Binding Polls:	COM-002-3 and IRO-001-3

Now Available

A formal comment period for **COM-001-2 – Communications** is open through **8 p.m. Eastern on Friday, July 6, 2012**. In response to industry comments, the Drafting Team made substantive changes to COM-001-2 – Communications requiring an additional comment period and successive ballot. The Drafting Team made minor changes to the VSLs but did not make substantive changes to **COM-002-3 – Communication and Coordination** and **IRO-001-3 – Reliability Coordination – Responsibilities and Authorities** requirements which passed the previous successive ballots.

Instructions for Commenting

A formal comment period for COM-001-2 is open through **8 p.m. Eastern on Friday, July 6, 2012**. Please use this [electronic form](#) to submit comments. If you experience any difficulties in using the electronic form, please contact Monica Benson at monica.benson@nerc.net. An off-line, unofficial copy of the comment form is posted on the [project page](#).

Commenters and voters must submit comments through the [electronic comment form](#). Due to modifications to NERC's balloting software, voters are no longer able to submit comments via the balloting software.

Next Steps

A successive ballot for COM-001-2 and a non-binding poll of the associated VRF/VSLs and recirculation ballots for COM-002-3 and IRO-001-3 and non-binding polls for the associated VRF/VSLs will be conducted on Wednesday, June 27 through 8 p.m. Eastern on Friday, July 6, 2012.

Background

The Reliability Coordination Standards Drafting Team was tasked with 1) ensuring that the reliability-related requirements applicable to the Reliability Coordinator are clear, measureable, unique, and enforceable; 2) ensuring that this set of requirements is sufficient to maintain reliability of the Bulk Electric System; 3) revising the group of standards based on FERC Order 693.

During the course of this project, the Reliability Coordination Standards Drafting Team incorporated changes due to the work of the IROL Standards Drafting Team. Two standards from the original Standards Authorization

Request (PER-004 and PRC-001) were moved to other projects due to the scope overlap. In addition, the scope of Project 2006-06 was expanded to incorporate directives from FERC Order 693 associated with standard IRO-003-2. Additional information is available on the [project page](#).

The Project 2006-06 standards are an important part of the ERO's strategic goal to develop technically sufficient standards with requirements that provide clear and unambiguous performance expectations and reliability benefits.

Standards Development Process

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Standards Announcement

Project 2006-06 Reliability Coordination

Successive, Recirculation and Non-Binding Poll Results

[Now Available](#)

A successive ballot for **COM-001-2 – Communications** and a non-binding poll of the associated VRF/VSLs and recirculation ballots for **COM-002-3 – Communication and Coordination** and **IRO-001-3 – Reliability Coordination – Responsibilities and Authorities** and non-binding polls for the associated VRF/VSLs concluded on Friday, July 6, 2012.

Voting statistics for each ballot are listed below, and the [Ballots Results](#) page provides a link to the detailed results.

Standard	Approval	Non-binding Poll Results
COM-001-2 (Successive)	Quorum: 75.37%	Quorum: 75.37%
	Approval: 72.16%	Supportive Opinions: 73.71%
COM-002-3 (Recirculation)	Quorum: 85.34%	Quorum: 84.16%
	Approval: 81.71%	Supportive Opinions: 79.16%
IRO-001-3 (Recirculation)	Quorum: 85.04%	Quorum: 83.87 %
	Approval: 81.72%	Supportive Opinions: 86.91%

Next Steps

The drafting team is considering all comments submitted for COM-001-2, and based on the comments will determine whether to make additional changes. If the drafting team determines that no substantive changes to the standard are required, the team will submit the standard and associated documents for a recirculation ballot. If the drafting team makes substantive changes to the standard, the team will submit its consideration of comments, along with the revised standard and associated documents, for a quality review prior to posting for another successive ballot.

COM-002-3 – Communication and Coordination and IRO-001-3 – Reliability Coordination – Responsibilities and Authorities will be presented to the NERC Board of Trustees for adoption and subsequently filed with regulatory authorities. The VRFs and VSLs for both standards (unchanged from

those included in the versions of the standards posted for recirculation ballot) will be presented to the board for approval.

Background

The Reliability Coordination Standards Drafting Team was tasked with 1) ensuring that the reliability-related requirements applicable to the Reliability Coordinator are clear, measureable, unique, and enforceable; 2) ensuring that this set of requirements is sufficient to maintain reliability of the Bulk Electric System; 3) revising the group of standards based on FERC Order 693.

During the course of this project, the Reliability Coordination Standards Drafting Team incorporated changes due to the work of the IROL Standards Drafting Team. Two standards from the original Standards Authorization Request (PER-004 and PRC-001) were moved to other projects due to the scope overlap. In addition, the scope of Project 2006-06 was expanded to incorporate directives from FERC Order 693 associated with standard IRO-003-2.

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NORTH AMERICAN ELECTRIC
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Ballot Results	
Ballot Name:	Project 2006-06 Recirculation Ballot IRO-001-3
Ballot Period:	6/27/2012 - 7/6/2012
Ballot Type:	Initial
Total # Votes:	290
Total Ballot Pool:	341
Quorum:	85.04 % The Quorum has been reached
Weighted Segment Vote:	81.72 %
Ballot Results:	The Standard has Passed.

Summary of Ballot Results								
Segment	Ballot Pool	Segment Weight	Affirmative		Negative		Abstain	No Vote
			# Votes	Fraction	# Votes	Fraction	# Votes	
1 - Segment 1.	88	1	53	0.828	11	0.172	7	17
2 - Segment 2.	11	0.9	9	0.9	0	0	1	1
3 - Segment 3.	85	1	42	0.792	11	0.208	20	12
4 - Segment 4.	24	1	16	0.8	4	0.2	2	2
5 - Segment 5.	69	1	39	0.78	11	0.22	8	11
6 - Segment 6.	44	1	29	0.784	8	0.216	3	4
7 - Segment 7.	0	0	0	0	0	0	0	0
8 - Segment 8.	8	0.6	5	0.5	1	0.1	1	1
9 - Segment 9.	4	0.2	2	0.2	0	0	1	1
10 - Segment 10.	8	0.5	3	0.3	2	0.2	1	2
Totals	341	7.2	198	5.884	48	1.316	44	51

Individual Ballot Pool Results				
Segment	Organization	Member	Ballot	Comments
1	Allegheny Power	Rodney Phillips		
1	Ameren Services	Kirit Shah	Affirmative	
1	American Electric Power	Paul B. Johnson	Negative	View
1	American Transmission Company, LLC	Andrew Z Pusztai	Affirmative	
1	Arizona Public Service Co.	Robert Smith	Affirmative	
1	Avista Corp.	Scott J Kinney	Affirmative	
1	Baltimore Gas & Electric Company	Gregory S Miller	Abstain	View
1	BC Hydro and Power Authority	Patricia Robertson	Affirmative	
1	Beaches Energy Services	Joseph S Stonecipher	Abstain	View

1	Bonneville Power Administration	Donald S. Watkins	Affirmative	
1	Central Maine Power Company	Kevin L Howes	Affirmative	
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G Choi	Affirmative	
1	City of Vero Beach	Randall McCamish		
1	City Water, Light & Power of Springfield	Shaun Anders		
1	Clark Public Utilities	Jack Stamper	Affirmative	
1	Cleco Power LLC	Danny McDaniel	Affirmative	
1	Colorado Springs Utilities	Paul Morland	Affirmative	
1	Consolidated Edison Co. of New York	Christopher L de Graffenried	Abstain	View
1	Dayton Power & Light Co.	Hertzel Shamash		
1	Dominion Virginia Power	Michael S Crowley	Negative	View
1	Duke Energy Carolina	Douglas E. Hils	Negative	View
1	East Kentucky Power Coop.	George S. Carruba		
1	Empire District Electric Co.	Ralph F Meyer	Affirmative	
1	Entergy Corporation	George R. Bartlett	Affirmative	
1	FirstEnergy Energy Delivery	Robert Martinko	Negative	
1	Florida Keys Electric Cooperative Assoc.	Dennis Minton	Affirmative	
1	Great River Energy	Gordon Pietsch	Affirmative	View
1	Hoosier Energy Rural Electric Cooperative, Inc.	Robert Solomon		
1	Hydro One Networks, Inc.	Ajay Garg	Negative	
1	Hydro-Quebec TransEnergie	Bernard Pelletier	Affirmative	
1	Idaho Power Company	Ronald D. Schellberg		
1	International Transmission Company Holdings Corp	Michael Moltane		
1	Kansas City Power & Light Co.	Michael Gammon	Affirmative	
1	Keys Energy Services	Stan T. Rzad		
1	Lake Worth Utilities	Walt Gill		
1	Lakeland Electric	Larry E Watt	Affirmative	
1	Lee County Electric Cooperative	John W Delucca	Abstain	
1	Long Island Power Authority	Robert Ganley	Affirmative	
1	Manitoba Hydro	Joe D Petaski	Negative	View
1	MEAG Power	Danny Dees	Affirmative	
1	MidAmerican Energy Co.	Terry Harbour	Negative	View
1	Minnkota Power Coop. Inc.	Richard Burt	Abstain	
1	National Grid	Saurabh Saksena	Affirmative	View
1	Nebraska Public Power District	Richard L. Koch		
1	New Brunswick Power Transmission Corporation	Randy MacDonald	Affirmative	
1	New York Power Authority	Arnold J. Schuff	Affirmative	
1	Northeast Utilities	David Boguslawski	Affirmative	View
1	Northern Indiana Public Service Co.	Kevin M Largura	Affirmative	
1	NorthWestern Energy	John Canavan	Affirmative	
1	Oklahoma Gas and Electric Co.	Marvin E VanBebber	Affirmative	
1	Omaha Public Power District	Doug Peterchuck	Affirmative	
1	Oncor Electric Delivery	Michael T. Quinn	Affirmative	
1	Orlando Utilities Commission	Brad Chase	Affirmative	
1	Otter Tail Power Company	Daryl Hanson		
1	PacifiCorp	Colt Norrish		
1	PECO Energy	Ronald Schloendorn	Affirmative	
1	Platte River Power Authority	John C. Collins	Affirmative	View
1	Portland General Electric Co.	Frank F Afranji	Affirmative	View
1	Potomac Electric Power Co.	David Thorne	Affirmative	
1	PowerSouth Energy Cooperative	Larry D Avery	Negative	
1	PPL Electric Utilities Corp.	Brenda L Truhe	Affirmative	
1	Public Service Company of New Mexico	Laurie Williams		
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Affirmative	
1	Public Utility District No. 1 of Okanogan County	Dale Dunkel	Affirmative	View
1	Puget Sound Energy, Inc.	Catherine Koch		
1	Rochester Gas and Electric Corp.	John C. Allen	Affirmative	
1	Sacramento Municipal Utility District	Tim Kelley	Affirmative	
1	Salt River Project	Robert Kondziolka	Affirmative	
1	Santee Cooper	Terry L Blackwell	Affirmative	
1	SCE&G	Henry Delk, Jr.	Affirmative	
1	Seattle City Light	Pawel Krupa	Affirmative	
1	Sierra Pacific Power Co.	Rich Salgo	Affirmative	View
1	South Texas Electric Cooperative	Richard McLeon		
1	Southern California Edison Co.	Dana Cabbell		

1	Southern Company Services, Inc.	Robert A. Schaffeld	Affirmative	View
1	Southern Illinois Power Coop.	William Hutchison	Negative	
1	Southwest Transmission Cooperative, Inc.	James Jones	Negative	
1	Southwestern Power Administration	Gary W Cox	Abstain	
1	Sunflower Electric Power Corporation	Noman Lee Williams	Affirmative	
1	Tampa Electric Co.	Beth Young	Affirmative	
1	Tennessee Valley Authority	Larry Akens	Affirmative	View
1	Tri-State G & T Association, Inc.	Tracy Sliman	Affirmative	
1	Tucson Electric Power Co.	John Tolo	Affirmative	
1	United Illuminating Co.	Jonathan Appelbaum	Affirmative	
1	Westar Energy	Allen Klassen	Negative	
1	Western Area Power Administration	Brandy A Dunn	Affirmative	
1	Western Farmers Electric Coop.	Forrest Brock	Abstain	
1	Xcel Energy, Inc.	Gregory L Pieper	Affirmative	
2	Alberta Electric System Operator	Mark B Thompson	Abstain	View
2	BC Hydro	Venkataramakrishnan Vinnakota	Affirmative	
2	California ISO	Gregory Van Pelt	Affirmative	
2	Electric Reliability Council of Texas, Inc.	Charles B Manning	Affirmative	
2	Independent Electricity System Operator	Kim Warren	Affirmative	View
2	ISO New England, Inc.	Kathleen Goodman	Affirmative	
2	Midwest ISO, Inc.	Jason L Marshall	Affirmative	View
2	New Brunswick System Operator	Alden Briggs	Affirmative	View
2	New York Independent System Operator	Gregory Campoli	Affirmative	
2	PJM Interconnection, L.L.C.	Tom Bowe	Affirmative	
2	Southwest Power Pool	Charles H Yeung		
3	Alabama Power Company	Richard J. Mandes	Affirmative	View
3	Allegheny Power	Bob Reeping		
3	Anaheim Public Utilities Dept.	Kelly Nguyen		
3	APS	Steven Norris	Affirmative	
3	Atlantic City Electric Company	James V. Petrella	Affirmative	
3	BC Hydro and Power Authority	Pat G. Harrington	Affirmative	
3	Blachly-Lane Electric Co-op	Bud Tracy	Abstain	View
3	Bonneville Power Administration	Rebecca Berdahl	Affirmative	
3	Central Electric Cooperative, Inc. (Redmond, Oregon)	Dave Markham	Abstain	View
3	Central Lincoln PUD	Steve Alexanderson	Negative	View
3	City of Bartow, Florida	Matt Culverhouse		
3	City of Clewiston	Lynne Mila	Affirmative	
3	City of Farmington	Linda R Jacobson	Affirmative	
3	City of Garland	Ronnie C Hoeinghaus	Affirmative	
3	City of Green Cove Springs	Gregg R Griffin	Affirmative	View
3	City of Leesburg	Phil Janik		
3	City of Redding	Bill Hughes	Affirmative	
3	Clearwater Power Co.	Dave Hagen	Abstain	View
3	Cleco Corporation	Michelle A Corley	Affirmative	
3	ComEd	Bruce Krawczyk	Affirmative	
3	Consolidated Edison Co. of New York	Peter T Yost	Abstain	View
3	Constellation Energy	CJ Ingersoll	Abstain	
3	Consumers Energy	David A. Lapinski	Abstain	
3	Consumers Power Inc.	Roman Gillen	Abstain	View
3	Coos-Curry Electric Cooperative, Inc	Roger Meader	Abstain	View
3	Cowlitz County PUD	Russell A Noble		
3	Delmarva Power & Light Co.	Michael R. Mayer	Affirmative	
3	Detroit Edison Company	Kent Kujala	Negative	
3	Dominion Resources Services	Michael F. Gildea	Negative	View
3	Douglas Electric Cooperative	Dave Sabala	Abstain	View
3	Duke Energy Carolina	Henry Ernst-Jr	Negative	View
3	East Kentucky Power Coop.	Sally Witt		
3	Entergy	Joel T Plessinger	Affirmative	
3	Fall River Rural Electric Cooperative	Bryan Case	Abstain	View
3	FirstEnergy Solutions	Kevin Querry	Negative	
3	Georgia Power Company	Anthony L Wilson	Affirmative	View
3	Georgia System Operations Corporation	Scott S. Barfield-McGinnis	Affirmative	
3	Great River Energy	Sam Kokkinen	Affirmative	View
3	Hydro One Networks, Inc.	David Kiguel	Negative	
3	Idaho Power Company	Shaun Jensen		

3	JEA	Garry Baker	Affirmative	
3	Kansas City Power & Light Co.	Charles Locke	Affirmative	
3	Kissimmee Utility Authority	Gregory D Woessner	Affirmative	
3	Lakeland Electric	Mace D Hunter	Affirmative	
3	Lane Electric Cooperative, Inc.	Rick Crinklaw	Abstain	View
3	Lincoln Electric Cooperative, Inc.	Michael Henry	Abstain	View
3	Lincoln Electric System	Bruce Merrill		
3	Los Angeles Department of Water & Power	Daniel D Kurowski	Affirmative	
3	Lost River Electric Cooperative	Richard Reynolds	Abstain	View
3	Louisville Gas and Electric Co.	Charles A. Freibert	Affirmative	
3	Manitoba Hydro	Greg C. Parent	Negative	View
3	MidAmerican Energy Co.	Thomas C. Mielnik	Negative	View
3	Mississippi Power	Don Horsley	Affirmative	View
3	Municipal Electric Authority of Georgia	Steven M. Jackson	Affirmative	
3	Muscatine Power & Water	John S Bos	Affirmative	
3	Nebraska Public Power District	Tony Eddleman	Affirmative	
3	New York Power Authority	Marilyn Brown	Affirmative	
3	Niagara Mohawk (National Grid Company)	Michael Schiavone	Affirmative	
3	Northern Indiana Public Service Co.	William SeDoris	Affirmative	
3	Northern Lights Inc.	Jon Shelby	Abstain	View
3	Okanogan County Electric Cooperative, Inc.	Ray Ellis	Abstain	View
3	Orange and Rockland Utilities, Inc.	David Burke	Abstain	
3	Orlando Utilities Commission	Ballard K Mutters	Affirmative	
3	PacifiCorp	John Apperson		
3	Platte River Power Authority	Terry L Baker	Affirmative	
3	Potomac Electric Power Co.	Robert Reuter	Affirmative	
3	Public Service Electric and Gas Co.	Jeffrey Mueller	Affirmative	
3	Public Utility District No. 2 of Grant County	Greg Lange		
3	Raft River Rural Electric Cooperative	Heber Carpenter	Abstain	View
3	Sacramento Municipal Utility District	James Leigh-Kendall	Affirmative	
3	Salmon River Electric Cooperative	Ken Dizes	Abstain	View
3	Salt River Project	John T. Underhill	Affirmative	
3	San Diego Gas & Electric	Scott Peterson		
3	Santee Cooper	Zack Dusenbury	Affirmative	
3	Seattle City Light	Dana Wheelock	Affirmative	
3	Seminole Electric Cooperative, Inc.	James R Frauen	Affirmative	
3	Southern California Edison Co.	David Schiada		
3	Tacoma Public Utilities	Travis Metcalfe	Affirmative	
3	Tampa Electric Co.	Ronald L Donahey	Affirmative	
3	Tennessee Valley Authority	Ian S Grant	Negative	View
3	Umatilla Electric Cooperative	Steve Eldrige	Abstain	View
3	West Oregon Electric Cooperative, Inc.	Marc M Farmer	Abstain	View
3	Wisconsin Electric Power Marketing	James R Keller	Negative	View
3	Wisconsin Public Service Corp.	Gregory J Le Grave	Negative	View
3	Xcel Energy, Inc.	Michael Ibold	Affirmative	
4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Affirmative	
4	American Municipal Power - Ohio	Kevin Koloini	Negative	
4	Blue Ridge Power Agency	Duane S Dahlquist	Affirmative	
4	Central Lincoln PUD	Shamus J Gamache	Negative	View
4	City of Clewiston	Kevin McCarthy	Affirmative	
4	City of New Smyrna Beach Utilities Commission	Tim Beyrle	Affirmative	
4	City Utilities of Springfield, Missouri	John Allen	Affirmative	
4	Consumers Energy	David Frank Ronk	Abstain	
4	Cowlitz County PUD	Rick Syring		
4	Florida Municipal Power Agency	Frank Gaffney	Affirmative	
4	Fort Pierce Utilities Authority	Thomas W. Richards		
4	Georgia System Operations Corporation	Guy Andrews	Affirmative	View
4	Illinois Municipal Electric Agency	Bob C. Thomas	Affirmative	View
4	Madison Gas and Electric Co.	Joseph DePoorter	Affirmative	
4	Ohio Edison Company	Douglas Hohlbaugh	Negative	
4	Pacific Northwest Generating Cooperative	Aleka K Scott	Abstain	View
4	Public Utility District No. 1 of Douglas County	Henry E. LuBean	Affirmative	
4	Public Utility District No. 1 of Snohomish County	John D Martinsen	Affirmative	
4	Sacramento Municipal Utility District	Mike Ramirez	Affirmative	
4	Seattle City Light	Hao Li	Affirmative	
4	Seminole Electric Cooperative, Inc.	Steven R Wallace	Affirmative	

4	Tacoma Public Utilities	Keith Morisette	Affirmative	
4	Tallahassee Electric	Allan Morales	Affirmative	
4	Wisconsin Energy Corp.	Anthony Jankowski	Negative	
5	AEP Service Corp.	Brock Ondayko	Negative	View
5	AES Corporation	Leo Bernier	Abstain	
5	Amerenue	Sam Dwyer	Affirmative	
5	Arizona Public Service Co.	Edward Cambridge	Affirmative	
5	Avista Corp.	Edward F. Groce	Affirmative	
5	BC Hydro and Power Authority	Clement Ma	Abstain	
5	Bonneville Power Administration	Francis J. Halpin	Affirmative	
5	City of Grand Island	Jeff Mead	Abstain	
5	City of Redding	Paul Cummings	Affirmative	
5	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Max Emrick	Affirmative	
5	City of Tallahassee	Alan Gale		
5	Cleco Power	Stephanie Huffman	Affirmative	
5	Cogentrix Energy, Inc.	Mike D Hirst	Abstain	
5	Consolidated Edison Co. of New York	Wilket (Jack) Ng	Abstain	View
5	Constellation Power Source Generation, Inc.	Amir Y Hammad	Abstain	View
5	Consumers Energy	James B Lewis	Abstain	
5	Cowlitz County PUD	Bob Essex		
5	CPS Energy	Robert B Stevens		
5	Detroit Edison Company	Christy Wicke	Affirmative	
5	Dominion Resources, Inc.	Mike Garton	Negative	View
5	Duke Energy	Dale Q Goodwine	Negative	View
5	Dynegy Inc.	Dan Roethemeyer	Negative	View
5	Electric Power Supply Association	John R Cashin		
5	Entergy Corporation	Stanley M Jaskot	Affirmative	
5	Exelon Nuclear	Michael Korchynsky	Affirmative	
5	ExxonMobil Research and Engineering	Martin Kaufman	Negative	
5	FirstEnergy Solutions	Kenneth Dresner	Negative	
5	Florida Municipal Power Agency	David Schumann	Affirmative	
5	Great River Energy	Preston L Walsh	Affirmative	View
5	Green Country Energy	Greg Froehling	Affirmative	
5	Indeck Energy Services, Inc.	Rex A Roehl		
5	Kansas City Power & Light Co.	Scott Heidtbrink		
5	Kissimmee Utility Authority	Mike Blough	Affirmative	
5	Lakeland Electric	James M Howard	Affirmative	
5	Liberty Electric Power LLC	Daniel Duff	Affirmative	
5	Lincoln Electric System	Dennis Florom	Affirmative	
5	Los Angeles Department of Water & Power	Kenneth Silver	Affirmative	
5	Luminant Generation Company LLC	Mike Laney	Negative	View
5	Manitoba Hydro	S N Fernando	Negative	View
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Affirmative	
5	MEAG Power	Steven Grego	Affirmative	
5	MidAmerican Energy Co.	Christopher Schneider	Negative	View
5	Muscatine Power & Water	Mike Avesing	Affirmative	
5	Nebraska Public Power District	Don Schmit	Affirmative	View
5	New York Power Authority	Gerald Mannarino	Affirmative	
5	Occidental Chemical	Michelle R DAntuono	Affirmative	View
5	Omaha Public Power District	Mahmood Z. Safi	Affirmative	
5	Orlando Utilities Commission	Richard Kinan		
5	PacifiCorp	Sandra L. Shaffer	Affirmative	
5	Platte River Power Authority	Pete Ungerman		
5	Portland General Electric Co.	Gary L Tingley		
5	PPL Generation LLC	Annette M Bannon	Affirmative	
5	Public Service Enterprise Group Incorporated	Dominick Grasso	Affirmative	
5	Public Utility District No. 1 of Lewis County	Steven Grega	Affirmative	
5	Sacramento Municipal Utility District	Bethany Hunter	Affirmative	
5	Salt River Project	Glen Reeves		
5	Santee Cooper	Lewis P Pierce	Affirmative	
5	Seattle City Light	Michael J. Haynes	Affirmative	
5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins	Affirmative	
5	Snohomish County PUD No. 1	Sam Nietfeld	Affirmative	
5	Southern Company Generation	William D Shultz	Affirmative	View
5	Tampa Electric Co.	RJames Rocha	Affirmative	

5	Tenaska, Inc.	Scott M. Helyer	Abstain	
5	Tennessee Valley Authority	David Thompson	Affirmative	View
5	Tri-State G & T Association, Inc.	Barry Ingold	Affirmative	
5	U.S. Army Corps of Engineers	Melissa Kurtz	Affirmative	View
5	US Power Generating Company	Bohdan M Dackow		
5	Wisconsin Electric Power Co.	Linda Horn	Negative	View
5	Wisconsin Public Service Corp.	Leonard Rentmeester	Negative	
6	AEP Marketing	Edward P. Cox	Negative	View
6	Ameren Energy Marketing Co.	Jennifer Richardson	Affirmative	
6	Arizona Public Service Co.	Justin Thompson	Affirmative	
6	Black Hills Power	andrew heinle		
6	Bonneville Power Administration	Brenda S. Anderson	Affirmative	
6	City of Austin dba Austin Energy	Lisa L Martin	Affirmative	
6	Cleco Power LLC	Robert Hirschak	Affirmative	
6	Consolidated Edison Co. of New York	Nickesha P Carrol	Abstain	View
6	Constellation Energy Commodities Group	Brenda L Powell	Affirmative	
6	Dominion Resources, Inc.	Louis S. Slade	Negative	View
6	Duke Energy Carolina	Walter Yeager	Negative	View
6	Entergy Services, Inc.	Terri F Benoit	Affirmative	
6	Exelon Power Team	Pulin Shah	Abstain	
6	FirstEnergy Solutions	Mark S Travagianti	Negative	
6	Florida Municipal Power Agency	Richard L. Montgomery	Affirmative	
6	Florida Municipal Power Pool	Thomas Washburn	Affirmative	View
6	Florida Power & Light Co.	Silvia P. Mitchell	Negative	View
6	Great River Energy	Donna Stephenson		
6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Affirmative	
6	Lakeland Electric	Paul Shipps	Affirmative	
6	Lincoln Electric System	Eric Ruskamp	Affirmative	
6	Manitoba Hydro	Daniel Prowse	Negative	View
6	MidAmerican Energy Co.	Dennis Kimm	Negative	
6	Muscatine Power & Water	Brandy D Olson		
6	New York Power Authority	William Palazzo	Affirmative	
6	Northern Indiana Public Service Co.	Joseph O'Brien	Affirmative	
6	Omaha Public Power District	David Ried	Affirmative	
6	PacifiCorp	Scott L Smith	Affirmative	
6	Platte River Power Authority	Carol Ballantine	Affirmative	
6	PPL EnergyPlus LLC	Mark A Heimbach	Affirmative	
6	Progress Energy	John T Sturgeon	Abstain	
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Affirmative	
6	Sacramento Municipal Utility District	Claire Warshaw	Affirmative	
6	Salt River Project	Steven J Hulet	Affirmative	
6	Santee Cooper	Suzanne Ritter	Affirmative	
6	Seattle City Light	Dennis Sismaet	Affirmative	
6	Seminole Electric Cooperative, Inc.	Trudy S. Novak	Affirmative	
6	Shell Energy North America (US), L.P.	Paul Kerr	Affirmative	
6	South California Edison Company	Lujuanna Medina	Affirmative	
6	Tacoma Public Utilities	Michael C Hill	Affirmative	
6	Tampa Electric Co.	Benjamin F Smith II	Affirmative	
6	Tennessee Valley Authority	Marjorie S. Parsons	Negative	View
6	Western Area Power Administration - UGP Marketing	Peter H Kinney	Affirmative	
6	Xcel Energy, Inc.	David F. Lemmons		
8		Edward C Stein	Affirmative	
8		James A Maenner	Affirmative	
8		Roger C Zaklukiewicz	Affirmative	
8	JDRJC Associates	Jim Cyrulewski	Affirmative	
8	Pacific Northwest Generating Cooperative	Margaret Ryan	Abstain	View
8	Power Energy Group LLC	Peggy Abbadini		
8	Utility Services, Inc.	Brian Evans-Mongeon	Negative	
8	Volkman Consulting, Inc.	Terry Volkman	Affirmative	
9	Commonwealth of Massachusetts Department of Public Utilities	Donald Nelson	Affirmative	
9	National Association of Regulatory Utility Commissioners	Diane J. Barney	Affirmative	
9	Oregon Public Utility Commission	Jerome Murray	Abstain	
9	Snohomish County PUD No. 1	William Moojen		
10	Florida Reliability Coordinating Council	Linda Campbell		
10	Midwest Reliability Organization	James D Burley		



10	New York State Reliability Council	Alan Adamson	Affirmative	
10	Northeast Power Coordinating Council, Inc.	Guy V. Zito	Abstain	
10	ReliabilityFirst Corporation	Anthony E Jablonski	Negative	View
10	SERC Reliability Corporation	Carter B Edge	Affirmative	View
10	Texas Reliability Entity	Larry D. Grimm	Negative	
10	Western Electricity Coordinating Council	Louise McCarren	Affirmative	

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Non-binding Poll Results

IRO-001-3

Non-binding Poll Results				
Non-binding Poll Name:		Project 2006-06 Non-binding Poll IRO-001-3		
Poll Period:		6/27/2012 - 7/6/2012		
Total # Opinions:		286		
Total Ballot Pool:		341		
Summary Results:		83.87% of those who registered to participate provided an opinion or an abstention; 86.91% of those who provided an opinion indicated support for the VRFs and VSLs.		
Individual Ballot Pool Results				
Segment	Organization	Member	Opinions	Comments
1	Allegheny Power	Rodney Phillips		
1	Ameren Services	Kirit Shah	Abstain	
1	American Electric Power	Paul B. Johnson	Negative	View
1	American Transmission Company, LLC	Andrew Z Pusztai	Abstain	
1	Arizona Public Service Co.	Robert Smith	Affirmative	
1	Avista Corp.	Scott J Kinney	Affirmative	
1	Baltimore Gas & Electric Company	Gregory S Miller	Abstain	
1	BC Hydro and Power Authority	Patricia Robertson	Abstain	
1	Beaches Energy Services	Joseph S Stonecipher	Abstain	
1	Bonneville Power Administration	Donald S. Watkins	Affirmative	
1	Central Maine Power Company	Kevin L Howes	Affirmative	
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G Choi	Affirmative	
1	City of Vero Beach	Randall McCamish		
1	City Water, Light & Power of Springfield	Shaun Anders		
1	Clark Public Utilities	Jack Stamper	Affirmative	
1	Cleco Power LLC	Danny McDaniel	Abstain	
1	Colorado Springs Utilities	Paul Morland	Affirmative	
1	Consolidated Edison Co. of New York	Christopher L de Graffenried	Abstain	
1	Dayton Power & Light Co.	Hertzel Shamash		
1	Dominion Virginia Power	Michael S Crowley	Negative	
1	Duke Energy Carolina	Douglas E. Hils	Negative	View
1	East Kentucky Power Coop.	George S. Carruba		
1	Empire District Electric Co.	Ralph F Meyer	Affirmative	
1	Entergy Corporation	George R. Bartlett	Affirmative	
1	FirstEnergy Energy Delivery	Robert Martinko	Negative	
1	Florida Keys Electric Cooperative Assoc.	Dennis Minton	Affirmative	
1	Great River Energy	Gordon Pietsch	Affirmative	View

1	Hoosier Energy Rural Electric Cooperative, Inc.	Robert Solomon		
1	Hydro One Networks, Inc.	Ajay Garg	Abstain	
1	Hydro-Quebec TransEnergie	Bernard Pelletier	Affirmative	
1	Idaho Power Company	Ronald D. Schellberg		
1	International Transmission Company Holdings Corp	Michael Moltane		
1	Kansas City Power & Light Co.	Michael Gammon	Affirmative	
1	Keys Energy Services	Stan T. Rzad		
1	Lake Worth Utilities	Walt Gill		
1	Lakeland Electric	Larry E Watt	Affirmative	
1	Lee County Electric Cooperative	John W Delucca	Abstain	
1	Long Island Power Authority	Robert Ganley	Affirmative	
1	Manitoba Hydro	Joe D Petaski	Affirmative	View
1	MEAG Power	Danny Dees	Affirmative	
1	MidAmerican Energy Co.	Terry Harbour	Abstain	
1	Minnkota Power Coop. Inc.	Richard Burt	Abstain	
1	National Grid	Saurabh Saksena		
1	Nebraska Public Power District	Richard L. Koch		
1	New Brunswick Power Transmission Corporation	Randy MacDonald	Abstain	
1	New York Power Authority	Arnold J. Schuff	Affirmative	
1	Northeast Utilities	David Boguslawski	Abstain	
1	Northern Indiana Public Service Co.	Kevin M Largura	Affirmative	
1	NorthWestern Energy	John Canavan	Affirmative	
1	Oklahoma Gas and Electric Co.	Marvin E VanBebber	Affirmative	
1	Omaha Public Power District	Doug Peterchuck	Affirmative	
1	Oncor Electric Delivery	Michael T. Quinn		
1	Orlando Utilities Commission	Brad Chase	Affirmative	
1	Otter Tail Power Company	Daryl Hanson		
1	PacifiCorp	Colt Norrish		
1	PECO Energy	Ronald Schloendorn	Affirmative	
1	Platte River Power Authority	John C. Collins	Abstain	
1	Portland General Electric Co.	Frank F Afranji	Affirmative	View
1	Potomac Electric Power Co.	David Thorne	Abstain	
1	PowerSouth Energy Cooperative	Larry D Avery	Affirmative	
1	PPL Electric Utilities Corp.	Brenda L Truhe	Abstain	
1	Public Service Company of New Mexico	Laurie Williams		
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Abstain	
1	Public Utility District No. 1 of Okanogan County	Dale Dunckel	Affirmative	
1	Puget Sound Energy, Inc.	Catherine Koch		
1	Rochester Gas and Electric Corp.	John C. Allen	Affirmative	
1	Sacramento Municipal Utility District	Tim Kelley	Abstain	
1	Salt River Project	Robert Kondziolka	Affirmative	
1	Santee Cooper	Terry L Blackwell	Affirmative	
1	SCE&G	Henry Delk, Jr.	Affirmative	
1	Seattle City Light	Pawel Krupa	Affirmative	

1	Sierra Pacific Power Co.	Rich Salgo	Abstain	
1	South Texas Electric Cooperative	Richard McLeon		
1	Southern California Edison Co.	Dana Cabbell		
1	Southern Company Services, Inc.	Robert A. Schaffeld	Affirmative	View
1	Southern Illinois Power Coop.	William Hutchison	Negative	
1	Southwest Transmission Cooperative, Inc.	James Jones	Negative	
1	Southwestern Power Administration	Gary W Cox	Abstain	
1	Sunflower Electric Power Corporation	Noman Lee Williams	Negative	
1	Tampa Electric Co.	Beth Young	Negative	
1	Tennessee Valley Authority	Larry Akens	Abstain	
1	Tri-State G & T Association, Inc.	Tracy Sliman	Affirmative	
1	Tucson Electric Power Co.	John Tolo	Affirmative	
1	United Illuminating Co.	Jonathan Appelbaum	Affirmative	
1	Westar Energy	Allen Klassen	Abstain	
1	Western Area Power Administration	Brandy A Dunn	Affirmative	
1	Western Farmers Electric Coop.	Forrest Brock	Abstain	
1	Xcel Energy, Inc.	Gregory L Pieper		
2	Alberta Electric System Operator	Mark B Thompson	Abstain	
2	BC Hydro	Venkataramakrishnan Vinnakota	Abstain	
2	California ISO	Gregory Van Pelt	Affirmative	
2	Electric Reliability Council of Texas, Inc.	Charles B Manning	Affirmative	
2	Independent Electricity System Operator	Kim Warren	Affirmative	
2	ISO New England, Inc.	Kathleen Goodman	Abstain	
2	Midwest ISO, Inc.	Jason L Marshall	Affirmative	View
2	New Brunswick System Operator	Alden Briggs	Abstain	
2	New York Independent System Operator	Gregory Campoli	Abstain	
2	PJM Interconnection, L.L.C.	Tom Bowe	Affirmative	
2	Southwest Power Pool	Charles H. Yeung	Abstain	
3	Alabama Power Company	Richard J. Mandes	Affirmative	View
3	Allegheny Power	Bob Reeping		
3	Anaheim Public Utilities Dept.	Kelly Nguyen		
3	APS	Steven Norris	Affirmative	
3	Atlantic City Electric Company	James V. Petrella	Abstain	
3	BC Hydro and Power Authority	Pat G. Harrington	Abstain	
3	Blachly-Lane Electric Co-op	Bud Tracy	Affirmative	
3	Bonneville Power Administration	Rebecca Berdahl	Affirmative	
3	Central Electric Cooperative, Inc. (Redmond, Oregon)	Dave Markham	Affirmative	
3	Central Lincoln PUD	Steve Alexanderson	Abstain	
3	City of Bartow, Florida	Matt Culverhouse		
3	City of Clewiston	Lynne Mila	Affirmative	
3	City of Farmington	Linda R Jacobson	Affirmative	
3	City of Garland	Ronnie C Hoeinghaus	Abstain	
3	City of Green Cove Springs	Gregg R Griffin	Affirmative	View

3	City of Leesburg	Phil Janik		
3	City of Redding	Bill Hughes	Affirmative	
3	Clearwater Power Co.	Dave Hagen	Affirmative	
3	Cleco Corporation	Michelle A Corley	Abstain	
3	ComEd	Bruce Krawczyk	Affirmative	
3	Consolidated Edison Co. of New York	Peter T Yost	Abstain	
3	Constellation Energy	CJ Ingersoll	Abstain	
3	Consumers Energy	David A. Lapinski	Abstain	
3	Consumers Power Inc.	Roman Gillen	Affirmative	
3	Coos-Curry Electric Cooperative, Inc	Roger Meader	Affirmative	
3	Cowlitz County PUD	Russell A Noble		
3	Delmarva Power & Light Co.	Michael R. Mayer	Abstain	
3	Detroit Edison Company	Kent Kujala	Negative	
3	Dominion Resources Services	Michael F. Gildea	Abstain	
3	Douglas Electric Cooperative	Dave Sabala	Affirmative	
3	Duke Energy Carolina	Henry Ernst-Jr	Negative	View
3	East Kentucky Power Coop.	Sally Witt		
3	Entergy	Joel T Plessinger	Affirmative	
3	Fall River Rural Electric Cooperative	Bryan Case	Affirmative	
3	FirstEnergy Solutions	Kevin Querry	Negative	
3	Georgia Power Company	Anthony L Wilson	Affirmative	View
3	Georgia System Operations Corporation	Scott S. Barfield-McGinnis	Affirmative	
3	Great River Energy	Sam Kokkinen	Affirmative	View
3	Hydro One Networks, Inc.	David Kiguel	Abstain	
3	Idaho Power Company	Shaun Jensen		
3	JEA	Garry Baker	Affirmative	
3	Kansas City Power & Light Co.	Charles Locke	Affirmative	
3	Kissimmee Utility Authority	Gregory D Woessner	Affirmative	
3	Lakeland Electric	Mace D Hunter	Affirmative	
3	Lane Electric Cooperative, Inc.	Rick Crinklaw	Affirmative	
3	Lincoln Electric Cooperative, Inc.	Michael Henry	Affirmative	
3	Lincoln Electric System	Bruce Merrill		
3	Los Angeles Department of Water & Power	Daniel D Kurowski	Affirmative	
3	Lost River Electric Cooperative	Richard Reynolds	Affirmative	
3	Louisville Gas and Electric Co.	Charles A. Freibert	Affirmative	
3	Manitoba Hydro	Greg C. Parent	Affirmative	View
3	MidAmerican Energy Co.	Thomas C. Mielnik	Abstain	
3	Mississippi Power	Don Horsley	Affirmative	View
3	Municipal Electric Authority of Georgia	Steven M. Jackson	Affirmative	
3	Muscatine Power & Water	John S Bos	Abstain	
3	Nebraska Public Power District	Tony Eddleman	Abstain	
3	New York Power Authority	Marilyn Brown	Affirmative	
3	Niagara Mohawk (National Grid Company)	Michael Schiavone	Affirmative	
3	Northern Indiana Public Service Co.	William SeDoris	Affirmative	
3	Northern Lights Inc.	Jon Shelby	Affirmative	

3	Okanogan County Electric Cooperative, Inc.	Ray Ellis	Affirmative	
3	Orange and Rockland Utilities, Inc.	David Burke	Abstain	
3	Orlando Utilities Commission	Ballard K Mutters	Abstain	
3	PacifiCorp	John Apperson		
3	Platte River Power Authority	Terry L Baker	Affirmative	
3	Potomac Electric Power Co.	Robert Reuter	Abstain	
3	Public Service Electric and Gas Co.	Jeffrey Mueller	Abstain	
3	Public Utility District No. 2 of Grant County	Greg Lange		
3	Raft River Rural Electric Cooperative	Heber Carpenter	Affirmative	
3	Sacramento Municipal Utility District	James Leigh-Kendall	Abstain	
3	Salmon River Electric Cooperative	Ken Dizes	Affirmative	
3	Salt River Project	John T. Underhill	Affirmative	
3	San Diego Gas & Electric	Scott Peterson		
3	Santee Cooper	Zack Dusenbury	Affirmative	
3	Seattle City Light	Dana Wheelock	Affirmative	
3	Seminole Electric Cooperative, Inc.	James R Frauen	Affirmative	
3	Southern California Edison Co.	David Schiada		
3	Tacoma Public Utilities	Travis Metcalfe	Affirmative	
3	Tampa Electric Co.	Ronald L Donahey	Negative	View
3	Tennessee Valley Authority	Ian S Grant	Abstain	
3	Umatilla Electric Cooperative	Steve Eldrige	Affirmative	
3	West Oregon Electric Cooperative, Inc.	Marc M Farmer	Affirmative	
3	Wisconsin Electric Power Marketing	James R Keller	Abstain	
3	Wisconsin Public Service Corp.	Gregory J Le Grave		
3	Xcel Energy, Inc.	Michael Ibold	Abstain	
4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Affirmative	
4	American Municipal Power - Ohio	Kevin Koloini	Negative	
4	Blue Ridge Power Agency	Duane S Dahlquist	Affirmative	
4	Central Lincoln PUD	Shamus J Gamache	Negative	
4	City of Clewiston	Kevin McCarthy	Affirmative	
4	City of New Smyrna Beach Utilities Commission	Timothy Beyrle		
4	City Utilities of Springfield, Missouri	John Allen	Affirmative	
4	Consumers Energy	David Frank Ronk	Abstain	
4	Cowlitz County PUD	Rick Syring		
4	Florida Municipal Power Agency	Frank Gaffney	Affirmative	
4	Fort Pierce Utilities Authority	Thomas W. Richards		
4	Georgia System Operations Corporation	Guy Andrews	Affirmative	View
4	Illinois Municipal Electric Agency	Bob C. Thomas	Abstain	
4	Madison Gas and Electric Co.	Joseph DePoorter	Abstain	
4	Ohio Edison Company	Douglas Hohlbaugh	Negative	
4	Pacific Northwest Generating Cooperative	Aleka K Scott	Affirmative	
4	Public Utility District No. 1 of Douglas County	Henry E. LuBean	Affirmative	
4	Public Utility District No. 1 of Snohomish County	John D Martinsen	Abstain	

4	Sacramento Municipal Utility District	Mike Ramirez	Abstain	
4	Seattle City Light	Hao Li	Affirmative	
4	Seminole Electric Cooperative, Inc.	Steven R Wallace	Affirmative	
4	Tacoma Public Utilities	Keith Morisette	Affirmative	
4	Tallahassee Electric	Allan Morales	Affirmative	
4	Wisconsin Energy Corp.	Anthony Jankowski	Negative	
5	AEP Service Corp.	Brock Ondayko	Negative	View
5	AES Corporation	Leo Bernier	Abstain	
5	Amerenue	Sam Dwyer	Abstain	
5	Arizona Public Service Co.	Edward Cambridge	Affirmative	
5	Avista Corp.	Edward F. Groce	Affirmative	
5	BC Hydro and Power Authority	Clement Ma	Abstain	
5	Bonneville Power Administration	Francis J. Halpin	Affirmative	
5	City of Grand Island	Jeff Mead	Abstain	
5	City of Redding	Paul Cummings	Affirmative	
5	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Max Emrick	Affirmative	
5	City of Tallahassee	Alan Gale		
5	Cleco Power	Stephanie Huffman	Abstain	
5	Cogentrix Energy, Inc.	Mike D Hirst	Abstain	
5	Consolidated Edison Co. of New York	Wilket (Jack) Ng	Abstain	
5	Constellation Power Source Generation, Inc.	Amir Y Hammad	Abstain	
5	Consumers Energy	James B Lewis	Abstain	
5	Cowlitz County PUD	Bob Essex		
5	CPS Energy	Robert B Stevens		
5	Detroit Edison Company	Christy Wicke	Affirmative	
5	Dominion Resources, Inc.	Mike Garton	Abstain	
5	Duke Energy	Dale Q Goodwine	Negative	View
5	Dynegy Inc.	Dan Roethemeyer	Affirmative	
5	Electric Power Supply Association	John R Cashin		
5	Entergy Corporation	Stanley M Jaskot	Affirmative	
5	Exelon Nuclear	Michael Korchynsky	Affirmative	
5	ExxonMobil Research and Engineering	Martin Kaufman	Negative	
5	FirstEnergy Solutions	Kenneth Dresner	Negative	
5	Florida Municipal Power Agency	David Schumann	Affirmative	
5	Great River Energy	Preston L Walsh	Affirmative	View
5	Green Country Energy	Greg Froehling	Affirmative	
5	Indeck Energy Services, Inc.	Rex A Roehl		
5	Kansas City Power & Light Co.	Scott Heidtbrink		
5	Kissimmee Utility Authority	Mike Blough	Affirmative	
5	Lakeland Electric	James M Howard	Abstain	
5	Liberty Electric Power LLC	Daniel Duff	Affirmative	
5	Lincoln Electric System	Dennis Florom	Affirmative	
5	Los Angeles Department of Water & Power	Kenneth Silver	Affirmative	
5	Luminant Generation Company LLC	Mike Laney	Affirmative	View

5	Manitoba Hydro	S N Fernando	Affirmative	View
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Abstain	
5	MEAG Power	Steven Grego	Affirmative	
5	MidAmerican Energy Co.	Christopher Schneider		
5	Muscatine Power & Water	Mike Avesing	Affirmative	
5	Nebraska Public Power District	Don Schmit	Abstain	
5	New York Power Authority	Gerald Mannarino	Affirmative	
5	Occidental Chemical	Michelle R DAntuono	Affirmative	
5	Omaha Public Power District	Mahmood Z. Safi	Affirmative	
5	Orlando Utilities Commission	Richard Kinan		
5	PacifiCorp	Sandra L. Shaffer	Abstain	
5	Platte River Power Authority	Pete Ungerman		
5	Portland General Electric Co.	Gary L Tingley		
5	PPL Generation LLC	Annette M Bannon	Affirmative	
5	Public Service Enterprise Group Incorporated	Dominick Grasso	Abstain	
5	Public Utility District No. 1 of Lewis County	Steven Grega	Affirmative	
5	Sacramento Municipal Utility District	Bethany Hunter	Abstain	
5	Salt River Project	Glen Reeves		
5	Santee Cooper	Lewis P Pierce	Affirmative	
5	Seattle City Light	Michael J. Haynes	Affirmative	
5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins	Affirmative	
5	Snohomish County PUD No. 1	Sam Nietfeld	Affirmative	
5	Southern Company Generation	William D Shultz	Affirmative	View
5	Tampa Electric Co.	RJames Rocha	Affirmative	
5	Tenaska, Inc.	Scott M. Helyer	Abstain	
5	Tennessee Valley Authority	David Thompson	Affirmative	
5	Tri-State G & T Association, Inc.	Barry Ingold	Affirmative	
5	U.S. Army Corps of Engineers	Melissa Kurtz	Affirmative	
5	US Power Generating Company	Bohdan M Dackow		
5	Wisconsin Electric Power Co.	Linda Horn	Abstain	
5	Wisconsin Public Service Corp.	Leonard Rentmeester	Abstain	
6	AEP Marketing	Edward P. Cox	Negative	View
6	Ameren Energy Marketing Co.	Jennifer Richardson	Abstain	
6	Arizona Public Service Co.	Justin Thompson	Affirmative	
6	Black Hills Power	andrew heinle	Affirmative	
6	Bonneville Power Administration	Brenda S. Anderson	Affirmative	
6	City of Austin dba Austin Energy	Lisa L Martin	Affirmative	
6	Cleco Power LLC	Robert Hirschak	Abstain	
6	Consolidated Edison Co. of New York	Nickesha P Carrol	Abstain	View
6	Constellation Energy Commodities Group	Brenda Powell	Abstain	
6	Dominion Resources, Inc.	Louis S. Slade	Abstain	
6	Duke Energy Carolina	Walter Yeager	Negative	
6	Entergy Services, Inc.	Terri F Benoit	Affirmative	
6	Exelon Power Team	Pulin Shah	Abstain	

6	FirstEnergy Solutions	Mark S Travaglianti	Negative	
6	Florida Municipal Power Agency	Richard L. Montgomery	Affirmative	
6	Florida Municipal Power Pool	Thomas Washburn	Affirmative	
6	Florida Power & Light Co.	Silvia P. Mitchell	Negative	
6	Great River Energy	Donna Stephenson		
6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Affirmative	
6	Lakeland Electric	Paul Shipps	Affirmative	
6	Lincoln Electric System	Eric Ruskamp	Affirmative	
6	Manitoba Hydro	Daniel Prowse	Affirmative	View
6	MidAmerican Energy Co.	Dennis Kimm	Abstain	View
6	Muscatine Power & Water	Brandy D Olson		
6	New York Power Authority	William Palazzo	Affirmative	
6	Northern Indiana Public Service Co.	Joseph O'Brien	Affirmative	
6	Omaha Public Power District	David Ried	Affirmative	
6	PacifiCorp	Scott L Smith	Abstain	
6	Platte River Power Authority	Carol Ballantine	Abstain	
6	PPL EnergyPlus LLC	Mark A Heimbach	Affirmative	
6	Progress Energy	John T Sturgeon	Abstain	
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Abstain	
6	Sacramento Municipal Utility District	Claire Warshaw	Abstain	
6	Salt River Project	Steven J Hulet	Affirmative	
6	Santee Cooper	Suzanne Ritter	Affirmative	
6	Seattle City Light	Dennis Sismaet	Affirmative	
6	Seminole Electric Cooperative, Inc.	Trudy S. Novak	Affirmative	
6	Shell Energy North America (US), L.P.	Paul Kerr	Affirmative	
6	South California Edison Company	Lujuanna Medina	Affirmative	
6	Tacoma Public Utilities	Michael C Hill	Affirmative	
6	Tampa Electric Co.	Benjamin F Smith II	Negative	
6	Tennessee Valley Authority	Marjorie S. Parsons	Abstain	
6	Western Area Power Administration - UGP Marketing	Peter H Kinney	Affirmative	
6	Xcel Energy, Inc.	David F. Lemmons		
8		Edward C Stein	Affirmative	
8		James A Maenner	Affirmative	
8		Roger C Zaklukiewicz	Abstain	
8	JDRJC Associates	Jim Cyrulewski	Affirmative	
8	Pacific Northwest Generating Cooperative	Margaret Ryan	Affirmative	
8	Power Energy Group LLC	Peggy Abbadini		
8	Utility Services, Inc.	Brian Evans-Mongeon	Abstain	
8	Volkman Consulting, Inc.	Terry Volkman	Affirmative	
9	Commonwealth of Massachusetts Department of Public Utilities	Donald Nelson	Affirmative	
9	National Association of Regulatory Utility Commissioners	Diane J Barney	Abstain	
9	Oregon Public Utility Commission	Jerome Murray	Abstain	
9	Snohomish County PUD No. 1	William Moojen		
10	Florida Reliability Coordinating Council	Linda Campbell		

10	Midwest Reliability Organization	James D Burley		
10	New York State Reliability Council	Alan Adamson	Affirmative	
10	Northeast Power Coordinating Council, Inc.	Guy V. Zito	Abstain	
10	ReliabilityFirst Corporation	Anthony E Jablonski	Affirmative	View
10	SERC Reliability Corporation	Carter B Edge	Abstain	
10	Texas Reliability Entity	Larry D. Grimm	Abstain	
10	Western Electricity Coordinating Council	Louise McCarren	Affirmative	

Exhibit G

Standard Drafting Team Roster for NERC Standards Development
Project 2006-06 Reliability Coordination

**Project 2006-06 Reliability Coordination
Standard Drafting Team**

Name and Title	Company and Address	Contact Info	Bio
William M. Hardy SDT Chair	Southern Company Services, Inc. 600 18th Street North PCC PCC-Corp HQ Birmingham, Alabama 35203-2206	wmhardy@southernco.com	Mike Hardy has 39 years of power industry experience at Southern Company. He currently is system operations supervisor in the Bulk Power Operations Power Coordination Center for Southern Company Transmission responsible for integrity of system control data and transmission energy accounting. Earlier, Mike supervised the load forecasting, maintenance scheduling and unit commitment processes in operations planning. He has system operator experience at the BA, TOP, RC and IA real-time operation functions of Southern Company. While at Georgia Power, Mike was an operator in its transmission control centers at the corporate and division levels. Prior to his move to operations, Mike worked as substation maintenance electrician in transmission and distribution maintenance. He started his career with Southern at Alabama Power as a tree trimmer for its distribution operations in Eufaula, Alabama. Mike serves as chair of the Reliability Coordination standard drafting team and also served as a member of the Interconnected Reliability Operating Limits standard drafting team for NERC. Most recently, he served as chair of the Scheduling Coordination Service taskforce for SERC. Mike holds a Bachelor of Science in Business Management from the University of Alabama-Birmingham. He earned certification in Industrial Electricity from Columbus Technical College in Columbus, Georgia and is also NERC certified as a System Operator-Reliability.

Earl A. Barber Telecommunication Engineering Manager	National Grid 300 Erie Blvd. West Syracuse, NY 13202	earl.barber@us.ngrid.com	Earl Barber is a Principle Substations Engineering at National Grid. With over twenty five years experience in the utility industry, Earl has mainly held positions in electric engineering, and engineering management. Recently, Earl held the position of Manager - Telecommunication Engineering where he was responsible for providing engineering support for wide band connectivity, wireless private voice communication networks, and for supporting initiatives such as the SMART program. Earl graduated with a BS in Electrical Engineering Technology from Rochester Institute of Technology, followed by a MBA in Marketing and Management from St. Bonaventure University. Earl has been an active member of the Utilities Telecom Counsel (UTC) Board of Directors and the Shared Telecom Networks (STN)) Management Committee. He has also served his community through sitting on the Executive Board of Aids Community Resources (ACR), United Way's Fiscal Management Team, Power Engineering Chair of the Syracuse Section of IEEE and a volunteer for Junior Achievement.
Timothy A. Beach	American Transmission Company LLC Transmission Reliability Administrator 2489 Rinden Road Cottage Grove, WI 53527-9598	tbeach@atcllc.com tbeach@caiso.com	Timothy A. Beach worked at American Transmission Company (ATC) as a Transmission Reliability Administrator, from 2001-20011. Prior to ATC, he worked at Alliant Energy and Wisconsin Power and Light, beginning in 1985. He served as the Operations Chair for the 9-18 Separation Event Analysis Team, as well as serving on the Operations Planning Working Group with the Midwest-ISO. Tim's work at ATC primarily encompasses liaison work with the System Planning, Engineering\ Projects, Maintenance, Compliance, as well as ATC management staff. Additionally Tim provided support to Real-Time Operations on reliability issues, outage planning as well as Operating Guide review and approval, and is the author of several ATC Transmission Operating Procedures. In August 2011 Tim began working for California-ISO as a Transmission Dispatcher, where his duties

			are to coordinate the day-to-day operation of the transmission system managed by the California ISO, consistent with NERC Reliability Standards, WECC Regional Reliability Standards, applicable ISO Tariff and procedures to ensure the safe and reliable operation of the ISO controlled grid.
Paul Bleuss Shift Supervisor	California Independent System Operator Corp. Folsom, CA 95630		Paul Bleuss has been in the electrical industry for over 25 years. He is currently a shift supervisor at the California Independent System Operator Corp., a position he has held for the last three years. Prior to this position Paul was a Reliability Coordinator responsible for the California and Mexico sub-region of the WECC for seven years. Earlier positions include generation dispatcher, transmission dispatcher, and interchange scheduler at the CAISO dating back to 1998. Paul also was a system dispatcher, instrument & control tech., and power plant operator for the Northern California Power Agency dating back to 1986.
James S. Case, PE Member	Entergy Services, Inc. 6540 Watkins Drive Jackson, MS 39213-8208	jcase@entergy.com	Jim S. Case was named director of weekly operations in June, 2008. Immediately prior to being named to this position, Case served in transmission operations as manager of transmission system security. As director of weekly operations, Case is responsible for the design, implementation and maintenance of procedures and processes necessary to ensure compliance with Entergy's transmission tariff on file with the Federal Energy Regulatory Commission that governs Entergy's weekly procurement process. Case is also responsible for developing and managing the processes to enable Entergy's Energy Delivery function to integrate into the MISO Regional Transmission Organization. Case has over thirty-eight years of electric utility experience, most recently in transmission operations. He has experience in all phases of transmission

			and distribution, including field engineering, construction management, distribution standards and bulk power operations. He currently directs a group that performs security-constrained unit commitment including independent offers on a week-ahead basis for Entergy. In addition to his previous assignment in transmission operations, he has served as manager of transmission security coordination. staff engineer in distribution standards, and district engineer in the south-central district of Entergy Mississippi. Before joining Entergy, Case worked for the Union Carbide Nuclear Division and Gulf Power Company. Case is active nationally in NERC. He is a member of the NERC Operating Committee, past Chair of the SERC Operating Committee, Chair of the NERC Real Time Operations Standards Drafting Team, member of the Reliability Coordination Standards Drafting Team, past member of the Interconnected Reliable Operations Standards Drafting Team, the Version 0 Standards Drafting Team, the Reliability Coordination Working Group, the Congestion Management Working Group and the ANSI C62 working group concerned with surge arrester standards. He has a bachelor's in electrical engineering from Mississippi State University and a master's in business administration from the University of Arkansas at Little Rock. Case is a senior member of Institute of Electrical and Electronics Engineers, Inc., member of the Power Engineering Society and is a registered professional engineer in Mississippi. Case is a member of Eta Kappa Nu, Tau Beta Pi, Beta Gamma Sigma and Alpha Epsilon Lambda.
Albert DiCaprio Strategist	PJM Interconnection , L.L.C.	dicapram@pjm.com	Albert DiCaprio has been employed by PJM since 1970. His experience at PJM includes System Operations Department in

955 Jefferson Avenue Valley Forge Corporate Center Norristown, Pennsylvania 19403-2497		which he helped developed PJM generation control program, PJM's Accounting for regulation program and PJM's Fuel Supply Emergency procedures; in the System Performance Department he initiated performance monitoring and benchmarking programs, and PJM's Energy by Fuel type tracking system; and he helped launch PJM's first retail customer support program. As Senior Strategist, Al provides analysis and support for PJM positions on NERC standards and FERC initiatives. Al has served on various NERC committees most notably as Chairman of the Performance Subcommittee when the first Control Performance Standard was approved and he served on the Task Force whose efforts led to the development of the NERC Functional Model. Al serves as the chairman of the ISO/RTO's Standards Review Committee who review and comment on NERC Reliability Standards, NAESB Business Practices and FERC initiatives related to reliability standards. Active in the IEEE, he is a senior member and has published various papers and has served on Technical Activities committees for two Joint IEEE-CIGRE conferences. Internationally, Al serves as the chairman of the International Group on Comparison of Transmission Operation Practices. Al has been part of CIGRE's initiative into Energy Markets and has been active with Study Committee C5 (Markets and Regulation) since its beginning in 2000 and received CIGRE 2009 Technical Committee Award for his contributions to the Study Committee. He is also active in a Joint Working Group with Markets and Operations, and Working groups on System Design (WG C5-7) and on Integration of Renewable resources and Demand-side Management (WG C5-11). He has a bachelor's in electrical engineering from Drexel University in

			Philadelphia and a Master's in System Operations from the University of Pennsylvania.
Anthony P. Jankowski Manager Electric System Operations	We Energies W237 N1500 Busse Road Waukesha, WI 53188	tony.jankowski@we-energies.com	Tony Jankowski is the Manager of Electric System Operations at Wisconsin Electric Power Company d/b/a/ We Energies. He is responsible for the safe, reliable Bulk Electric System operation of the transmission dependant utility's Balancing Authority Area within the Midwest ISO. Mr. Jankowski has 25 years of experience in the Electric Utility Industry through various assignments involving nuclear and fossil generation, wholesale merchant business and Bulk Electric System operations. He is a NERC Certified Reliability Operator and has been involved in regulatory and industry policy issues for over 17 years. Mr. Jankowski actively participates in MISO, RFC and NERC committees as: Chair of the MISO Reliability Subcommittee; a member of the RFC Reliability Committee, NERC Operating Reliability Subcommittee, NERC Functional Model Working Group, and MISO Balancing Authority Committee. He has also been a member of several past and present RFC and NERC Standard Drafting Teams, along with numerous past group or committee positions.
Al Miller (Retired)			Al Miller has over 32 years experience in ensuring the reliable operation of the power system and the facilitation of energy markets in Ontario with the Independent Electricity System Operator. Initially, as a Shift Operator/Reliability Coordinator and later managing the department that oversaw the operation of markets while ensuring reliability in the day-ahead/near-term time frames. Over the years, Al has also provided operational and reliability expertise to many Industry Working Groups, Committees and Standard Drafting Teams. These included, Chairing a number of the Pre-seasonal Assessment Working Groups for NPCC, being an active member of a number of NERC Standard Drafting Teams including the Co-Chair of the Version Zero

			Standard Drafting Team and Chair of the NERC Operating Committee's - Operating Limit Definition Task Force whose Reliability Concepts Document provided the basis for the NERC's Adequate Level of Reliability definition.
H. Steven Myers Principal, Operating & Planning Standards	Electric Reliability Council of Texas, Inc. 2705 West Lake Drive Taylor, Texas 76574-2136	smyers@ercot.com	Steve Myers, Principal, Operating & Planning Standards at the Electric Reliability Council of Texas (ERCOT), has over forty-three years of electric system operations experience. Mr. Myers first joined ERCOT in 1996 as the Security Center Manager at the inception of the ERCOT Independent System Operator (ISO). During his time at ERCOT, he has served as Security Center Manager, Manager of System Operations, Manager of Operations Support, Manager of Operating Standards, and now as Principal, Operating & Planning Standards. Prior to joining ERCOT, Mr. Myers served as Manager of the North Texas Security Center. He also served as Operations Supervisor and as Supervisor of Operations Engineering for an investor-owned electric utility; including generation and transmission operations. As a more junior engineer, he served as an engineer in electrical distribution, with responsibilities including supervision of a transformer repair shop, supervision of an underground network group, and as an operations engineer at the system control center. Mr. Myers is a graduate of New Mexico State University, with a Bachelor of Science in Electrical Engineering (BSEE). He has a Master of Business Administration (MBA) degree in Management from the University of Texas at Arlington, and is a Registered Professional Engineer in the State of Texas. Mr. Myers served as an officer in the U. S. Naval Reserve as an Assistant Resident Officer in Charge of Construction in San

			Diego, California. His electrical engineering training enabled his oversight of all contracts for electrical systems on all bases in the San Diego area. He also gained experience with oversight of contracts of every nature on three assigned Navy bases in the area.
Robert C. Rhodes, Jr. Manager, Reliability Standards	Southwest Power Pool Suite 140, Plaza West 415 N. McKinley Little Rock, AR 72205	rrhodes@spp.org	Robert Rhodes is the Manager, Reliability Standards at Southwest Power Pool (SPP) where he has been employed since 2000. In his previous role at SPP he was Manager, Reliability Coordination for over 10 years. Prior to joining SPP, Robert worked at Progress Energy (Carolina Power & Light Company) in Raleigh, NC for over 26 years in various positions in transmission maintenance, operations and planning. In his current capacity, Robert works with SPP members, SPP staff and other industry experts to ensure that reliability standards necessary to maintain a reliable bulk electric system are in place. He coordinates SPP members and registered entities in the development, refinement, maintenance, communication, training and implementation of national and regional reliability standards and policies. Robert is active at NERC currently serving on the Operating Reliability Subcommittee, the Resources Subcommittee and the Reliability Coordination Standard Drafting Team. He has previously served on the Reliability Coordinator Working Group, the Interchange Distribution Calculator Working Group and was Vice Chair of the Distribution Factor Working Group. Additionally, he has served on committees, working groups and task forces in SPP, SERC and VACAR. Robert received an Associate in Science degree from Rockingham Community College in 1970, a Bachelor of Science degree in Electrical Engineering from North Carolina State University in 1972 and a Master of Engineering degree from Rensselaer Polytechnic Institute in 1974.

			He is a member of Tau Beta Pi, Eta Kappa Nu, Order of the Engineer, the Institute of Electrical and Electronics Engineers and its Power Engineering Society, the National Society of Professional Engineers and is a registered professional engineer in the State of North Carolina.
Eric Senkowicz Manager of Operations	Florida Reliability Coordinating Council 1408 N. Westshore Blvd. Suite 1002 Tampa, Florida 33607	esenkowicz@frcc.com	Eric Senkowicz has been with the FRCC since January 2005 and is currently the Director of Operations. His primary responsibilities include facilitator and liaison to various operating committees and reliability groups within the FRCC structure. Eric is also active in representing FRCC reliability within the NERC standards development process and has been active on various drafting teams and working groups. Eric has been working in the utility industry for over 18 years. His experience includes nuclear plant design engineering, systems engineer, component failure analysis specialist and protective relaying installation and maintenance. Eric's experience also includes five years in grid operations with various responsibilities including load forecasting, system dispatch, transmission operations, operations planning and system operator for the FPL system (approximate 20,000 MW peak at the time). Prior to joining the FRCC staff, Eric worked for FPL, the FRCC RC Agent and spent three years as an on-shift FRCC Regional Reliability Coordinator based out of Miami, Florida. Eric holds a degree in Electrical Engineering and is a NERC Certified System Operator, Reliability area. Eric is also a registered Professional Engineer in the State of Florida.
Scott Barfield-McGinnis Standards Development Advisor	North American Electric Reliability Corporation 3353 Peachtree Road, NE	scott.barfield@nerc.net	Scott Barfield-McGinnis, as a Standards Development Advisor supports NERC's continual mission of managing and improving standard development, revisions, interpretations and other reliability related projects through the

	North Tower – Suite 600 Atlanta, GA 30326		valued participation of industry technical experts. Before joining NERC, he was the Bulk Electric System Compliance Manager at Georgia System Operations Corporation. Other positions held throughout his 27-year career in power include system engineer, planner, and engineering manager with oversight in energy control systems, planning and forecasting, as well as, asset management. He received an undergraduate electrical engineering degree in Power Systems from Southern Polytechnic State University and earned his Master of Business Administration from Mercer University's Stetson School of Business. Scott is also a registered Professional Engineer in the state of Georgia. Scott is a member of the Institute of Electronics and Electrical Engineers (IEEE) and a past Board Member of the Central Georgia Section and continues to provide technical presentations at IEEE meetings.
Stephen Crutchfield Standards Development Coordinator	North American Electric Reliability Corporation 3353 Peachtree Road, NE North Tower – Suite 600 Atlanta, GA 30326	stephen.crutchfield@nerc.net	Stephen Crutchfield began his career with NERC in May 2007. Prior to joining NERC, Stephen was a Project Manager with Shaw Energy Delivery Services, managing engineering and construction projects in the substation and transmission line fields. Stephen's background also includes experience with PJM as Manager of RTO Integration, working on the operations and markets integration of new members (AEP, ComEd, Dayton, Dominion and Duquesne) into PJM and southern seams operations issues with Progress Energy, Duke and TVA. Stephen also helped lead the team that was developing GridSouth in the dual roles of Organization Architect and Manager of Customer Support. Prior to GridSouth, Stephen was the Manager of Power System Operations Training at Progress Energy where he spent over 10 years training System Operators and Engineers. Overall, Stephen was with Progress Energy

			for 16 years. Stephen received his Bachelor of Arts in Physics from the University of Virginia and Masters of Science in Electrical Engineering from North Carolina State University. Stephen also holds a Master of Science in Management degree, also from North Carolina State University.